



**THEY  
BUILT  
A  
CITY**

**150 Years of Industrial Cincinnati**

Compliments

THE CINCINNATI ASSOCIATION OF PURCHASING AGENTS  
and  
THE CINCINNATI POST

In Commemoration of

THE SILVER ANNIVERSARY

THE NATIONAL ASSOCIATION OF PURCHASING AGENTS

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**BUILDING**

# **THEY BUILT A CITY**

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## **150 Years of Industrial Cincinnati**

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*Compiled and written by the  
Cincinnati Federal Writers'  
Project of the Works Progress  
Administration in Ohio*

•

*James Garfield Stewart,  
Mayor of Cincinnati,  
cooperating sponsor*

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*Illustrated*

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**WORKS PROGRESS ADMINISTRATION**

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## *Preface*

"They Built A City" is a record of 150 years of industrial life in Cincinnati; it tells about the things that the city's hands have made. A good many people have at some time or other wandered off into Cincinnati's curious byplaces, stood upon the hills and seen the river cutting the city's pattern, joined the music crowds at the symphony and at the Zoo opera, or paid random visits to its Barbary Coast and its beer gardens. They may wonder why this book stresses, to the exclusion of everything else, the fact that industry and commerce have built Cincinnati. We are not saying, "Thy merchants are the great men of the earth," or minimizing all other men and influences. The reason is much simpler.

About a year ago the Cincinnati office of the Federal Writers' Project started to look for facts about industry and commerce to be included in the forthcoming Ohio Guide and Cincinnati Regional Guide. Available materials were amazingly scanty. Robert E. Moore, research assistant on the project, was assigned the task of scratching for facts, and soon enough good data was gathered to warrant a separate publication. We have therefore made other facts and more subtle influences wait for other publications, and concerned ourselves here only with a historic cross-section of the means by which Greater Cincinnatians have earned their livelihood. The book does not pretend to be literary; it is a compilation. We have laid our emphasis not on the interpretations, but rather on the hitherto mislaid facts and figures.

The job itself has not been simple. Often the figures had to be freshly compiled from old ledgers, and desultory facts arrayed in some sort of order. At times only the expert aid of consultants has stopped us from going up blind alleys. We appreciate greatly the fine co-operation and assistance given us by the many concerns who have entered the pages of this book.

Particularly helpful and generous of their time have been John J. Rowe, president of the Fifth Third Union Trust Com-

pany; Harry S. Brutton, Procter & Gamble Company sta  
Hudson Biery, Cincinnati Street Railway; "Bill" Bailey, Sta  
tions WLW-WSAI; Elmer Dressman, Station WCKY; Fr  
Gruen, Gruen Watch Company; Ferd Overmole, Greater Ci  
cincinnati Brewers Inc.; Carl D. Groat, Frederick Giesel, Fra  
Aston, William Dowdell, and Alfred Segal, The Cincinnati  
*Post*; Edward Steinborn, Robert Harris, and Jerry Hurter, Ci  
cincinnati *Times-Star*; Kenneth Doris, Cincinnati *Enquirer*; En  
and Willard Hess, Sayers & Scovill Company; Harold LeBlon  
Ahrens-Fox Fire Engine Company; Louis Kahn, E. Kahn Son  
Company; Jack Koons, Midland Advertising Agency; Jo  
Warrington, advertising executive; George Rosenthal, S. Rose  
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W. B. Wingo and R. J. Phillips, Western Union Telegra  
Company; M. L. Smith, Cincinnati & Suburban Telepho  
Company; A. C. Moorhaus, Cincinnati Gas & Electric Com  
pany; J. C. Mashburn, Cincinnati Coca Cola Company; Ea  
Johnson, United Press Associations; William Sachs, *The Bi  
board*; and Arnold Guenther, Acme Machine Tool Compan


Robert Lehman assisted in the editing; Earle Sargeant  
responsible for the art layouts and Sam Kremer for many  
the photographs; and Robert E. Moore not only did t  
original research, but also was invaluable in designing a  
making up the book.

HARRY GRAFF, *District Supervisor*



## Chapter I

### *Building A City*

NE HUNDRED FIFTY years ago the Ohio River wound a mysterious way into the green country far beyond the great wall of the Alleghenies. And men with a foothold on the Atlantic Coast pressed against the wall, peered over into the wilds, and wondered. The Revolution was over and they were tired. Many were bankrupt, many oppressed, many restless. Over the wall was a new adventure, a new land, a new freedom. They listened to exciting stories of traders, to highly colored accounts of land agents, to the eulogies of aesthetic souls delighted by the Ohio country. And they decided to gather their wives and children, pick up their belongings, and move on through fierce Indians, dire hazards of the journey, the terrible unknown. But their ancestors had braved the same dangers, and they were still not many generations removed from their first American ancestral stock. They started towards the wall, to go up and over. By pack horse and ox-drawn covered wagon they pushed on, followed mud trails over slippery hills and through valleys that sent up the hills about them again in terrifying majesty, forded rivers and creeks, and reached Simrall's Ferry and Fort Pitt (Pittsburgh). Here the trails ended.

The entrance to the West was a gateway of hills, through which the Ohio River rushed and turned, bent and rolled, on to the Mississippi and the Gulf. For weeks the men hammered together rafts and flatboats to carry their families and possessions over the waterway linking their old life with the new. In December 1788 a fleet of craft, carrying 26 persons, some livestock, and some foodstuffs, slithered into the Ohio's fast current and floated westward, past Marietta and Columbia, where, on the flatlands near the mouth of the Little Miami Riv-

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er, a blockhouse was going up. Then they saw a slim river, the Licking, going off to the south, and on the right the land ran up in terraces to a lovely valley sheltered by tall hills. Plenty of water, good soil, and open space—here was the place to spend their lives. After beaching their rafts and flatboats, they tore the vessels apart and clattered together the first crude homes in Losantiville.

Cincinnati has come to maturity with a long experience of building up and breaking down. First, a frontier town was set up and the crops were sown. Next, banks were opened, minor manufactures were encouraged to become greater, and the wharves on the water front were made increasingly important to the great Ohio River traffic. By 1860 Cincinnati was on its way to becoming the nation's third largest city, and one of the leading gateways of northern commerce to the South. For another 40 years the swelling tide of commerce and industry continued to force the city's boundaries far back into the hills. At the turn of the century Cincinnati dreamed of becoming a center of automotive production, but this industry was attracted to cities closer to the sources of steel and coal. In its place arose the highly complex, scientifically developed machine tool industry. The financial collapse of 1929 was only a temporary halt to this gigantic industrial growth. Cincinnati has now resumed her work, fresh with a new faith in the future years.

The Losantiville pioneers put seeds in the land and watched the crops grow. Occasionally they chased Indian snipers from the hills. Then, about 1800, they found that they were near coal, iron, wood, and limestone, and they turned slowly from agriculture to manufacturing. As early as 1791 the first horse-powered grist mill was proudly built, but, because everybody needed meal, it rarely managed to grind sufficient grain. In 20 years the application of steam brought rest to horses weary of the treadmill, and a sudden surge of river commerce, emanating from pork packing, distilling, and other manufactories, began to shape Cincinnati into the "Porkopolis," "Ragtown," and "Floral City" of 1840-1900.

Keeping pace with manufacturers were the merchants and wholesalers. Considering the difficulties of transportation, the

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variety of stocks offered before 1800 is remarkable. In 1796 Smith & Findlay, one of the early stores, put up for sale such articles as combs, handkerchiefs, shawls, whisky, brandy, imported Lisbon and Madeira wines, coffee, Bohea tea, loaf sugar, and chocolate. Cups, saucers, plates, looking glasses, and window glass were also advertised that year. In 1791 the first general store was opened by John Bartell (or Bartal) at Front Street and Broadway.

Before the *Orleans*—some say the *New Orleans*—throwing the first jets of steam up from the Ohio River (1811) paused at Cincinnati enroute from Pittsburgh to Louisville, all traffic on the Ohio River was carried in various kinds of flatboats. River trade fed industry, and it set on the river bank boatmen and passengers looking for hotels and inns. Cincinnati became a favorite stopover place. As early as 1792 the first ferry, Robert Benham's, pushed to and from Losantiville and Newport. The only wagon road in the vicinity twisted from Newport to Lexington, and then eastward.

In 1818 Cincinnati industry boomed as the Mississippi delta region opened to the colonizer. Men rushing to the Mississippi put factories on the banks of the Ohio. And the Kanawha, the Scioto, the Hocking, the Licking, the Miamis spilled boats and produce into the Ohio River. The Ohio washed them down to the Mississippi, and the Mississippi swung them up on its banks before it emptied into the Gulf. Cincinnati toiled and sweated, making goods for the people of New Orleans and immigrants to the South. Cincinnati was the wonder city of the West, knotting garlands beside the river.

About 1825 the warehousing of merchandise shipped by boat became an important concern of the young city below the hills. Buildings walling the banks of the stream became storage depots for the trans-shipment of items. And so the river has borne goods to and from Cincinnati through the years and made the city, hundreds of miles from mines, today the world's largest center for the distribution of bituminous coal.

Later the construction of wagon roads, turnpikes, and the Miami & Erie Canal took away its exports, brought it raw materials and money, and made it grow. During the past hundred

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

years many other transportation facilities—highways, railroads, electric streetcars, automobiles, motor trucks, and airplanes—have helped build the city.

Before 1800 crude sawmills and brickyards had been making building materials. Clothing and machinery came next among the trades, but for some years clothes were homemade—as homespun as the people who made them. In 1810 Richard Fosdick hit upon a rocksalt process for curing pork and revolutionized meat packing methods. Great fields of glowing corn stretched along the rich Miami Valley, but there were no roads to take the crops to market. So the hogs grew fat on a corn diet, and Cincinnati was Porkopolis until the 1880's, when Chicago thrust itself forth among American packers.

Whisky was another by-product of the corn crop which reduced bulk and made for easy handling. Distillation of spirits and alcohol, and later the brewing of beer, became work for Cincinnati's hands; and they wove for their Queen by the river a rakish garland.

Some early records prove how quickly industry developed. In 1815 imports were valued at \$534,880; by 1818 the valuation was \$1,619,030. From October 1818 to March 1819, merchandise worth \$1,334,080 was exported from the city. Flour at five dollars a barrel accounted for 650 thousand dollars of the total; pork at \$15 a barrel brought 150 thousand dollars; hams and bacon at eight cents a pound amounted to about 22 thousand dollars; lard at 11 cents a pound totalled 46 thousand dollars; and whisky, at 50 cents a gallon, accounted for 40 thousand dollars. The value of products exported during the next six months of 1819 was almost as great. By 1819 there were two foundries, six tinsmiths, four copper, and nine silversmiths, three whitesmiths and two gunsmiths, a nail factory, a fire engine maker, 15 cabinet shops, 16 cooperage shops, several ship carpenters and boat builders, 26 shoemakers, 25 tailor shops, 25 brickyards, six tanyards, three grist mills, 15 bakeries, two breweries, nine distilleries, five bookbinders, and seven soap boilers and tallow chandlers in Cincinnati. Among the craftsmen were a hundred bricklayers, 30 plasterers, 15 stone masons, 10 barbers, and 10 street pavers. That year

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the combined industrial employment was 1,238, while valuation of the products amounted to \$1,059,049. In the city were 1,800 buildings, 214 of which were mechanics' shops, factories and mills, and more than a hundred warehouses. Of the retail establishments 102 were groceries, 14 drug stores, four confectioneries, six book and stationery shops, five printing offices, and five auction and commission houses.

Although the *Centinel of the North-Western Territory*, the city's first newspaper, began publication in 1793, the commercial printing and publishing trades were not developed until 1820, when the Methodist Episcopal Church of New York established the Methodist Book Concern in Cincinnati to supply its Western subscribers with religious literature. At the time, Cincinnati was gripped by its first financial panic (1820-1825), and, because local bank notes were valueless in New York, a printing press was carted over the hills to Pittsburgh, and then brought by packet to Cincinnati. Other printers and publishers arrived later to open shops, and soon a new industry was hiring its workers. Along came new processes—color printing, lithography, photographic engraving, automatic typesetting machines—and the industry grew toward maturity.

The building of carriages and wagons, begun in 1824, made Cincinnati in 1890 the world's center of the trade. Every kind of wheeled vehicle rolled from the great plants of the city; their basic designs—the phaeton, the landau, the coupe—are still used by the autobody industry. But the queen on a laden river did not meet the new century prepared for change. When the automobile came, she turned her back and favored the wagon. And the automobile rolled on to Detroit and set a huge new city on the Michigan flatlands. Today, however, Cincinnati is an important automobile and motor truck center, the home of assembling plants for the nation's two largest producers; it has also a passenger body plant, two motor truck makers, and several truck and tractor-trailer body manufacturers.

From 1830 to 1840 new industries strengthened. Among these were two soap manufactories, the M. Werk Company (1832) and the Procter & Gamble Company (1837), now the largest producer of soap and allied products in the world. The

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making of soap, started as early as 1814, has become part of Cincinnati's industrial backbone. Another venture of the time was the Thomas French Company (1840), which became in 1842 the French-Bauer Company, the city's leading distributor of milk and dairy products. Thomas French pioneered in the wholesale collection and retail distribution of milk. Cincinnati was America's second city—New York was first—to operate a dairy under modern methods of marketing. Previously, milk had been sold in cans and buckets, and consumers had to buy it either in stores or directly from dairymen.

In 1832 the river visited some of Cincinnati's homes, and in October business activity was suspended for 13 months after 432 persons died of Asiatic cholera, carried by fleas scourging the Middle West. In 1850 the disease came again, but mildly. Although trade was not affected, business men and health authorities started a movement which led to the laying of sewers and to a general cleanup of mudholes and dank alleyways.

Despite the bank riot of 1842, Cincinnati from 1840 to 1850 tripled its population. But bank crises were becoming common, and when a severe financial crisis came in 1857, the city suffered. In 1863 approval of the National Bank Act by President Lincoln, and the subsequent establishment of governmental regulations for banks, eased the tension here. Laws came with the years and helped stabilize the city's banks.

Cincinnati had been linked closely with the far South for many years before the Civil War, but she was a comparative stranger to her little neighbors just across the river until 1867, when the Suspension Bridge, connecting Cincinnati with Covington, was opened. That year Cincinnati was the nation's third city in manufacturing, surpassed only by New York and Philadelphia. In 1869 Greater Cincinnati plants produced 187 kinds of articles in three thousand factories, which employed 55,275 hands. Total production was valued at \$104,657,000 and the capital invested in building and equipment amounted to \$49,824,000.

In 1868 Charles and Max Fleischmann made the first compressed yeast. At first only Cincinnatians knew its virtues, but its importance in baking soon widened the market.

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By 1880 industry had recovered from the economic depression of 1871-75 and Cincinnati was more than a provincial Western metropolis. But when she reached the quarter-million mark in population, Cincinnati rested. Until this time she had been the largest city west of Philadelphia. Suddenly American industry took up new dominant themes—coal, iron, steel, rails. Cities like Cleveland, Detroit, and Chicago, closer to raw materials, now took the lead in America's industrial expansion. Cincinnati slowly adjusted her industries to the pace of the new industrialism. The new order brought more leisure to the working man, and Cincinnati responded with increased opportunities for entertainment and culture. Internationally known dramatists and bands played local theaters and concert halls, while across the canal along Vine Street the picturesque "Over the Rhine" district sounded a new note of gaiety.

In 1881, when the nation's center of population was eight miles southwest of Cincinnati in the northern part of Kenton County (near Taylorsport), Kentucky, the city's factories employed 20,944 males and 3,495 females at an average daily wage of \$1.69 for men and 91 cents for women. Retail merchants hired 3,868 men and 542 women at a wage of \$1.60 and 91 cents per day. In outlying sections of Hamilton County the daily pittance was 80 cents. During the past 50 years retail methods have changed entirely, and in the stores of 1938 women outnumber men by about three to one.

The years from 1875 to 1890 wrought new marvels. Two wonders now taken for granted, electricity and the telephone, were put to use. Almost overnight the old-time handcraft was superseded by huge, cold masses of steel and iron; precision machines replaced manpower. The Knights of Labor, afraid that mechanization and low wages would throw labor from its jobs, called a nationwide general strike (1886). The walkouts proved to be the opening wedge in labor's struggle for an eight-hour day, and from the ashes of the K. of L. rose the American Federation of Labor.

Meanwhile in 1876 the first telephone exchange, with 18 subscribers, had been opened, and the "hello girl" appeared. The success of the instrument speedily established telephone

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companies in competition with the telegraph systems, the first of which had been started here in 1847.

About 1880 the first electric lights were used here. The general use of electricity for power came in 1888, when an experimental electric trolley line trundled passengers in Walnut Hills. Industry and the city had been dependent on gas jets, oil lamps, and candles for light, and on steam for power; electric power was a boon. The touch of a finger set gigantic wheels to turning, and lighted up homes, factories, and offices.

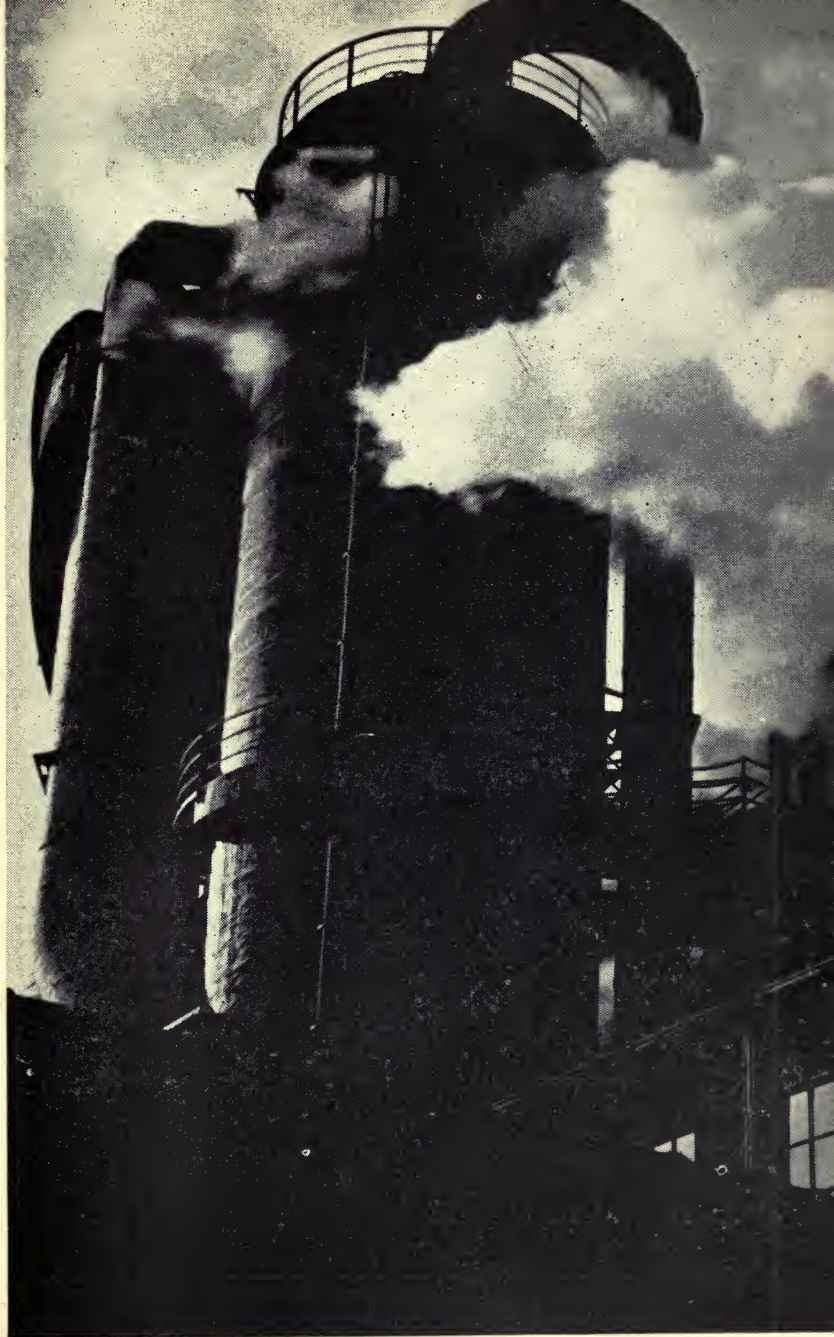
During the same period many other new enterprises were founded in Cincinnati. Among them were in 1880 the United States Playing Card Company, now the world's leading manufacturer of playing cards; in 1883 the modern retail food chain store, typified by the Kroger Grocery and Baking Company, second largest organization of its kind in the world. In 1887 the modern machine tool industry began with the R. K. Leblond Machine Tool Company, to be followed two years later by the Cincinnati Milling Machine Company, now the world's largest producer of milling and grinding machinery.

By 1891 Cincinnati was the carriage and wagon center of the world, bicycles bumped along the cobbles and the country roads, and horses and pedestrians jumped at the racket of the horseless carriage. That year 1,292 industrial establishments operating in the city had a combined capitalization of \$106,599,037.

Since 1900 industry and commerce have slowed down, but the city has undertaken the motor truck and body trades, laundry machine making, and the production of overalls, aluminum products, insulation material, articles made from papers and fibre, chemicals and beauty preparations, automobiles (1915), sporting goods, electric washers and refrigerators, and radio receiving sets. A definite revival in production has been noted in the tailoring and dress trades and in the making of women's shoes, office fixtures and furnishings, and quality home furniture.

By 1909, though still convalescing from the 1907 money panic, Cincinnati had the world's largest playing card plant, trunk factory, and tannery; the nation's leading theatrical poster printery, compressed yeast factory, iron tube and pipe works,





TOWER OF INDUSTRY



**FOUNTAIN SQUARE (1874, 1938)**

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printing ink establishment, harness and saddlery works, theatrical publishing house, women's shoe factory, and desk and office furniture plant, and the Middle West's biggest piano factory. The city was also America's leading bituminous coal distributing center and diamond cutting center, the Middle West's capital for the manufacture of men's clothing, and Ohio's top wholesaling market.

In 1910 the automobile was still a rich man's plaything; Old Dobbin was losing few good oats and little affection. That year, because the American banking system had failed to keep stride with industry and commerce, Washington set out to find a permanent cure for periodic financial panics. From a mass of proposals came the Federal Reserve Bank Act (1913), designed to maintain an elastic national currency. The beneficial effects of the new banking laws were immediate, local industry once more began to grow, and, with the beginning of the World War (1914), Cincinnati's machine tool industry rocketed the city upward again.

Almost overnight the local metal trades got busy. Orders for war materials piled up; employers vainly tried to meet production schedules by working their plants on a 24-hour day. Factory space and facilities were doubled, then tripled. Shortage of trained operatives thrust wages to an all-time peak. Cincinnati workers suddenly found their pay envelopes stuffed with crisp bills, and they immediately began spending their increased earnings for luxuries they had always wanted. Retail trade soared, and to meet the increased demands manufacturing schedules grew long.

In 1917, when the United States entered the War, the hurry and the noise of machines were even greater. Locally, and elsewhere in America, employers had to replace male workers who had joined the Army, Navy, and Marine Corps. Women, whose wage-earning activities until that time had been limited to offices, stores, and the needle trades, trooped to the factories. They operated all types of machines and helped to keep supplies moving to the front.

Meanwhile a movement for beer and liquor reform reached a climax in the approval by Ohio voters (November 1918) of

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a state prohibition law. A few days later the War ended, and Cincinnati-ans joined the world-wide celebration. By July 1919, when beer and liquor dispensaries, breweries, and distilleries locked their doors because of the state dry act, a national recession in manufacture and wholesale and retail trade was beginning to be felt. Locally the stringency of unemployment caused by the cancellation of war orders and the closing of alcoholic beverage plants became more acute as soldiers were demobilized. They had left during a period of prosperity; they returned to find industry furloughing workers. This condition led to considerable unrest; through it all ran the resentment towards employers for failing to rehire workers who had gone to "save the world for democracy."

Such was the condition of Cincinnati industry in 1920. Beginning in 1921, the automotive trades and radio broadcasting and manufacturing helped break this post-war recession. In soaring to success they proved helpful to other units, especially steel production and transportation; and the pickup in commerce and trade was a spur to lagging industrial activity.

The motor car industry, following the adoption of almost revolutionary production methods, found a ready market for its improved and cheaper products. In 1919 the radio industry began in Cincinnati when the Midwest Radio Corporation started manufacturing crystal receiving sets. About the same time the Precision Equipment Company started regular broadcasts of musical programs over Station WMH. In 1921 Powell Crosley, Jr., got interested in radio, and by July 1922 he was the world's leading manufacturer of radio receiving sets, producing five hundred a day.

Meanwhile other local industries and commercial firms had recovered from the post-war recession, and they began skyrocketing their schedules. Pacing this upward swing were the automobile trades. In Cincinnati, besides the Ford assembly plant (1915), other automobile manufacturers had added sales and distribution facilities; four local factories were producing trucks; and the Sayers & Scovill Company was one of the nation's foremost manufacturers of motor hearses and ambulances. In 1923 the Chevrolet Motor Car Company and the

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Fisher Body Company, both General Motors Corporation units, opened assembly and manufacturing plants in Norwood.

By 1925 the valuation of Cincinnati industrial products totalled \$460,823,827; in Greater Cincinnati they aggregated 700 million dollars. Leading the list were soap, metal products, clothing, meat, printed matter, motor cars and trucks, bakery products, boots and shoes, and paints and varnish. Through 1927, through 1928, and through the first nine months of 1929, this blithe era of expansion went along, while a few economists wagged warning fingers, preaching the "day of retribution." At the time America was the world's center for capital and trade; its technological superiority assured an increasing number of orders, and Cincinnati workers, as elsewhere, were going home on pay days with bulging pockets.

The national buyer's market continued unchecked until September 1929. Then prices on the nation's securities exchanges slumped, and men realized that they had stretched the American economy to the breaking point. Efforts to avert a major financial disaster proved temporarily successful; investors recovered their earlier losses, started another surge toward getting rich quick on market stock. The stage was set for the biggest economic fiasco in United States history.

The debacle came suddenly. In the morning of October 29, 1929, Cincinnatians went about their daily tasks unsuspecting. At 9 a. m., when markets opened, the overnight break in prices caused panic, and the hysteria spread as thousands tried to save at least a portion of their investments by selling. By noon the country's financial and security markets showed scenes of bedlam; wild confusion swirled in brokerage and investment offices and on the floor of the Cincinnati Stock Exchange. Issues of even the most conservative Cincinnati manufacturers, along with the more speculative stocks, skidded downward to record lows. By 7:30 that evening, when local newspapers published extras screaming the day's final stock prices, national investor losses exceeded 20 billion dollars. Overnight efforts to "peg" the market proved unsuccessful, and during the following week, though the rate of decline was less abrupt, security prices continued to drop.

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So began another commercial and industrial depression. In Cincinnati business bumped along during the remainder of 1929. Despite financial losses, the year ended with business reporting the largest aggregate earnings in the community's history. The valuation of industrial products alone totalled \$933,290,890, and 114,068 factory workers received \$157,583,726 in wages—both an alltime peak.

But early in 1930 local industry and commerce began to feel the effects of a major depression. Payrolls were cut and thousands of operatives laid off. Across the nation rolled a wave of bank failures. The conservatism of Cincinnatians helped to ease the shock in financial circles here, and only three banks suspended payments. In 1931, as the economic upheaval reduced industry and commerce to debris, unemployed workers and professional people, their savings exhausted, were forced into the breadlines. In Cincinnati, as elsewhere, unskilled labor bore the brunt of the depression. Soon the alarming increase in the number of persons on public relief rolls made additional funds sadly needed.

Help came from State and Federal Governments. Federal funds, first appropriated by Congress in 1933, were expended for work projects sponsored by municipalities. The first of these programs, the Civil Works Administration (CWA), at its peak (January 1934) gave employment to 23,162 men and women in Hamilton County. Total expenditures were \$5,486,476. Later the Federal Emergency Relief Administration (FERA), a direct relief organization augmented by a work program, took over the work, and completed those projects left unfinished by CWA. At its highest rate of operation the FERA gave employment to about 4,500 men and women in the county. Then the Public Works Administration (PWA) was set up to help communities make public and semi-public improvements and in this way aid workers in the building and construction trades. At the same time the expenditures for materials boosted production in the durable goods industries. Soon after PWA began functioning, the Works Progress Administration (WPA) was organized to give work to employables on the direct relief rolls. Since late in 1935 the WPA has spent several millions of dollars for the

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continuance of its program in Cincinnati. Other Federal projects which have helped lessen unemployment are the Federal Housing Administration (FHA), sponsor of Laurel Homes, a seven million dollar model homes and slum clearance project; and the National Resettlement Administration (NRA), in charge of constructing Greenhills, a ten million dollar model town built on a tract of farm land near Mt. Healthy.

These huge expenditures of Government funds helped stave off economic collapse. In 1933 Greater Cincinnati industrial payrolls and production reached their lowest level; the 1,619 establishments reported a total of 67,257 employees, who earned \$64,608,254 in wages, while valuation of products was \$396,242,147. This represented a loss of 55,811 in employment and \$537,048,743 in valuation compared with the peak year of 1929. The percentage of loss in commerce and the professions equalled those of industry. Post office receipts of \$5,374,933 and the \$19,324,339 valuation of new mortgages were record lows.

The uncertainty and discouragement of 1933 are apparent in headlines excerpted from local newspapers:

Trading is Slow in Local Market.

See Scrip as Possibility.

Deposits Declared Safe as Withdrawals are Cut: Trade Goes on as Usual. (5 per cent per month withdrawal limitation.)

Ford Branch Here to Halt Operations.

Hoarding Prohibited as Fourteen Local Banks Reopen.

But the city muddled through. After the national "bank holiday" in March, the Federal Reserve Bank Act was revised to prevent future recurrence of financial panic. Fear was checked, and Cincinnatians started rehabilitation. Beginning in 1934 the steady flow of money from work relief payrolls, coupled with the spurt given business activity by resumption of work in the brewing and distilling industries (April 1933), brought gradual improvement. As Cincinnati industry began recalling former employees, wholesale and retail sales also jumped ahead until the fall of 1937. Then another economic recession hit the country. The steel and automobile industries,

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which had paced other units of manufacturing during the upward climb, led the downward swing and bore the heaviest reversals.

In Cincinnati business activity was spotty. Until December 1937 retail sales and bank clearings continued to gain, while general industrial activity registered losses in some cases as high as 10 per cent. Statistics compiled by the Cincinnati Chamber of Commerce show that local business activity for 1937 was 11.4 per cent higher than in 1936 and less than 12 per cent below the 1929 record.

Since 1935 the building trades, which reached a peak in volume of construction and wages in 1929, have shown signs of revival. The principal stimulant has been the huge Government expenditure for the slum clearance and model homes projects. Although the present shortage of homes is acute, real estate and building experts blame the lack of construction activity on the high cost of materials and labor. The construction industry in Cincinnati is subject to so many ups and downs that the status of the industry is often hard to determine.

In 1937 the average yearly wage of the nearly 100 thousand industrial workers in the Cincinnati area was about \$1,380. This about equalled the peak average of 1929. In 1933, when factory activity reached its lowest depression level, the average was only \$945 for Cincinnati's 68,247 industrial wage earners. By 1935 it had jumped to \$1,130. In 1937 for every dollar spent in wages about \$2.75 was added by manufacture to the value of the finished article. In 1935 it was \$2.53; in 1929, \$2.79.

Because of the wide variety of its industrial activity, Cincinnati does not have so seasonal a life as cities with fewer important manufactories. The city is represented in nearly 250 of the 319 industrial classifications listed in the census compiled by the United States Department of Commerce. It leads the world in the production of soap, machine tools, playing cards, and sporting goods, and takes high rank in the manufacture of office furniture, laundry machinery, printing inks, text books, women's shoes, work clothing and men's wear, sheet metal products, engineering appliances, coffins and burial caskets, lam-



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inated bakelite, overalls, printed work, meat, radio sets, beer and liquor, agricultural, pharmaceutical, and industrial chemicals.

Its muster roll of products is a round-sounding list of what America uses: pottery; watches and watch cases; hall clocks; jewelry; home and office furniture; neon and electric advertising signs; electrical appliances; time-recording instruments; butcher's store supplies and equipment; store and office fixtures and supplies; marble, granite, slate, and other stone products; common and face brick; patent and proprietary medicines or compounds; photo-engraving work; electrotypes; paints, lacquers, and varnishes; barber and beauty salon chairs and supplies; planing mill products; plumbers' supplies; hardware; cooperage; bungs; railroad repair and boiler shops; fire apparatus and equipment; hearses, ambulances, automobiles, trucks, and bodies; rubber goods; stamped and enamel ware; surgical and orthopedic appliances; glassware; window and door screens; paper and cloth shades; stoves, ranges, furnaces, and air conditioning equipment; awnings, tents, and waterproofed products; non-alcoholic beverages; boots and shoes; butter and dairy products; cigars; compressed and liquefied gases; concrete products; condensed and evaporated milk; confections and candies; glue, animal foods and fertilizers; flavoring extracts and syrups; flour and other grain mill products; various food products, teas, and spices; woolen goods; electric and artificial ice refrigerators; electrical machinery; aluminum products; pressure pumps and machinery; gasoline, oils, and greases; and many other articles.

In addition, such novelties as parachutes, toys and skates are manufactured; feathers and down are reclaimed, and goldfish raised successfully. The manufacture of a typewriter with characters in Braille, invented and perfected by two Cincinnatians, Mrs. Cecelia Dooin Wiedemann and George Grosse, a mechanic, was about to be started in 1938. The machine looks and operates like a typewriter. An electrically driven motor supplies the power for the operation of a cylindrical wheel which punches out the characters. Transcription is controlled by a keyboard.

Through 150 years Cincinnati has come to be seventeenth among America's cities in size, thirteenth in the value of its

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products. About 475 thousand persons live within the city proper, over 72 square miles; while industrial Cincinnati, comprising Hamilton and Butler Counties in Ohio, and Kenton and Campbell Counties in Kentucky, a total area of some five hundred square miles, has a population of almost a million. More than fifty million people live within the overnight trading territory of 350 miles. In 1935 the 1,742 establishments in the Cincinnati area produced more than 10 thousand articles, valued at \$625,779,625, and a total of 86,941 factory wage earners were employed, with payrolls aggregating \$98,927,191. That year the city's 6,948 retail stores had net sales of \$196,867,000, employed 26,517, and paid wages of \$24,776,000, while the 1,383 wholesale businesses had net sales of \$477,189,000, gave employment to 13,090, and paid \$22,505,000 in wages. The combined manufacturing, wholesale, and retail trade was more than \$1,300,000,000, while total business transactions, including professional and executive services, aggregated about two billion dollars.

At these dimensions Cincinnati has arrived, after 150 years. The city has reached maturity; its pattern is set. And the newer city in the hills calmly watches the industry that gave it life throw up smoke in the basin and along Mill Creek. From thousands of homes clustered on the bluffs above the old city her people still can watch the Ohio River turn between the hills on its way to the great "Father of Waters" who draws together our nation.

## Chapter II

### *Transportation • Ohio River and Its Floods • Canals and Railroads • City Carriers • Motor Bus and Truck Sys- tems • Air Lines*



THE OHIO RIVER first brought supplies on hand-propelled boats to Cincinnati. Then steam-driven paddles began to churn and the river bore packets gunwale-deep to the lusty young city on its north bank. The city was grateful; it sang songs of the river and made the boatmen its heroes, the dockhands its poets. Then the roads, the canals, and the railroads came; and the city forgot the river. But the Ohio had a long memory of trade and story and song; and today it relives its memory in a new tradition and bears a new commerce to an old city.

On a steep hill in Eden Park overlooking a sharp bend of the river, President Herbert Hoover on October 22, 1929 dedicated a stone obelisk commemorating the completion of a system of locks and dams insuring a nine-foot channel, which permits navigation at all times on 980 miles of river. Proposals for the work had been laid before Government officials on October 8, 1895, by the Ohio Valley Improvement Association. Now manufacturers can ship freight by way of the Ohio River and its tributaries, and at New Orleans transfer it to ocean-going craft. Several steamboat and barge-line companies have landings and warehouses along the river front at Cincinnati, and they operate steam and diesel-powered boats on regular schedule from the city. During the first eight months of 1937 merchandise received and shipped by boat at Cincinnati totalled 2,927,828 tons.

Cincinnati, the division point, or terminal, for seven great railroads, owns the Cincinnati Southern Railroad (Southern

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Railway System), a 340-mile steam railroad from Cincinnati to Chattanooga, Tennessee, operated under lease by the Cincinnati, New Orleans, and Texas Pacific Railway.

A number of interstate and intrastate bus lines and motor truck drayage concerns operate routes penetrating to every corner of the country; an electric interurban line runs to Columbus; two airlines reach all sections of the nation; bus, electric streetcar, and taxicab systems touch all major parts of the city and suburbs; and motor busses, electric trolleys, and five bridges connect the city with communities in northern Kentucky. In 1937 Cincinnatians owned 88,668 passenger automobiles and 11,683 motor trucks; 120 thousand vehicles were registered in Hamilton County.

Cincinnati's combination of good rail and waterway facilities has helped make the city the soft coal capital and one of the leading coal distributing centers in America. Each year about three million tons of the fuel, carried by barge from West Virginia and Kentucky mines, is handled in local yards. A yearly burden of some 32 million tons of coal is hauled by railroad through the city.

How to transport merchandise safely and cheaply was one of the problems Cincinnati's pioneer manufacturers had to solve. Although they tried hard, their first attempts were rather ineffectual; they set pack horses on bridle paths, clumsy wagons on roads, and crude boats on neighborhood streams and creeks. As early as 1792 the first commercial ferry was poled laboriously across the Ohio from Cincinnati to Newport; and the pioneers joyfully nailed together more wagons for Kentucky trade. At the time practically all the merchandise sold here was brought from Philadelphia; stock was sent for, or fetched in person, over a road which ran down through Lexington, Danville, and Crab Orchard, Kentucky, to Cumberland Gap, then shot northeast through Abingdon, Staunton, and Winchester, Virginia, to Baltimore, Maryland, and finally reached Philadelphia. Waggoners making this trip were on the road for 30 days.

More people, increased manufacturing, and improved farming soon piled up the need for better ways to and from market. Dirt roads were cut through the wilds, then turnpikes, and

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finally toll roads, and the infant city was no longer lost in the woods beside the river. But these roads did not fully meet the need. In 1825, therefore, the city started digging the Miami & Erie Canal; for nearly half a century it was Cincinnati's main route to the interior of the state.

After Cincinnati's streets were laid out, road building lagged, then picked up again about 1830 with the era of toll roads. These roads, constructed with private capital, had gates set at strategic places; waggoners had to pay fees before they could travel through. The toll ways bearing the heaviest traffic were the Cincinnati, Columbus, and Wooster Turnpikes, connecting Cincinnati with the National Road at Columbus; Milford Road, from Chillicothe to Cincinnati; and Harrison Road, from Cincinnati to Brookville, Indiana. Later these roads were taken over by the state and incorporated in the present state highway system.

In the 1880's the electric streetcar took workers to and from their homes and sprinkled the suburbs with new homes. The introduction of auto busses (about 1916) also helped build outlying residential districts and new manufacturing zones. Almost immediately local transportation systems chartered motor coach routes to accommodate the heavy traffic. During recent years several more auto coach routes have been added.

During the past three decades the factory area of Cincinnati has been enlarged primarily because of the Greater Cincinnati switching district, a co-operative arrangement permitting interchange of cars between competing railroads. About 1920 the introduction of motor trucks hastened expansion of new manufacturing zones. Because of its greater speed in door-to-door delivery, the truck has almost entirely superseded the horse and wagon; it has brought about the quicker and cheaper exchange of light freight.

Today all these major transportation systems serve Cincinnati. The street railway system, with its electric streetcars, motor coaches, trackless trolleys, and taxicabs, and the independent bus and cab lines transport workers to and from homes, offices, and factories; the railroads and motor truck systems bear the heavy and light freight, bring in the raw materials

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for factory workers to change into saleable merchandise, and along with the motor bus, the airplane, and the automobile, scatter Cincinnati salesmen everywhere.

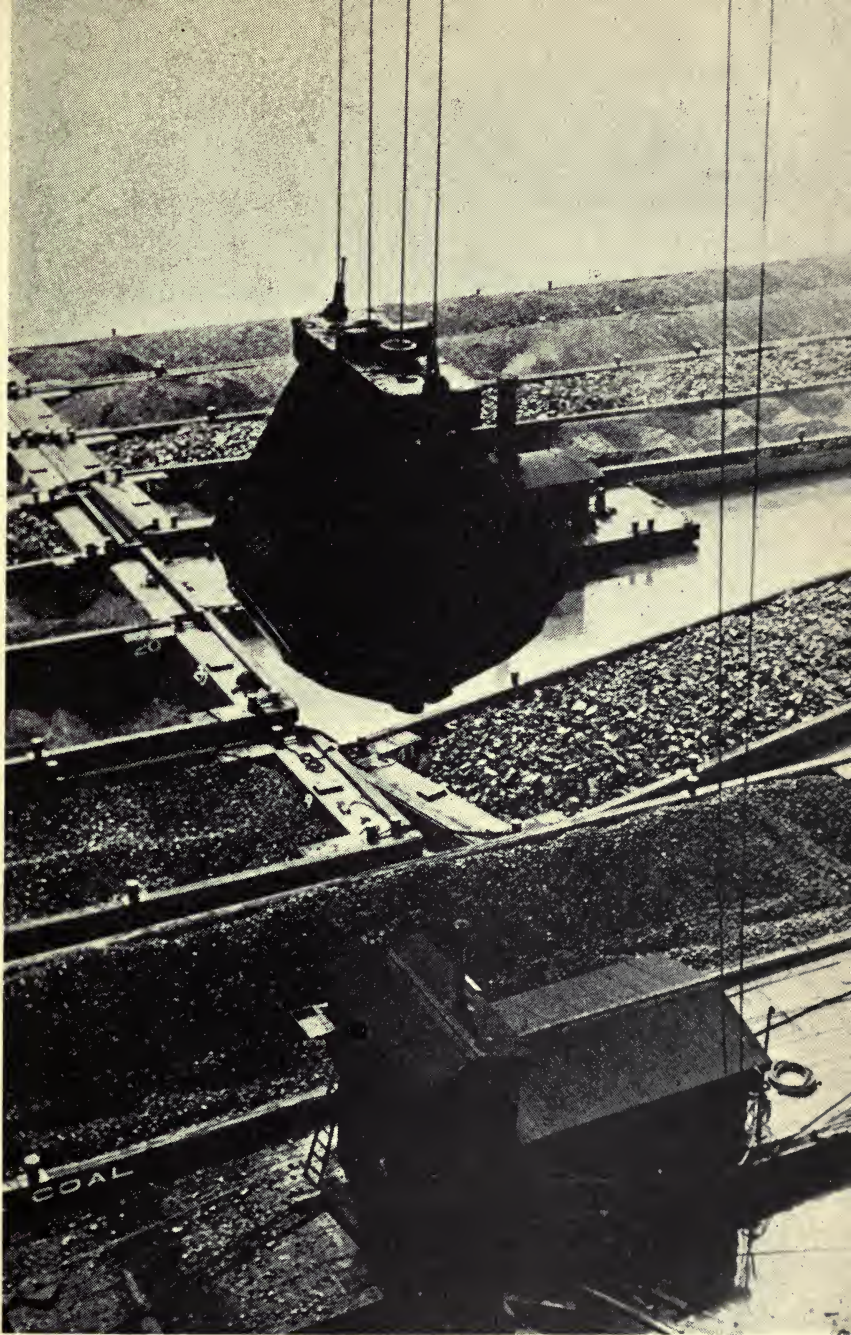
Transportation runs up big payrolls. In 1937 the railroads with terminal facilities in Cincinnati had about 5,200 employees and an estimated annual payroll of \$9,400,000; the intercity bus lines employed about two hundred men, while wages amounted to 300 thousand dollars; the intercity motor truck freight lines gave employment to about 3,500 workers, earning an estimated \$5,500,000; the airlines had about 30 employees and a payroll of \$80,000; the packet and barge lines gave work to about five hundred, with an estimated payroll of \$400,000; and the Cincinnati Street Railway Company and the independent bus lines had jobs for about 2,750, who earned more than \$3,500,000.

### *The Ohio River*

KEEL BOATS, FLATBOATS and makeshift craft hewn from logs first transported freight and passengers on the Ohio and its tributaries. In this primitive way traders were able to ship upriver 4,457 barrels of flour from February to June, 1802.

The first line of keel boats plied a regular schedule between the city and Marietta in 1794. Earlier, the flatboat had carried other cargo besides passengers, and often it was the retail store at which river town inhabitants bought their household stuffs. During the first eleven months of 1788 more than nine hundred boats descended the river, carrying a roughly estimated 18 thousand passengers, eight thousand horses, 2,500 cattle, a thousand sheep, and as many hogs. Many of the boats did double duty; when they reached Cincinnati they were torn apart, to become the lumber for homes, barns, furniture, and sidewalks.

Shippers had to be satisfied for more than a decade with these uncertain methods of transportation. Then steam was applied to the propelling of watercraft. The *Orleans*, designed by Robert Fulton (inventor of the first steamboat) and built at Pittsburgh, paused at the Public Landing here in October, 1811, on its maiden trip to Louisville. The *Orleans* weighed



UNLOADING RIVER COAL



PUBLIC LANDING (1860, 1938)



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three hundred gross tons, was equipped with a low-pressure engine, and cost about \$38,000. As she puffed up the Ohio Valley, she opened a new era for Cincinnati, an age when her life was that of the river.

Records show that in 1835 some 2,237 steamboats tied up at the Cincinnati Public Landing. As river traffic grew thick it brought commerce to Cincinnati—and also catastrophe. In 1838, for instance, an explosion wrecked the *Moselle* opposite Cincinnati, killing some 80 of the holiday crowd which packed its decks. The sidewheeler had gone upstream from the Public Landing to pick up excursionists waiting on the Kentucky shore. With the steam pressure unusually high, the pilot was preparing to back into the stream when the blast occurred. Another disaster, which took the lives of six passengers trapped in the cabins, happened at the Public Landing on March 31, 1892, when the *Golden Rule* suddenly went up in flames a few minutes before it was scheduled to leave. In less than an hour the boat was a heap of charred debris.

But river life, with its diplomatic captains, its suave poker sharks who would bet a grand on a pair, its whip-tongued mates, and its crooning deckhands, went on undeterred. The Cincinnati wharves were exciting, noisy places. Saws whined and hammers clattered rhythmically as craftsmen busily shaped and fitted timbers into "floating palaces." Launchings were the social events of the day; food and drinks were free. In 1872 (probably the peak year) 54 large boats, costing well over a million dollars, were first slid into the water at Cincinnati. The most important boat builders were S. T. Hambleton & Co., Johnston, Morton & Co., John Litherbury, the Nile Works, and Miles Greenwood & Co.

In its best years the Cincinnati steamboat building industry employed about three thousand workers, most of them craftsmen who shaped their careers in the boatyards. Today the city does not put together steamboats, but since 1910 it has profited from the building, repair, maintenance, and sale of small pleasure craft. When the last ship's carpenter in the vicinity of Cincinnati, Alonzo Bayless, died October 13, 1937, aged 90, the last of Cincinnati's age of steamboat building went with him.

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The use of towboats for handling river coal began in the Cincinnati area in January, 1907 when the *Sprague* took 60 coal boats and barges, carrying a load of 70 thousand tons, from Louisville to New Orleans. From this experiment came a vast river trade in coal. At Cincinnati this coal commerce has gone steadily upward; on several occasions the annual receipts have exceeded three million tons. In 1937 the city received 2,606,044 tons.

Before the Ohio River was entirely canalized, navigation was often halted by ice floes or low water. The greatest economic loss came during the winter of 1917-18, when boats could not travel the Ohio for 10 weeks. At Cincinnati the Public Landing was covered with splinters of boats and barges, and many a sunken vessel lay nearby on the river bottom. Thousands of blocks of ice even floated down to Memphis, hundreds of miles away on the Mississippi River. The aggregate damage to shipping was estimated at seven million dollars.

In 1929 completion of the Ohio River locks and dams sharpened the interest of local shippers; since then the tonnage carried by packet and barge has been stepped up considerably each year. In 1935 shipments on the Ohio and its tributaries amounted to 46,411,655 gross tons—more than had been towed through the Panama Canal that year. A new Ohio River record was made during the first six months of 1937, when 10,100,000 tons of cargo were hauled in 1,300 trips, nine hundred of which were by towboat and barge and the remainder by the 87 packets still in service.

Modern steamboating on the Ohio River has turned from musing about its memorable days as an individualist to participating in an exciting present in co-operation with industry, whose barges carry coal, iron, steel, oil, sand, gravel, cement, and automobiles. Shipment of oil, the latest industrial product to be hauled by river barge, has increased from 82 thousand tons in 1924 to 1,961,000 tons in 1936. Oil tank barges from the south help fill the giant storage tanks of local oil distributing companies, while other boats, stocked with gasoline from pipes of the Gulf Refining Company's plant near North Bend, deliver their cargo at sundry points along the river.

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Besides the Greene Line Steamers, at the foot of Main Street, operating packet and freight service, the larger river transit concerns are Mississippi Valley Barge Line Company, Front and Harriet Streets; Ohio River Transit Company, foot of Sycamore Street; and Ohio River Company, Addyston. Many of the larger coal companies have their own barges and towboats.

Some of the glamor of river life in the 1870's was recaptured at Cincinnati in 1928 when Captains Frederick Way, of the *Betsy Ann*, and Tom Greene, of the *Chris Greene* (both boats sternwheelers in the Cincinnati-Pittsburgh trade) agreed to try the mettle of their packets in an official race. The boats had raced before—when they found themselves beside each other going downstream; but the crews of both steamers claimed victory. Roustabouts on the *Betsy Ann* pointed to a pair of antlers hanging in their salon, antlers signifying victory in races on the Mississippi River.

On the afternoon of July 25, 1928 the race was run over a 21-mile course from the Public Landing to New Richmond between cheering thousands on both banks of the river and on accompanying boats. The onlookers saw fine boats churning the river; they could not see the sooty, sweating firemen cramming coal into the hot mouths of the fireboxes so that the engineers could catch every possible breath of steam. The crews, it is said, had bet every penny they could scrape together on the outcome of the race. The contest was fairly even until the sternwheelers passed Coney Island. Then the *Chris Greene* gradually pulled away, until at the finish it was about a quarter-mile ahead. The prize, the old pair of antlers, was transferred from the *Betsy Ann* to the winner.

When Captain Way asked for a return match, Captain Greene accepted the challenge. On July 16, 1929 the second test was run over the same course. Representatives of the leading news services and newspapers saw the speed run, and the contest had national publicity. The *Tom Greene*, of the Greene Line fleet, a dark horse entry, was the winner, but the margin of victory was less than 35 feet. A third and final race was run from Fernbank Dam to Coney Island on June 28, 1938. This time the *Tom Greene* ended up four miles ahead of the *Betsy Ann*.

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The prize was a bronze plaque formerly in the salon of the *Robert E. Lee*, which had beaten the *Natchez* in the historic race from New Orleans to St. Louis in 1870.

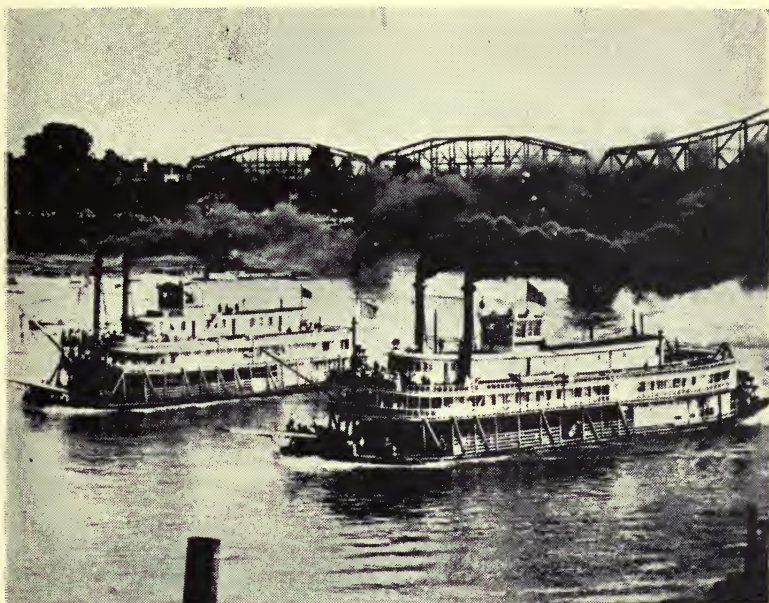
### *Ohio River Floods*

THE OHIO FLOODS nearly every year, usually without inflicting much damage. But in 1832, 1884, 1913 and 1937 losses were immense. After each flood, however, business has been lively after the river has gone back to bed. In 1832 the city faced an acute food shortage for several weeks when practically every warehouse in the high-water district was gutted by the river. After the 1884 and 1913 floods many industrial plants and wholesale warehouses were removed from the high-water district because of the heavy losses to stocks and equipment and the subsequent loss of trade.

In January 1937 the Ohio River was in especially high spirits; it came up the terraces, crawled into the top stories of homes and the nether parts of tall business houses, and left reluctantly after doing damage to the tune of 25 million dollars.

The actual loss to industry in wages, cancelled orders, and destroyed records has never been accurately computed, but the total was big. One large manufacturing concern in its annual report to stockholders wrote off 250 thousand dollars in flood losses. Owners of factories in the Bottoms, East End, Riverside, Brighton, and Cumminsville industrial areas suffered the heaviest losses. In Cumminsville a disastrous fire which burned for 48 hours started when oil and gasoline, spewn on the water by overturned storage tanks, ignited. The fire razed several factories and dwellings, and caused damage estimated at more than two million dollars. Three months after the marauder left, however, only a few watermarks on buildings were visible evidence that the river had stopped to pillage Cincinnati.

At the November 1937 Cincinnati election voters approved a five million dollar bond issue, the proceeds of which are to be used for setting up a floodwall or otherwise protecting the city's low-lying sections against future river raids. Proposals are



**GREENE BEATS BETSY ANN (1928, 1930)**



CANAL DAYS

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now being studied by engineers, and additional building funds will probably be appropriated by the Federal Government after a flood-protection plan is approved by United States Army engineers. So in the future Cincinnatians may put up a wall between themselves and the Ohio River. The waterway was friendly when it took their ancestors on its back through nature's wall in the Alleghenies and bore all their goods, then suffered their taking the trees from its banks and spewing it with refuse from their sewers and industrial plants. But there is a limit to friendliness, and the river periodically exacts its toll.

### *The Canal Era*

AS EARLY AS 1815 Dr. Daniel Drake was urging the construction of a canal from Cincinnati to Toledo, but it was not until five years later that Cincinnati business men were smitten with the canal mania rampant in the East. From a mass of proposals emerged plans for the Miami Canal, later known as the Miami & Erie Canal, and in 1825 the Ohio legislature authorized the digging of the waterway. After the necessary capital had been subscribed, the first spadefuls of earth were turned at Middletown (July 1825) by Governors Morrow of Ohio and Clinton of New York.

Construction work from Middletown to Cincinnati was rushed. By 1827 the locks had been placed and the water let in; slender boats were being drawn slowly along by horses or mules pulling in tandem over the narrow towpath. The first two boats, the *Clinton* and *Washington*, heavy with merchandise, left here for Middletown on November 21, 1827. Though the weather was bad, it was a bright day for the promoters and for the local tradesmen, for the hopes and the future of many a Cincinnati business depended upon the success of the canal. The waterway lived up to all expectations and attracted many new industries.

The *Clinton*, carrying freight and passengers, made the first trip from Middletown to Cincinnati. Cargo on the boat included flour, whisky, pork, and pork barrels, all consigned to A. J. Gano. The first boat built exclusively for passengers

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slid into the canal here on December 17, 1827. Freight boats hauled sand, lumber, dressed pork, livestock, ice, and sometimes an entire cargo of from 350 to 450 barrels of whisky. Ice came to Cincinnati from basins fed by canal waters a few miles north of the city, and sometimes from Toledo—the waterway reached there in 1840—where it was hacked from Lake Erie.

For 60 years the canal boats were drawn by horses or mules; then came the “electric mules” and the gasoline boats, used only for a short time before the canal was abandoned. The truck of the electric mules ran on rails parallel to the canal. Though these electric mules were equipped with twin motors equal to 80 mule power, they could only go about as fast as the horses they replaced—three or four miles an hour. Traffic on the canal reached its peak in 1851, when tolls collected from the boat operators amounted to 352 thousand dollars. Thereafter the volume of traffic slowly diminished.

Because the Miami & Erie Canal was a success, another company built the Whitewater Canal from the National Road (now US-40) near Cambridge City, Indiana, to Cincinnati. Sections of the Whitewater River were used for the right-of-way, and at one point, near Cleves, the route ran for 1,900 feet through a tunnel. The first boats cleaved its waters in 1843. The canal's span of usefulness was short; after several disastrous floods on the Whitewater River had destroyed boats and valuable cargoes, the waterway was abandoned in 1860. Although stockholders of the operating company faced heavy financial loss when the waterway was given up, the sale of a section of the canal to the railroads averted complete ruin. Rail line operators used the “ditch” as a right-of-way for entrance to the old Grand Central Station (closed in 1933) at Third Street and Central Avenue.

From 1830 until 1860 turnpikes and canals were regarded as the last word in transportation. Elaborately decorated passenger boats, drawn by fast horses, were placed in service.

In 1888 Cincinnati went Venetian for its Centennial Exposition (July-November). Over the canal from Thirteenth to Fifteenth Streets, a distance of 1,248 feet, it arched Machinery



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Hall. The interior was a gala transplanted Venice. Four bridges over the canal ran through the middle of the building, and gondolas and singing gondoliers were part of the exposition entertainment. Centennial promoters proudly announced in newspaper advertisements that the building became bright at nightfall with "innumerable jets of gas and electric lights."

Near the close of the nineteenth century it became apparent the Miami & Erie Canal had reached the end of its days as a common freight carrier. After the railroad had sapped river commerce, the operating company decided to close the waterway. In 1895 freight boats completed their leisurely final trips. For some years thereafter, however, some manufacturers continued to move merchandise along the waterway near Cincinnati for a purely local trade.

On July 28, 1917, many years after the official closing, the Free Setters, a group of residents whose homes banked the old waterway, took an excursion on one of the few remaining boats. While the horses footed slowly along, pulling a craft whose decay was camouflaged with paint and bunting, former Mayor and Judge Frederick S. Spiegel extolled the long service of the artificial stream which had been the city's greatest common carrier. It was the swan song of the canal.

So ended Cincinnati's canal era—days when small boys and men fished from the banks, when "swimmin' holes" were select places in the dirty canal, when rescues seldom made the front page. Those were the times when the Texas and Mohawk boy gangs battled and then ran off at the cry of "Cheese it, the cops!," when "Over the Rhine" families packed picnic baskets and went boating, when children and grownups joined hands in skating or sleighing on the canal ice in winter. Today a parkway with islands of greenery follows the route of the old canal to the suburbs; along it stream automobiles and busses carrying thousands of Cincinnatians. The boulevard has an expensive foundation. Using the canal bed as right-of-way is a \$6,500,000 subway, practically completed in 1925, still unused in 1938, but available for rapid transit whenever traffic conditions in the future may require a lower level for mass transportation.

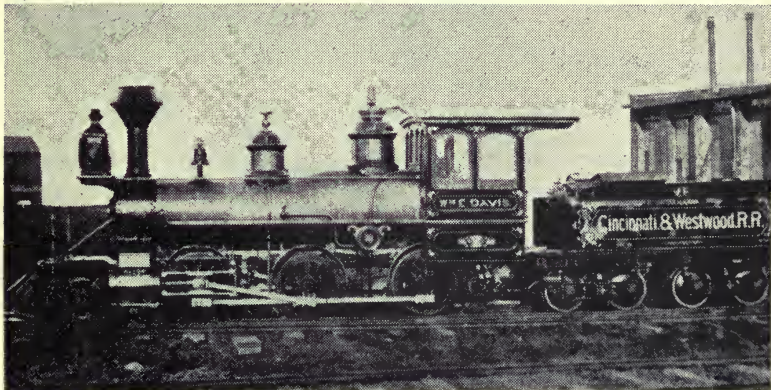
### *Railroads in Cincinnati*

CINCINNATI SHIPPERS AGAIN faced the problem of providing faster means of transferring cargo in the 1830's. At the time, boats on the Ohio River and the Miami & Erie Canal were carrying most of the industrial cargo. Because of the lack of good roads and the limited capacity of wagon trains, great sections of trading territory in the neighborhood of Cincinnati were untapped and plans for market expansion were at a stalemate.

Although the East had a railroad in 1827 it was not until August 28, 1830 that an American-built locomotive was put into service by the Baltimore & Ohio Railroad. Gradually the iron horse proved its worth as a common carrier and disturbed canal and river boat operators, who foresaw the death of the canal. Since business had recovered from five years of monetary crisis, local capitalists took quickly to railroading. They formed companies, obtained charters, started building steam rail lines, and carried the city into its railroad era.

Rivalry between railroad promoters was sharp. The group sponsoring the Little Miami Railroad (now part of the Pennsylvania Railroad System) scrambled ahead of the others, got a state charter, and started construction. The first train carrying passengers and freight from the city made its way gingerly over a 30-mile section of the Little Miami Railroad in 1843. The trackage was extended to Xenia the following year, and in 1846 to Springfield, the terminus. One eight-wheeled locomotive, two passenger coaches, and eight freight cars ran over the strap rails. Still, it was a beginning, and new rights-of-way soon radiated fanwise from the city. All equipment used by the Little Miami Railroad, even the wood-burning locomotive, was fabricated by Cincinnati workmen.

Promoters of the old Cincinnati, Hamilton & Dayton Railroad (now part of the Baltimore & Ohio Railroad System) were second to obtain a state charter. The C. H. & D. put trains on its tracks in 1850, and the same year the Louisville & Nashville Railroad began service from Covington. In 1851 the Cleveland, Cincinnati, Chicago & St. Louis Railroad (Big 4



EVOLUTION OF RAILS (1850, 1900, 1938)



THE GAY 90's

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Route, now part of the New York Central Lines) laid a road-bed from Cincinnati to Indianapolis, and trains soon ran on regular schedule between the two cities.

Railroad building lagged during the next six years. In 1857 two additional lines, the Ohio & Mississippi (Baltimore & Ohio System) and the Marietta & Cincinnati, with the help of loans from the city completed rights-of-way, and announced the beginning of train service.

Greater use of rail lines by travellers and shippers instantly precipitated a keen struggle between railroad and canal and river boat operators. In some instances the agents of competing lines resorted to cutthroat methods in order to get passengers and freight. Cut-rate rail, canal boat, and river packet tickets were sold openly; in time the bribery and rebating on freight shipments became a scandal which came to the ears of Congress and led to an investigation. In 1887 Congress passed an act to regulate commerce—a law which brought forth the Interstate Commerce Commission (1888), armed with the power to control rates and practices. This regulatory and policing agency now rules the policy of railroads, telephone and telegraph companies, and airplane, bus, and motor truck lines doing an interstate business. More recently, state utility commissions have managed intrastate commerce under regulations patterned after those of the Federal agency.

After Government regulation became effective (and partly because of financial stress in the nation), stockholders of many smaller railroad companies near bankruptcy approved proposals for the merger or absorption of their systems by the larger rail corporations. Then followed the golden age of the railroad, an era of great expansion programs, of new construction and equipment.

The beginning of the Civil War ended temporarily the building of new railroads in Cincinnati. But plans had been drawn, bonds floated, and work started on the Cincinnati Southern Railroad. The job of building the roadway was resumed when the conflict ended, and in five years the entire project was rushed to completion at a cost of about 30 million dollars. In 1870 the first trains over the route left Greater Cin-

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cincinnati (Ludlow, Kentucky). Steam trains were soon carrying more traffic, both passenger and freight, than the river and canal boats combined.

But unwise tracklaying through small towns anxious for service made for haphazard, wasteful building. Short line routes were laid from Cincinnati to suburban villages, but the narrow-gauge tracks got no right-of-way into the basin of the city. Afterwards several roads, including the Cincinnati & Westwood Railroad tried to recapture passenger and freight trade by rebuilding roadbeds to conform with the standard-gauge tracks of other lines.

By 1910 passenger service on the few remaining short roads had been abandoned and freight loads were small; for another competitor, the motor truck, had entered the transport lists. In 1920 the C. & W. Railroad discontinued freight service. A gasoline-driven car now makes a round trip daily so that the line can keep the charter for its right-of-way.

Like the Van Sweringens in Cleveland, the short line railroad operators in Cincinnati helped create suburban towns in the Cincinnati area, many of which have since been annexed to the city. Investment losses during the narrow-gauge period were great, but the advances made toward solving the suburban transport problem partially offset the financial setbacks.

After a century of growth, and of struggle against new competitors and against time, which has a way of antiquating equipment and scrapping once-urgent needs, American railroads have achieved almost perfect co-ordination. A car of Cincinnati merchandise leaving the city at 5 p. m. will be "spotted" on a siding at its destination, three hundred or more miles away, on the following morning. Freight trains of a hundred to 125 cars—in 1937 proposals to limit trains to 75 cars were turned down—with a paying daily load of from four to five thousand tons speed away from the city, distributing from coast to coast the products manufactured here. In 1938 there were 85 freight stations in the city and vicinity, with trackage of more than 1,200 miles. The normal interchange of loaded freight cars in the Cincinnati area averages about 20 thousand weekly. In order to meet the strong competition of the motor bus and the

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air liner, railroads have launched big programs to attract passengers. Schedules have been speeded up; air-conditioned coaches are the rule rather than the exception; and pullmans have the conveniences of a modern hotel. Scientists and inventors employed by the railroads are investigating ways of making travel by rail the safest means of getting about.

The latest advance in railroad freight service is the door-to-door pickup and delivery of merchandise, inaugurated in 1934 by Eastern lines. Most of the companies operating locally have contracts with transfer concerns to make these deliveries. In January 1938 the first diesel-motored locomotives to be used in the vicinity of Cincinnati ran on the tracks of the B. & O. Railroad.

For many years Cincinnati's main railroad terminal (Grand Central Station) was an old, inadequate building at the southwest corner of Central Avenue and Third Street. When through tickets called for connections between competing lines, travellers were often transferred to the Pennsylvania Station. After years of talk and planning, the railroads decided to invest in a new terminal for a stable city. Their faith in the future of Cincinnati was largely responsible for the spending of more than 45 million dollars in the construction of the fine new Union Terminal and the relocation of hundreds of miles of freight sidings. Work was started in 1929; by April 1933 the terminal was ready for use. The terminal spreads a total trackage of 94 miles; it can accommodate daily 216 trains and more than 17 thousand passengers.

Railroads with Cincinnati service facilities are The Baltimore & Ohio Railroad, a national combination of many small lines; Big Four Route (New York Central Lines); Chesapeake & Ohio Railway Company; Louisville & Nashville Railroad Company; Norfolk & Western Railway Company; Pennsylvania Railroad; and Southern Railway System. All passenger trains entering or leaving the city use the Union Terminal. All lines, except the Southern Railway, use the Terminal roundhouse facilities. The Southern Railway has its own roundhouse and repair shops at Ludlow, Kentucky, directly opposite Cincinnati.

## *Ohio River Bridges*

THE CIVIL WAR turned Cincinnati's attention again to the South, and its business leaders urged the construction of bridges to span the Ohio River. Work on the Suspension Bridge, started several years before the beginning of the war, was halted in 1861 by the scarcity of labor and the lack of capital. In 1862, when it was believed Confederate forces might try to raid the city, the United States Government stretched a pontoon bridge alongside the stone abutments and on this transported troops and supplies. Although the raid was never made, the pontoon span proved the value of a bridge across the river. After North and South had battled to a finish, work on the structure was resumed. The bridge, then the longest suspended river crossing in the world, was opened to pedestrian traffic on December 1, 1866. A month later, on January 1, 1867, the first wheeled vehicles rumbled over the Ohio River at Cincinnati.

The Southern Railway bridge was the second span to be completed, and in 1882 the first trains made their way slowly across it. The L. & N., the Central, and the C. & O. bridges were originally designed only for railroad traffic, but vehicular and pedestrian roadways were added later. In 1938 the auto roadways of the L. & N. and C. & O. spans were the property of the Kentucky State Highway Department. Both will become free bridges after tolls collected from autoists and other users retire the bonds issued by the State of Kentucky when it bought the structures (1935-1936).

## *Street Railway System*

WHEN THE CORPORATE boundaries of Cincinnati were pushed outward by the huge increase in population and the expansion of industry about 1850, it became difficult for citizens in far-flung suburbs to travel about the city. Previously, workers had either to walk to and from their homes or use horse-drawn hacks and omnibusses. The more affluent strutted their own buggies on the cobblestones. In 1859 five companies



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(predecessors of the present Cincinnati Street Railway Company) organized to operate horse-drawn streetcars. The charters granted them by the city called for the establishment of service in the various sections of the community.

The horsecar days were lively. While horses pranced, bustles bobbed, and silk toppers tipped with courtly grace, the car operators openly fought each other for passenger trade. Occasionally the horses became tired and balked; on other occasions passengers helped lift the cars back on the tracks when the vehicles were derailed by mud or rubbish in the street.

This method of operating jolting "boxes on wheels," stuffy in summer and so cold in winter that passengers used straw to keep their feet warm, continued until the introduction of the electric streetcar by the street railway company and a number of independent lines in 1888-89. By 1896 all 33 lines were merged, making possible the present co-ordinated system.

In 1869 disgruntled property owners in the "Over the Rhine" section of Vine Street delayed for a time the granting of a charter to the Queen City Line (Vine Street). The *Gazette* disdainfully reported the reactionary attitude of these people, who raised a rumpus in open meetings of the city council. Campaigns to win over the dissenters were successful, and the charter was granted.

Owners of the horsecar lines had labor and political troubles only a few months after they put their cars on the streets. The first difficulty came on March 21, 1860 when drivers on the Third Street line went out on strike, demanding a wage increase. The *Gazette* reported the company had announced a 25-cent daily wage increase, but at the same time had added four hours to the working schedule; so that a driver had to work 18 hours to earn \$1.25. On March 27 workers on the other four lines joined the strike. Community sentiment was nearly unanimous for the drivers. Several weeks elapsed before peace and regular service were restored.

On May 15 that year, spokesmen for the five operating companies asked city council to amend existing contracts. The concerns wished to be relieved of the expense of paving streets used by the cars, offering, instead, to keep repaired that part of

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the streets within the tracks and one foot on each side. (In time the city consented, but during recent years the operating company has periodically asked further reduction in its responsibility for paving.) They also demanded the repeal of ordinances calling for the annual payment of \$25 for each car and one cent tax for each passenger. In return for these concessions, the spokesmen assured the councilmen that rates of fare would be reduced. Council agreed to all of this.

As early as 1860 newspapers campaigned against speeding. That year, after a pedestrian had been killed by a horsecar, the *Gazette* demanded editorially that the city enforce the ordinance limiting the speed of streetcars to six miles an hour. The paper claimed drivers did not try to slow down at intersections and in other ways refused to drive safely.

Competition for passenger trade during the 1860's inspired many chuckles. On summer evenings one enterprising car driver hired a band to give concerts. So popular was this driver, newspapers reported, that there was not an inch of empty space inside the car; and often the roof was precariously packed with undignified riders.

In 1913 street railway employees struck for union recognition, increased wages, and better working conditions. Violent conflict followed. After several hectic weeks a compromise settlement was reached and peace restored. Since then all such difficulties have been negotiated peacefully by employers and workers.

For 10 years the horsecars answered the city's needs for local transportation. Then in the 1870's came the day when venture-some souls averred that the steam engine was better than the horse for moving streetcars. An operating company was formed and a "dummy" railroad set up on Crawfish Road (Delta Avenue); and for many years *Joe Bell*, steam locomotive, pulled passenger cars between Sportman's Hall, in Pendleton, and Mt. Lookout Park. In 1897 the route was abandoned.

Since they were an intermediate step between the horsecar and the electric streetcar, the incline and the cable cars were also important in shaping the present co-ordinated city transport system. During the 1870's, after a fecund city had almost



HORSECAR, FIRST TROLLEY AND PARLOR CAR



CITY TRANSPORTATION OF TODAY

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doubled its population in 20 years, newer methods for handling this added traffic were needed. Experts were puzzled; for horses could not pull loaded cars up the steep grades of Cincinnati streets leading to hilltop suburbs. The inclined planes solved the problem. The first incline, connecting Mt. Auburn with the basin of the city, was opened in 1872. Then planes climbed Price Hill, Bellevue, Mt. Adams, and Fairview.

By 1880, when the present Cincinnati Street Railway Company was organized, Cincinnati was known as the "city of inclines." On summer evenings society gathered at beer gardens like the Highland House, Bellevue House, Price Hill House, and Lookout House, perched on the hills beside the inclines, sipped their beers, and, with the serenity that only height can give, maintained that the hill-locked city beside the river was a fine place. In 1938 only two inclines were left. The Mt. Adams plane carried streetcars and passengers, and the Price Hill incline, only passengers.

Next came the cable cars. In 1885 the Walnut Hills cable, five miles long, driven by a steam engine in a power house at the top of the Gilbert Avenue hill, replaced the horsecars. The Sycamore and the Vine Street systems were built later. The Vine Street line continued operating until 1898, when, during a G.A.R. encampment, the cable broke and tied up traffic on the entire system. Thousands of veterans were marooned at the Zoo. The next day the cable line was in the discard and new electric cars were immediately put into service. The cables on these systems ran through a groove between the tracks; a "grip" on each car clutched the steel strand and pulled the vehicle along. In order for the car to stop, the grip had to be released and the hand brake manipulated by the motorman.

Local transportation systems have given good target practice to critics. Complaints range from lack of service in particular communities, poor service in others, and delays in service, to excessive rates. Despite this difficulty and the interference of politics, the Cincinnati Street Railway system has grown steadily until it is now offering a comprehensive transport service to all sections of the city and suburban areas. The corporation added new equipment quickly when new transport facilities, such as

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motor coaches and trolley busses, were invented; at the same time it has improved existing equipment.

From 1900 until 1915 the Cincinnati Traction Company ran several parlor cars, specially built vehicles to be chartered for picnics, outings, or sight-seeing in the city. Riders were served ice cream, peanuts, and popcorn. During the same period cars leased by the United States Government transported mail to and from substations and the main post office.

The next advance in local transportation—which may in time obviate the less heavily travelled electric streetcar lines—was the introduction of the motor bus. Although experimental routes had been operated as early as 1916, the first put to regular use by the Street Railway Company came in 1926. The first busses were noisy, smelly, cumbersome for the driver to operate in traffic, uncomfortable for the rider. Progress in design and performance, however, was rapid, and by 1938 auto coach manufacturers had devised a vehicle as comfortable, though not so large, as the electric car. Because it is still in the experimental stage, however, the motor bus is more costly to operate.

Since 1859 the growth of the Cincinnati Street Railway Company has paralleled that of industry and the city's increase in population. Extension of old routes and construction of new ones have made possible the moving of factories from the crowded bottoms to the Millcreek Valley, Oakley, Norwood, Western Hills, East End, and suburban villages.

The Street Railway Company operates about five hundred streetcars, a hundred motor busses, and 17 trolley busses; it owns a repair and maintenance shop, covering 5½ acres, on Mitchell Avenue, and controls Cincinnati Taxicabs, Inc. (Yellow, Ferguson, and Davis companies). Independent local bus lines run about 75 coaches.

Since 1925 the Cincinnati Street Railway Company has been in the transportation business on a service-at-cost plan, which assures a six percent return on invested capital. Through a public utilities director the city represents the car rider in disputes and regulates policies of the corporation. Under the plan fares may not be increased unless income of the company fails to meet expenses. To avoid frequent changes in fares, there has

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been established a control fund, to which surpluses are added and deficits withdrawn as the situation requires.

In 1938 City Transit, Inc. (1925) was the largest independent operator of motor coaches in Cincinnati. Its routes radiate to many sections of the city and its suburban area. The Valley Bus Lines (1926) and the Mt. Washington Transportation Company also have local and suburban auto bus routes.

### *Interurban Lines*

AFTER THE COMING of the electric streetcar in 1888, the need for faster means of getting to and from Cincinnati and nearby communities led to the building of interurban lines—which again helped industry to widen the local trading territory. These lines flourished until the advent of the motor bus and truck. Then the rapid construction of good roads and the resulting competition from motor bus lines caused traffic to decline and gradually led to the abandonment of electric interurban lines. Today only one enters the city. The Cincinnati & Lake Erie Railroad, operating electric cars between Cincinnati, Dayton, Springfield, and Columbus, has also a number of motor bus routes to northwestern Ohio communities. The C. & L. E. still transports many passengers, but its last freight line, between Cincinnati and Columbus, was abandoned in June 1938. De luxe cars, furnished like Pullman salons and able to do 90 miles an hour, are used for passenger service. At present only 127 miles of electric interurban trackage remain in Ohio, and most of the familiar old stations are in various stages of decay.

### *Intercity Bus Lines*

EFFORTS OF AUTOMOTIVE designers to construct motor vehicles for the carrying of passengers led to the intercity motor bus systems, which began forming about 1915. Since the early coach was simply a boxlike frame mounted on an auto chassis, progress in bus transportation was slow. As the industry advanced, and despite poor roads and the lack of com-

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fort, travellers quickly approved this new mode of transport. Since the speed and the flexibility of the bus offset its disadvantages, and since it is cheaper to operate because no expensive rights-of-way have to be purchased or large amounts of capital spent for roadbeds, tracks, and buildings, the fares are comparatively low.

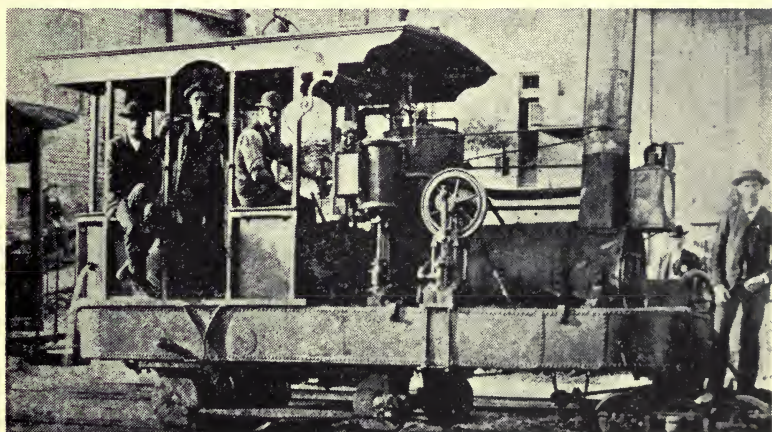
The popularity of riding on rubber forced owners of short bus lines to expand, and soon it was possible to travel from coast to coast by motor stage. As in other new industries, competition among the early bus companies was costly, and as a result many smaller concerns were forced to suspend service, while others were absorbed by companies more financially secure. In recent years the railroads have established bus lines to serve territory unprofitable for the operation of steam trains.

The Colonial Short Line System, one of the nation's first transcontinental bus lines, was organized in Cincinnati in 1926. For a time its business was good, but because of the decline in travel during 1929-33 the management slid into involuntary bankruptcy. Later some of its route franchises and equipment were bought by the Greyhound Lines, now the world's largest operator of motor coach routes.

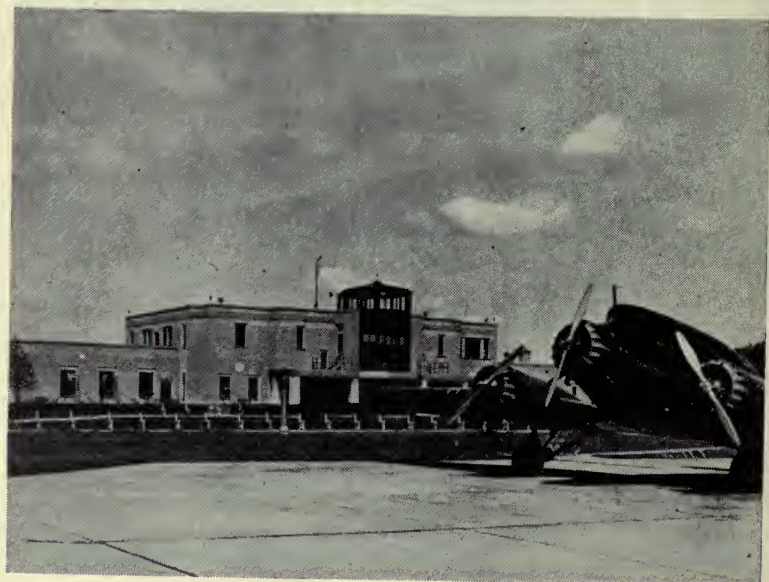
The Capitol Greyhound Lines, one of the subsidiary corporations which make up the Greyhound System (1914), was formed here in 1928. The company operates coaches from Washington, D.C., through Cincinnati to St. Louis. Other Greyhound lines using the Cincinnati Greyhound Terminal, Walnut Street, between Sixth and Seventh Streets, are the Ohio, Central, Pennsylvania, Southeastern, and Atlantic Lines.

Other intercity bus line companies with executive offices in Cincinnati are Ohio Bus Lines (1923), running coaches between Cincinnati, Hamilton, and Middletown (Ohio), and cities in Indiana; and the King Brothers Company (1921, incorporated in 1928), operating busses between Franklin, Cincinnati, Dayton, and Xenia, and Cincinnati and Portsmouth. Several other intercity bus lines leave Cincinnati from the Union Bus Terminal, East Fifth Street, between Main and Sycamore Streets. Many small lines transport passengers to and from nearby Kentucky communities.





BELLEVUE INCLINE AND OLD JOE BELL



LUNKEN AIRPORT

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Within the last few years design and performance of motor busses have changed. Modern coaches are large and comfortable, fitted with easy reclining chairs. In 1930 sleeper coaches for long overnight journeys appeared on the roads. Fares are slightly lower than those of the railroads.

### *Motor Truck Freight Lines*

FOR SEVERAL YEARS after the automobile proved its practicability for pleasure riding, the horse and wagon remained the principal means for transporting merchandise. As early as 1900, however, local shippers were interested in the motor truck; but because the price was high and the mechanical performance of the earlier models uncertain, only a few were used. By 1910 progress in mechanical construction had advanced so that it was economical for large shippers to buy fleets of trucks. As the revolutionary transportation change continued, shippers remodeled stables into garages, and retired horses to farms on a pension of oats.

Since 1925 motor truck freight transportation has come into general use as fast as did the railroads in the 1850's. In 1938 the truck lines ranked next to the railroads in the amount of freight handled. About 20 terminals and 75 intercity motor freight lines, having the latest truck, tractor, and trailer equipment, operate from Cincinnati. First-class freight rates are about the same as rail rates; commodity rates are lower.

### *Air Lines*

AMERICAN AIR LINE operators have blazed new travel ways. Although Cincinnati's interest in flying dates back to 1910, the first regularly scheduled plane service from the city did not begin until 1927 when the Embry-Riddle Company was awarded a Government contract to transport mail between Cincinnati and Chicago. At that time the old type of open-cockpit heavier-than-air machine was still being used commercially. But meager equipment did not halt the rapid advance of air transportation.

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The modern transport airplane came into use about 1925. Since then the latest types of planes in passenger service can do more than two hundred miles an hour. Plane capacity has been increased from four to 30 or more passengers.

In 1928 the Embry-Riddle Company was purchased by American Airways, which in 1934 became American Airlines Inc. In May 1938 the Marquette Airlines, Inc. began tri-weekly service between St. Louis, Cincinnati, and Detroit. Now it is possible for an airline passenger leaving Cincinnati from municipally owned Lunken Airport, six miles from the downtown district, to reach New York in less than four hours, Chicago in less than two hours, and the Pacific Coast in about 14 hours. Sleeper planes are used on regular schedule, while practically every flight carries mail, light express, and a stewardess to take care of the passengers. Rates are about 15 to 20 percent higher than rail fares. From January to May 1938 a total of 1,866 passengers, compared with 1,214 for the same 1937 period, travelled from Cincinnati via American Airlines.

In addition to the commercial airlines, Cincinnati has several flying instruction, air taxi, sight-seeing, and advertising concerns. Two have hangars and instruction classes at Lunken Airport: Queen City Flying Service (1931), and Cincinnati Aircraft Service.

Lunken Airport, with an area of 1,125 acres, of which 450 have been improved, is one of the nation's most modern and complete municipal landing fields. In May 1938 a new administration building, housing ticket offices, passenger and baggage rooms, weather bureau, radio directional beam controls, superintendent's offices, and a "Theodolite tower," used for recording of wind velocity, ceiling heights, and barometric pressure readings, was completed with the aid of the Works Progress Administration at a cost of 175 thousand dollars. The airport is surrounded by dikes devised to protect it from flood waters of the Little Miami and Ohio rivers, but these afford safety only to a river stage of 65 feet.

## Chapter III

### *Banking • Building and Loan Associations • Finance Companies • Stocks and Bonds • Insurance*

**C**OMMUNITY STABILITY DEPENDS to a great extent upon the condition of its banks, which help industry and commerce by supplying capital, credit, and payrolls. In 1938, 15 banks, with 55 branches in various parts of Cincinnati, had combined resources totalling more than 400 million dollars. The resources of about 250 building and loan associations amounted to nearly 150 million dollars. Nearly 2,100 persons, with an estimated annual payroll of \$3,250,000, are employed in the banks. Depositors number 200 thousand.

Compared with pioneer institutions, present financial organizations, housed in strong, finely decorated buildings and having national currency regulations through the Federal Reserve Board and governmental regulations and protection for depositors, are amazingly complex; for the early banker had to overcome severe difficulties before he got even a foothold, much less stability.

Banking originated about 2,000 B.C. when the Babylonians put their worldly valuables in the temples for safe keeping. By 575 B.C. this pious system was private business; the bankers acted as buying agents, loaned money on crops and signatures, and paid interest on deposits. The first Greek banks, both private and state-controlled, functioning about 400 B.C., were of three kinds: some received deposits against checking, others dealt in coins and gold bullion, and the rest were money lenders. The Roman banking system, patterned after the Greek, was operated under strict governmental regulation. During the Middle Ages churches and monasteries became depositories for

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money. Receipts given for these deposits were widely used as commercial paper in Europe.

Modern banking dates from 1400 A.D. when the first of the great banks in Venice was opened. The Venetian system differed from that of mediaeval times only in that it had reserves of specie as a medium of exchange. Later the English accelerated the circulation of money by using the specie reserve as the basis for a paper circulating currency. The practice of issuing notes secured by specie representing only a part of their value came in 1700.

The Bank of North America (1781), the first important banking house in the United States, and the Bank of New York and Bank of Massachusetts, chartered by Congress in 1784, were founded to provide a circulating medium after the collapse of Revolutionary War paper currency. In 1791 Congress approved a charter for the Bank of the United States. Because of its large capital and its branches in various parts of the nation, the institution was able to regulate the State banks then being organized, and it refused deposits or note payments of unsound banks. In 1811 the pressure from state banks prevented renewal of the charter for the Bank of United States. In 1816 Congress chartered another "central" bank in Philadelphia; the Second Bank of the United States could open branches, accept deposits of government funds, and negotiate Federal and State loans.

The development of Cincinnati banking came in five great cycles: days of the early banks and note issues until the panic of 1820, followed by five years of recovery and the subsequent normal growth of banking capital; an era of great increase in the number of private banks, caused by the difficulty in obtaining state bank charters; a period under regulations of the National Bank Act (1863), written by Salmon P. Chase, Cincinnati, secretary of the treasury during Lincoln's Administration; a later period of liberalization of state laws for the granting of charters—which caused private financial institutions to get charters or liquidate; and finally the current time, dating from the Federal Reserve Bank Act of 1913, which provided for an elastic currency, expanding as trade expands,

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contracting as trade contracts, because of re-discount privileges granted reserve banks. (An amendment, liberalizing the re-discount policy, was made in 1933).

Only a year after Cincinnati was incorporated in 1802, the first general assembly of the new State of Ohio gave to the Miami Exporting Company a liberal 40-year charter allowing it to bank in the lively young village, and to build and operate river boats—probably with the idea that, should the shipping business go under, the capital could then be used in banking.

Previously the early tradesmen and industrialists had plodded along, trading with the Indians and hunters by swapping cloth, blankets, beads, and now and then a hogshead of whisky for skins and furs. Then they bartered with their neighbors. A rabbit skin brought a "half-bit" ( $6\frac{1}{4}$  cents); a coon skin, a "bit" ( $12\frac{1}{2}$  cents). A deer skin was priced at 50 cents, while a fox pelt was worth only 25 cents. (From this, no doubt, originated the present-day slang of "two bits," meaning 25 cents.) A fifth quarter of the dollar added by the mint to cover coinage cost was promptly spit at as a "sharpskin."

When the Miami Exporting Company and other early banks began issuing notes, these became the medium of exchange. During the crisis of 1818 the notes depreciated in value as much as 40 percent. In 1820, when all Cincinnati banks were closed, a variety of money swirled from pocket to pocket in the city—United States silver dollars, Portugese "joes," Spanish pistareens, dollars cut into eight pieces, notes issued on the credit of private firms, gold five and 10 dollar pieces minted by private firms, copper and bronze disks, and beer and merchandise checks.

Capital was not easy to get. Four years after the charter had been granted, the paid-in capital of the Miami Exporting Company amounted to 150 thousand dollars, part of which was cash, the rest produce and merchandise. The company soon quit the shipping business and put its whole talent to banking. In March 1807 a banking office was opened at the foot of Sycamore Street, with Rev. Oliver M. Spencer, a pioneer of the old school, once captured by Indians, as first cashier. Dividends amounting to as much as 15 percent a year were paid.

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As the Cincinnati population grew to more than 2,500 in 1810, more banks were needed. Nicholas Longworth I, great-grandfather of the late speaker of the House of Representatives, was named, in October 1811, secretary of a group of commissioners who were to get a charter for the Farmers' and Mechanics' Bank. The banking office was set up at 45 Main Street, and Samuel C. Vance, one of the incorporators of the Miami Exporting Company, named the first cashier. Although it was not incorporated until 1816, the Bank of Cincinnati, Lot Pugh cashier, was ready for business in 1814.

The three banks issued a large number of notes, and business stepped along normally until December 26, 1814, when the presidents of the institutions posted notices that payment of notes in specie was being discontinued, and that a premium of about 10 percent was commanded by specie in the East. The bulletins excited many citizens to joint action; but a mass meeting held January 27, 1815, only produced a committee which later returned a report favorable to the banks.

Business travelled an even road for a time. The first private bank west of the Alleghenies came in 1816 when John H. Piatt and Company put a banking house on the south side of Lower Market Street, east of Main Street. A brother-in-law of Piatt was his silent partner. (The two partly gave up their contracting business when the bank was started). During the same year, in addition to the notes issued by the banks, scrip of various Cincinnati corporations was handed about as currency because of the shortage of specie.

The next bank established was the Second Bank of the United States, opened January 27, 1817 in a building on the east side of Main Street, between Third and Fourth Streets. Among the Cincinnati potentates on the directorate were Jacob Burnet, John H. Piatt, General (later President) William Henry Harrison, Martin Baum, of the Miami Exporting Company, and Daniel Drake, historian and about everything else besides.

With the opening of the branch, some specie was brought into the community, and in July of the same year other banks resumed specie payments. But banking was not as we know it



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today. The hours were short (from 10 a.m. to 1 p.m.), and notes for discount had to be left with cashiers the day before funds were needed—except at the branch bank, which discounted only on Tuesday. Since the land office would accept only notes approved by the branch, the local house and the branch soon squabbled over redemption of their paper. This bickering excluded a number of Ohio institutions which, although all Cincinnati bank paper was acceptable, were not paying in specie. Local industry was caught in the middle. Markets were expanding fast and notes received in payment for merchandise had to be discounted to meet payrolls and buy raw materials.

Instead of blowing over, the situation became stormy, and on November 5, 1818 Cincinnati banks suspended payments, announcing that they had to do this because of the "hostile attitude assumed by the Bank of the United States." Newspapers of the day acridly commented on the "further draining of Ohio of specie" when two wagonloads of currency, totalling 120 thousand dollars, were shipped from the Chillicothe branch to the home office of the Bank of the United States in Philadelphia. "So goes specie from our Western country" was the lament.

Nearly eight months were flipped away on the calendars before specie payments were again made, and then only by the Farmers' and Mechanics' Bank when it became the depository for public funds. The paper of all Cincinnati banks (including Piatt's, which previously had been questioned) were now acceptable to the land office, and finance seemed more solidly grounded, except for the debt of local banks to the branch for the great amount of paper held against them. All was quiet on the Western banking front for two months; then in July the Farmers' and Mechanics' Bank again suspended payment in specie, claiming that, because of the increased value of its paper, it had been forced to pay out more metal than it could lay hands on, even with the help of public deposits.

Paper and notes sent forth by local banks were being accepted at various rates, and the financial weather was extremely unsettled during the first days of 1820 when Gilmore's Exchange, which later became the Gilmore & Dunlap Bank,

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opened offices on Main Street and started quoting the first regular exchange prices. Bank of the United States paper stood at one percent premium, Miami Exporting and Bank of Cincinnati at 25 percent, and Piatt's at 30 percent. Paper of the Farmers' and Mechanics' Bank had no sales; it continued to depreciate so fast that, towards the end of January 1820, the bank shut its doors. Collection of loans was hard, for other banks would not make new loans, and, with property values declining rapidly, the idea of credit was absurd. Soon the notes of the closed house were worthless.

During February, when leading merchants announced their refusal to accept Piatt paper, that institution gave up banking. Since most of its notes were redeemed in merchandise, however, there was little loss. A panicky public soon liquidated the Bank of Cincinnati (June 1, 1820). Although its paper declined to 45 percent discount, the Miami Exporting Company, the city's first bank, managed to keep its doors open. On October 12, 1820 the Bank of the United States demanded immediate payment in specie of \$2,251,061 outstanding. Since according to newspaper accounts of the time there was probably less than a million dollars in currency in the Western country (excluding New Orleans and other branch banks), it had to close the same day.

Industry felt the pinch of this financial depression; but payrolls were met with scrip, issued by the manufacturers, which was received gladly by local merchants. But the method proved harmful to exporting arrangements, and after a time industry had to cut payrolls and staffs.

Although it was the only bank in the community, the Miami Exporting Company found it difficult to meet obligations. A pot of trouble brewed, and boiled over. On a morning in May 1821 a mob set on looting the vaults gathered at its doors. Although Mayor Isaac Burnet was able to send the crowd home, its dander was up beyond putting down, and the bank went the way of the others a few days later. From that day until 1825 Cincinnati business and industry bumped along on the rocks.

In 1825 the Second Bank of the United States, assigning

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capital of \$1,329,000, sent Peter Bensen from Philadelphia to open another branch in Cincinnati. The city needed this stimulant. By 1829, when a charter was obtained for another bank, the city had covered its entire indebtedness with 30 thousand dollars in bonds. In March 1831 the Cincinnati Savings Institution was formed, with offices in Goodman's Exchange on West Third Street. Deposits were limited to from five dollars to three hundred dollars a year, on which five percent interest was paid; and the institution was expressly restrained from issuing notes to be used as currency. After a year had been taken to raise capital of 500 thousand dollars, the Commercial Bank was ready for patrons at 45 Main Street in April 1831.

With the financial horizon brightening, industry began another cycle of expansion. After one-fourth of its capitalization of a million dollars had been subscribed, the Franklin Bank, housed on Main Street, between Third and Fourth Streets, was ready to do business in February 1833. During the same year new capital secured the charter of the Miami Exporting Company, and the bank was reopened with offices at Court and Main Streets. In 1834 the Lafayette Bank, the Ohio Life Insurance and Trust Company, and the Exchange Bank and Savings Institution (the first private bank since the closing of Piatt's), owned by John Bates Company, were doing business.

Notes of local banks were acceptable to the Bank of the United States, and paper circulated freely at par, with paper currency of out-of-city banks in proportion to the point of issue. In 1836 the charter of the Bank of the United States expired, and it was not renewed. Several years elapsed, however before affairs of the institution were settled.

As the year 1837 was marked into the books, financial and industrial conditions in Cincinnati were good—although currency problems were becoming grievous in the nation. There were several "runs" on houses in New York and other cities, and local newspapers printed daily columns about the "money grippe," as they called the stringency. It was not until most Eastern cities had suspended specie payments, however, that action became necessary locally; on May 17 Cincinnati banks announced cessation of specie payments to prevent a currency

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drainage. As specie dropped from circulation, note issues and "shinplasters," both authorized and unauthorized, came to hand, and many large corporations got permission from the State to issue notes—a right in some cases badly abused.

Despite the monetary troubles of 1837, two more banks, both privately operated, opened for business in 1838—the Mechanics' and Traders', and Delafield and Burnet's Bank. Exchange was still in a chaotic condition during the year. In December influential merchants agreed not to accept Exchange Bank notes, Delafield checks, and the issues of several banks outside Cincinnati; but they did not adhere strictly to the agreement. From 1839 to 1841 the Delafield Bank was being liquidated, and C. R. Gilmore and Company, assuming the name which had been used as early as 1820, started the Bank of Cincinnati. During 1839 the Ohio legislature limited the legal bank note issue to three times the specie on hand instead of three times the capital of the bank.

In 1841 the Lebanon Miami Bank, of Lebanon, opened an agent's office in Cincinnati for the payment of notes, after the State Auditor had arranged with the bank to redeem all checks and certificates given for work done on the Miami Canal from Cincinnati to Piqua. Funds to meet the demands were insufficient, however, and the agency closed December 29, 1841. This failure was an unsettling influence; notes were scrutinized more closely. The uncertainty came to a head on January 8, 1842 when all merchants agreed to accept notes of chartered banks only, to the exclusion of all unauthorized paper checks, and appointed a committee to investigate the solvency of the Mechanics' and Traders' Bank and the Miami Exporting Company.

This added to the general unrest. When the Miami Exporting Company assigned its business on January 10, 1842, a bellicose crowd assembled before the closed bank. As word sprang from tongue to tongue that the Bank of Cincinnati had also collapsed that morning, the mob let loose. Breaking into the Miami banking offices, it hacked to debris all movable property, tossed notes and papers to the winds, and carried off a great number of circulating notes—\$28,850 worth were recovered later. The

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police broke up the disorderly mob for a short time; but, coagulating again, the rioters resumed their charge. Gunfire wounded several. From the ruins of the Miami bank the mob, gradually assimilating newcomers, swept on down Main Street to just below Fourth Street, where it sacked the offices of John Bates' Exchange Bank. At Noah Lougee's exchange, next door, the safe held up under mass attack. When the crowd rolled up to the Mechanics' and Traders' Bank violence was averted only because the institution managed to pay all claims in specie. The rioting was no solution to the problem, and a confused Cincinnati speculated about the value of paper issued by the closed banks.

During the following few years banking was normal, with notes circulating at various rates of discount. The next major disturbing influences came in 1855, when the Mechanics' and Traders' Bank liquidated and W. W. Cones' Company failed. During the same year gold rose from three-fourths to one percent premium; while gilt-edged investments continued to decline in value. Private banks dominated the financial life of the city; for they numbered 22, as against three chartered institutions. Despite unsettled conditions, the number of private banks continued to increase. Five new ones opened that year, and two started business in 1856.

Although the year 1857 was born under seemingly good financial auspices, widespread banking unsteadiness reached a crisis before the summer was over. On August 24 Cincinnati heard that the New York office of the Ohio Life Insurance and Trust Company had closed, and it was soon apparent that the local office would not be open for business the following morning. Newspapers carried the announcement that the company would not operate until it had more details of the New York closing. The city seemed about to have a repetition of the 1842 riots; the financial district on Third Street was alive with worried depositors and policemen. Nervous tension and a close watchfulness resulted in only one serious run—that on the Citizens' Bank. Settlement of Ohio Life Insurance and Trust Company affairs was greatly protracted because of legal complications; but this trouble was only the start. On Septem-

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ber 2, 1857, affected by the failure of their Eastern correspondent, the Central Bank of Hatch & Langdon suspended business. Conditions were becoming more serious throughout the country; banks failed every day.

Eleven days after the closing of the Central Bank, the Citizens' Bank discontinued activity. Local business men began to wonder how long it would be before a general suspension of specie payments became necessary. All New York banks took this step on October 14; the rest of the country followed suit immediately after.

Then a long depression moved in. Payrolls were cut and operatives laid off by the thousands. City officials tried diligently to keep many people from starving, and people blamed banking and monetary methods. New national laws to avoid, if possible, a repetition of the money panics were being planned, and a Cincinnati<sup>an</sup>, Salmon P. Chase, was one of the economists studying the problem.

Despite all this uncertainty the Bank of the Ohio Valley was organized in June 1858 under the act of the Ohio General Assembly of 1851 to "authorize free banking." It secured quarters on the north side of Third Street, west of Main Street, and was prosperous from the start—although most of its original capitalization of 25 thousand dollars had to be subscribed by northern Ohio business men. A year after the opening of the bank, profits totaled \$14,252.68. After a dividend of four percent was paid, \$7,080.88 was carried to surplus; during the same year capital was increased to 500 thousand dollars. The Bank of the Ohio Valley was merged with the Third National Bank in April 1871.

At the outbreak of the Civil War Cincinnati was still feeling the effects of the depression. Hard times became general again; bank notes were variously called "wildcat," "red dog," "stump tail," and "shiplaster," and Congress was busy talking about methods of exchange. In 1862 total capital of the incorporated banks in Ohio was \$5,696,000, with a currency circulation of \$9,217,000. By December of the same year this circulation had increased to 10 million dollars. Circulating specie decreased as circulation of the bank notes increased. Since change was

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becoming scarce, small copper cents, or "hard times" tokens, were coined as a substitute. In Cincinnati, Pike's Opera House and the Burnet House, long a famous hotel, issued paper notes for from five to 50 cents, which were redeemed in five-dollar lots. The Government brought forward a large amount of fractional and postage currency, and even postage stamps were used as change in mercantile establishments. Cincinnati corporations that placed this "necessity money" into circulation were John Shillito & Co.; Ellis, McAlpin & Company; Pearce, Tolle & Holton; L. C. Hopkins & Co.; and C. G. Evans & Co.—all of whom issued stamps in denominations of from one to 24 cents.

On February 20, 1863 the National Bank Act was passed, and on February 25 it was approved by President Abraham Lincoln. The National Bank Act created a system regulating banking and credit, and imposed the following restrictions: no national bank could be capitalized for less than a hundred dollars in cities having more than six thousand population; before a bank could open, 50 percent of the capital had to be subscribed, and the remainder paid in five equal monthly installments; at least 30 percent of the capital had to be invested in Federal bonds deposited with the United States Treasury, which could issue bank notes equal to 90 percent of the bonds' par value; and the total national circulating currency was limited to 300 million dollars. The notes, redeemable in gold or silver on demand, were legal tender for all payments except duties on imports. Twenty-fourth on the list of those granted charters under the new law and first to begin operations in Cincinnati, The First National Bank, with a capitalization of one million dollars, that year set its offices on Third Street, east of Walnut Street. Next in order came the Second National, charter 32, with capital stock of 200 thousand dollars; the Third National, charter 20, with 500 thousand dollars; and the Fourth National (charter transferred), with 500 thousand dollars.

Cincinnatians approved the new banking laws, and industry and commerce began to expand—a growth which has been checked only temporarily in 1873, 1907, and in 1933, when

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a general bank holiday was declared following the stock market crash and the ensuing depression in 1929.

In 1866, since it had seven national banks and many private institutions, Cincinnati felt it needed a clearing house to facilitate collections. Consequently, in a meeting at the Lafayette Bank on March 20, 1866, in which every bank in the city participated, the Cincinnati Clearing House Association was formed. (It is still operating today). The same year, the first safety deposit boxes were introduced in the city when the Safe Deposit Corporation of Cincinnati was incorporated. The rental price of its boxes ranged from 20 to 50 dollars a year, compared with the present minimum rental of two dollars a year.

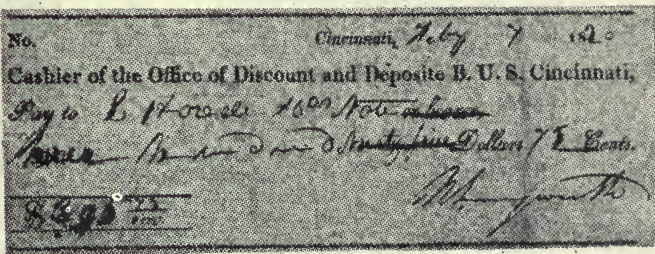
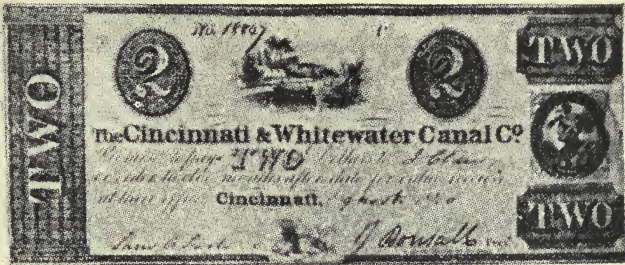
The financial depression of 1873 was precipitated in September by the suspension in New York of the banking firm of Jay Cooke & Company. The hoarding of currency had become so widespread that the shock menaced stable banking and credit conditions. On September 25 the Cincinnati Clearing House Association, following the lead of the similar New York body, passed resolutions restricting members from paying out large amounts of currency except in the case of payrolls. It was several years before business recovered from the unsettled conditions of 1873, and local trade was meager until 1877.

In 1880 Cincinnati had six national banks, five state banks, one savings bank, eight private banks, and two particularized institutions—the Real Estate Bank and the Safe Deposit Company. In November the Citizens' National Bank, with capital of one million dollars, was organized.

Failure of the Fidelity National Bank in June 1887 because of unfortunate loans on wheat and merchandise disturbed local trade and resulted in considerable loss to stockholders. The following year when two banks, the Metropolitan National Bank and the Cincinnati National Bank, were suspended, depositors did not suffer. Accounts of the Cincinnati National were transferred to the Ohio Valley National; after liquidation of the Metropolitan, depositors were paid in full.

The financial district of the city was unsettled by the panic of 1893, attributed to general overexpansion in business. Stores were overstocked and credit inflated, but Cincinnati banks and





EARLY COMMERCIAL PAPER



BANKING QUARTERS (1890, 1938)

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industrial concerns were able to meet the stringency without extreme hardship.

In 1900 Cincinnati had 13 national banks, one savings society, one private bank, two trust companies, and five state banks. In 1907 a "money panic", arising from hoarding, swept the country. To meet the situation and protect the credit of communities, prompt action by the banks was imperative. In Cincinnati the Clearing House Association arranged for the issuance of cashier's checks (scrip) by the 14 member banks, in denominations of two, five, 10 and 20 dollars, payable through the clearing house. The first scrip appeared in Cincinnati November 4.

Merchants co-operated by advertising they would accept scrip for purchases. Because the scrip passed freely as currency many industrial firms met their payrolls by issuing the cashier's checks. Within a few weeks, when more actual currency was to be had, the clearing house called for retirement of 25 percent of the issue.

In June 1908 the Fifth and Third National Banks were consolidated as the Fifth-Third National Bank, with capital of \$2,500,000. In November the Fifth-Third absorbed the American National Bank, increasing the capital to \$2,700,000. S. Kuhn & Sons, Cincinnati's last private bank, was absorbed by the Fifth-Third Bank in January 1910. With the disappearance of S. Kuhn & Sons, the once-strong institution of the private bank went into discard.

When the Postal Savings Bank was opened at the post office on September 12, 1911, it marked the appearance of the first government bank in Cincinnati since 1836, the year that the branch of the Second Bank of the United States was withdrawn after renewal of its charter had been refused. The savings department at the post office was ready for business after the Postal Savings Bank Act of 1911 has been approved by President Theodore Roosevelt. Two weeks later 948 accounts had been opened, while deposits amounted to 30 thousand dollars. In 1936 deposits totalled \$2,061,302, and the following year, \$1,723,157. In 1937 local sales of United States Government "baby" bonds aggregated \$2,886,056.25, compared with \$1,575,137.50 during the previous 12 months. The increase

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in bond sales probably accounts for the decrease in savings certificates, for the debentures were issued by the Treasury primarily for investment purposes.

On December 31, 1915, shortly after the Federal Reserve Banking Law became effective (1913), there were in Cincinnati eight national banks, having capital of \$13,900,000, surplus of \$9,323,301, and total resources of \$113,117,914, and 31 state banks with 10 branches, having capital of \$5,460,500, surplus of \$7,167,308, and resources of \$82,779,705. During the next 10 years this amalgamation of banks continued. On December 31, 1925 there were seven national banks, with capital of \$13,100,000, surplus of \$13,086,749, and resources of \$173,777,464, and 20 state banks with 42 branches, having capital of \$8,800,000, surplus of \$13,201,149, and resources of \$189,028,367. In 1922 Cincinnati's first labor bank and the country's third—Mt. Vernon Savings Bank, Washington, D. C. was first (1920)—the Brotherhood of Railway Clerks National Bank was organized with a capitalization of 400 thousand dollars. That same year the Brotherhood of Locomotive Engineers put up a bank in Cleveland. In 1935 there were four such organizations in the United States, having combined resources of more than 19 million dollars.

During the next five years mergers eliminated three national and six state banks; but the first branches of national houses had opened and the state institutions continued to set up more neighborhood branches. On December 31, 1930 financial statements showed there were four national banks with two branches, having capital of \$7,900,000, surplus of \$9,617,532, and resources of \$102,463,779, while the 14 state banks and their 50 branches had \$13,725,000 capital, \$18,125,594 surplus, and \$265,346,352 worth of resources.

In 1926-29, after a long period of stock speculation and industrial and credit expansion, economists were seriously worried about the future of American banking. The severe economic depression which followed the stock market crash (October 1929) proved the stability of Cincinnati financial institutions. Whereas bank failures in other cities of the nation were reported daily, Cincinnati was one of the few compara-

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tively unperturbed urban banking centers in the country. From 1930 to March 1933 more than four thousand banks collapsed in the United States. The closings involved deposits aggregating \$5,144,647,000. Three Cincinnati banks did fail; but in only one case was there a loss to depositors—and then only 17 per cent, as the assets of the closed institution were purchased by a larger bank.

The first failure here came on June 10, 1930 when both the main offices and branches of the Cosmopolitan Bank and Trust Company closed. On June 26 the Brotherhood of Railway Clerks National Bank also failed, but in slightly more than a month both institutions had been absorbed and reopened. On July 16 the Central Trust Company took over the Brotherhood Bank and began operating it as its Court-Vine Street Branch, while on July 30 the assets of the Cosmopolitan Bank and Trust Company were bought by the Fifth-Third Union Trust Company, which on August 11 opened as branches both the main office and the six neighborhood banks.

A local flurry of excitement on November 17, 1930 was caused by the sudden failure of Banco-Kentucky, a holding corporation of Louisville, Kentucky, which had on September 25, 1929 purchased control of two Cincinnati banks, the Brighton Bank and Trust Company and the Pearl-Market Bank. The Cincinnati Clearing House Association, however, called an emergency meeting, bought, on November 18, the entire holdings of Banco-Kentucky in the two institutions, and continued to operate them. A little more than a month later, on December 22, the Central Trust Company purchased the two banks from the Clearing House Association and reopened them as branches.

No more failures overtook banks in the city until after the 10-day national bank holiday in March 1933. On April 1 the Washington Bank and Trust Company did not open for business and it was placed in liquidation. Later, under ruling of the courts, the Fifth-Third Union Trust Company was appointed liquidator.

New Federal banking laws and regulations supplementing the Federal Reserve Act of 1913, and designed to avoid, if possible,

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a recurrence of the 1933 financial panic are today in operation. In 1913 the Federal Reserve Bank Act approved the establishment in the United States of a central bank—that is, a bank for bankers. Twelve Federal Reserve Banks today receive deposits, make loans, and issue notes to, and collect checks, from member institutions. The stock of each Reserve Bank—national banks are compulsory members—is owned by member banks. Dividends are limited to six percent a year, and additional earnings are paid into a surplus fund. Through a board of governors the Reserve Banks control the nation's money and credit by issuing money, increasing or lowering rediscount rates, and buying and selling government securities.

On March 10, 1933 Congress, in an effort to strengthen the nation's banking system, passed an act suspending all payments in gold. In June the same year another was approved for the setting up of the Federal Deposit Insurance Corporation, which guarantees, up to five thousand dollars, individual bank deposits. Later that year the so-called "gold standard" was abandoned by the Federal Government; the "payment in gold" clause in all contracts, government bonds, and gold notes, was cancelled; and citizens were asked to turn over to the Treasury Department all holdings of gold, hoarding of the metal becoming a criminal offense. Other banking reforms included prohibition of investment banking, issuance of securities in deposit banking, and payment of interest on demand deposits; placing interest rates on time deposits under control of the Reserve Board; banning of joint service of bank directors on bank and financial corporation boards; authorization of the Reserve Board to fix the amount of credit member banks can lend on collateral loans.

A branch of the Fourth Federal Reserve Bank, Cleveland, which acts as agent for Cincinnati member banks, is in the Chamber of Commerce Building, Fourth and Race Streets.

The Fifth Third Union Trust Company, established in 1863 as the Third National Bank, with main offices at Fourth and Walnut Streets and 21 branches, is the city's largest bank, having resources of more than 100 million dollars. Next in size are the First National Bank, Fourth and Walnut Streets,

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with resources of more than 80 million dollars; Central Trust Company (1883, Ohio's oldest incorporated trust company), Fourth and Vine Streets, with 13 branches and resources of more than 70 million dollars; Provident Savings Bank and Trust Company, Seventh and Vine Streets, established in 1900, with 14 branches and resources of more than 50 million dollars; Western Bank and Trust Company, organized in 1875, Twelfth and Vine Streets, with three branches; and Second National Bank (1863), Ninth and Main Streets, with four branches.

Other Cincinnati banks, all smaller in size, are the Guardian Bank and Savings Company (formerly the Cincinnati Morris Plan Bank), 117 East Sixth Street; Southern Ohio Savings Bank and Trust Company, organized in 1903, 515 Main Street; Atlas National Bank, chartered in 1887, 519 Walnut Street; Cincinnati Bank and Trust Company, organized in 1906, 2155 West Eighth Street; the Columbia Bank and Savings Company, established in 1902 as the Helvetia Savings and Banking Company, 929 Vine Street; Lincoln National Bank, chartered in 1881, Fourth and Vine Streets; North Side Bank and Trust Company, 4125 Hamilton Avenue; Peoples Bank and Savings Company (1906), Fourth and Elm Streets, with one branch; and Westwood Savings Bank and Trust Company, established in 1926, Harrison and Boudinot Avenues. A number of smaller banks, with many Cincinnatians as directors, are in the cities and villages of Hamilton County outside the Cincinnati corporate limits.

Present-day services of banks are distributed through the commercial, savings, safety deposit, trust, real estate, management, foreign exchange, and travel departments. Eight Cincinnati banks operate foreign trade departments to speed the clearance of imported and exported merchandise: Atlas National Bank, Central Trust Company, Fifth Third Union Trust Company, First National Bank, Lincoln National Bank, Provident Savings Bank and Trust Company, Second National Bank, and Western Bank and Trust Company.

All the leading Cincinnati banks are members of the Federal Reserve System and the Federal Deposit Insurance Corporation, which guarantees deposits up to five thousand dollars.

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The Southern Ohio Savings Bank and Trust Company in 1936 increased its capitalization from 250 thousand dollars to 500 thousand dollars, and in 1937 doubled its banking space. In September 1937 the name of the Cincinnati Morris Plan Bank (1918) was changed to the Guardian Bank and Savings Company. But there was no alteration in policy; the institution continued as a member of the Morris Plan system, which operates a financial plan for the granting of loans to business men and regularly employed workers.

Records of the Cincinnati Clearing House Association reveal the growth of banking in Cincinnati. Clearings in 1887 were \$562,261,150; in 1907, \$1,361,879,950; in 1927, \$2,030,-181,819; in 1929, \$3,910,555,730; and in 1936, \$2,880,-749,980. (The 1937 clearings of \$3,229,667,260 were the greatest since the economic decline which set in during 1930 after the stock market crash). In December 1937 clearings were \$262,966,539, compared with \$295,280,079 for the same month in 1936. The decrease that month clearly reflected the business recession which began during the fall of 1937.

### *Building and Loan Associations*

CINCINNATI'S FIRST BUILDING and loan association, the Cincinnati German Building Association, No. 1, was organized in 1867. Established primarily for the making of loans for home construction, these institutions—about 250 in 1938—now also have limited general banking functions. Many of the larger associations—some have capitalizations of five million dollars—maintain daily banking hours. The institutions doing a general banking business have approximately three hundred employees, with an estimated annual payroll of 470 thousand dollars.

Indicative of the huge amount of business transacted by these institutions are the 1925-1934 records, which show that Greater Cincinnati building and loan associations paid interest and dividends of more than 45 million dollars, made loans of more than 275 million dollars, and received deposits and paid out in withdrawals approximately two billion dollars.



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More than half (144 in 1937) the local institutions are members of the Cincinnati Federal Home Loan Bank, Chamber of Commerce Building, Fourth and Walnut Streets, a lending agency sponsored by the United States Government. The Federal Home Loan Bank, established in 1934, is similar to the Federal Reserve Bank in that it helps members to refinance real estate loans in default and to avert foreclosures of property purchased on time payments. Most local institutions also are members of the Federal Home Savings and Loan Insurance Corporation, which guarantees deposits up to five thousand dollars.

### *Personal Finance*

RECENT YEARS HAVE also brought a great increase in the number of finance organizations, which have been doing much business financing credit purchases of automobiles, furniture, radios, stoves—in fact, practically any article of value for which the buyer is unable to pay cash. These companies have helped increase the turnover of merchandise, hence production.

### *Credit Unions*

A PROGRESSIVE FINANCIAL unit in America since 1930 is the credit union, an employee organization formed to make small loans to members. Shares in such unions usually cost five dollars. Loans are made to members, and the profits from interest are paid in annual dividends. Credit unions originated in 1849-50 in Schulze-Delitzh, and Raiffeisen, Germany. In 1938 more than a hundred such unions were operating in the city.

### *Stocks and Bonds*

CINCINNATI STOCK EXCHANGE, Dixie Terminal Building, was founded in 1885 for the establishment of a central market for listed securities of Cincinnati industrial and

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business houses. Incorporated in 1887, it is one of the 21 national security exchanges in the United States. Stocks of 46 Cincinnati organizations, as well as those of several out-of-city firms, are traded on the exchange. Sales are made through the 23 member brokerage houses.

In 1936 a total of 353,008 shares were bought and sold on the exchange; dollar sales amounted to \$8,184,071; and sales of bonds aggregated \$122,100. In 1937 a total of 227,856 shares were traded, the decrease reflecting the decline in business activity during the final quarter of the year. Dividends paid during the year by corporations listed on the exchange amounted to \$43,012,960, compared with \$38,316,987 in 1936. The Procter & Gamble Company alone accounted for more than a third of the total, with payments of more than \$17,300,000. Bond sales in 1937 were \$400,850.

Trading of unlisted securities of many Cincinnati industrial firms is done on the "over the counter" market. Although no record is kept of total sales, there probably are as many as the listed stocks.

Securities of several firms, such as The Procter & Gamble Company, Kroger Grocery and Baking Company, Crosley Radio Corporation, and Champion Paper and Fibre Company, of Hamilton, Ohio, also are listed on the New York Stock Exchange. A number of other Cincinnati industrial securities are traded on the New York Curb Exchange.

Members of the exchange exclusively eligible to execute commission orders in listed stocks and bonds are Ballinger and Company, Inc.; H. B. Cohle & Company; Dominick and Dominick; T. Oliver Dunlap (Dunlap & Dunlap, January 10, 1938); George Eustis & Company; W. E. Fox & Company; W. D. Gradison & Company; Granberry & Company; John J. Grau & Company; Greene & Brock; Hill & Comany; W. E. Hutton and Company; Irwin Ballman Company; A. Lepper & Company; W. L. Lyons and Company; C. C. Murray & Company; C. H. Reiter & Company; Stephenson & Potter; Weil, Roth & Irving Company; and Westheimer & Company.

Many members of the Cincinnati Stock Exchange also are members of the New York and Chicago stock exchanges. Sev-

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eral brokers deal exclusively in state, county, and municipal bonds.

### *Insurance*

STILL ANOTHER UNIT of financial life is formed by the insurance companies—life, fire, and casualty—of which there are 10 with home offices in Cincinnati. All are active and growing constantly, with operations on a national scale. By investing in local industry they help expansion. Since 1815, when the city's first marine insurance company was organized, the business has been constantly enlarged, until in 1928 the local life insurance companies had assets of \$336,323,895 and gross income of \$102,066,507; fire insurance concerns, assets of \$8,368,375 and income of \$2,322,211; and casualty firms, assets of \$1,907,096 and income of \$2,719,292. In 1938 the insurance companies having home offices in Cincinnati, with an estimated annual payroll of \$4,200,000 employed about 3,200 persons. In addition, agencies of organizations chartered in other states gave employment to about 1,200 persons, who earned about \$1,600,000.

In 1867 there were 35 fire insurance companies with executive offices in Cincinnati. Most of these had been organized under the State Insurance Act of 1856, which required only 20 percent paid capital. An amendment in 1867, however, forced the companies to increase their paid capitalizations, ultimately causing a trend toward consolidations which reached a peak during the 1880's. On July 11, 1881, the 18 life insurance companies with home offices in Cincinnati reported to Hamilton County assessors taxable assets of \$2,281,000. By 1891 only 10 companies had home offices here, five organizations having been liquidated or consolidated during 1890.

Hamilton County Mutual Fire Insurance Company, with home offices at Twelfth and Walnut Streets, was established in 1858. In 1938 the firm had assets of \$1,048,024, surplus of \$813,203, and contingency reserve of 125 thousand dollars. Insurance in force amounted to \$47,610,648. The Cincinnati Equitable Fire Insurance Company, founded in 1826 (oldest

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insurance organization in Ohio), has home offices in the Dixie Terminal Building, Fourth and Walnut Streets, while the Cincinnati Fire Underwriters Association (1838) maintains home offices in the Carew Tower, Fifth and Vine Streets. This firm sponsors the Salvage Corps, a fire prevention and protection body. Executive offices of the American Druggists' Fire Insurance Company, chartered as a stock company in 1815, and of the Inter-Ocean Casualty Company, Inc. (1903), are in the American Building, Walnut Street and Central Parkway.

Union Central Life Insurance Company, founded in 1867 (oldest and largest life insurance firm with home offices in Cincinnati), occupies part of the 28-story Union Central Building, second highest structure in the city. In 1937, the firm had assets of more than 300 million dollars.

Next in size is the Western & Southern Life Insurance Company (1888), with home offices at Fourth Street and Broadway. The company has written casualty insurance since 1932. A million dollar office addition was completed in 1936. Assets in 1938 aggregated more than 160 million dollars.

Other life insurance companies with home offices in Cincinnati are Ohio National Life Insurance Company (1907) which moved into its present headquarters at 2400 Reading Road in 1935; Columbia Life Insurance Company (1903), 1349 East McMillan Street; and Cincinnati Mutual Life Insurance Company, First National Bank Building, Fourth and Walnut Streets. The Federal Union Life Insurance Company (1915) formerly occupied home offices at Ninth and Vine Streets; but it was being liquidated by the Ohio Department of Insurance in 1938.

## Chapter IV

### *Pork and Beef Packing • Sausage Making • Cincinnati Stock Yards • Machinery and Equipment • Poultry Packing*

Hog Butcher for the World,  
Tool Maker, Stacker of Wheat,  
Player with Railroads and the  
Nation's Freight Handler. . . .



O CARL SANDBURG sings his conception of modern Chicago. In the days when Cincinnati was a reigning hog-butcher no poet laureate sang the city's praise, but everybody knew Cincinnati as "Porkopolis," and meat packers' ledgers were bursting with the poetry of good round profits.

The first ordinance passed by the Select Council of the Village of Cincinnati (1802) was appropriate for a community which was to become America's meat butcher. Hog owners were prohibited from turning their animals loose to run at large in the "streets, alleys, and commons of the in-lots of Cincinnati." Whenever this was disobeyed, the offending animal was impounded and the owner, if he could be determined, was fined. Since the town had not yet developed its meat packing business, however, strict enforcement of this law waited several decades until Cincinnati hogs were almost synonymous with American pork and ham.

Slaughtering livestock and packing meat first brought fame to industrial Cincinnati when Richard Fosdick, the first packer, after being warned that pork and beef could not be cured to keep in the climate here, stubbornly continued his experiments. His discovery of a rocksalt process for curing pork was the cornerstone of a business which has given employment to many

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thousands of Cincinnati workers since he opened a slaughterhouse in 1810.

Miami Valley farmers had bumper corn crops but no practicable way of transporting their corn to the Eastern markets. Fosdick's find induced Cincinnati packers to buy more hogs. So farmers used their surplus corn to raise hogs for the packing business. Soon hundreds of thousands of hogs were being raised hereabouts, and thousands driven each year to Cincinnati slaughter-houses.

In 1815, only five years after the opening of the city's first packing house, Cincinnati was already exporting more than 50 thousand dollars worth of meat, about 95 percent of which was pork. From November 1818 to November 1819 exports from Cincinnati totalled ten thousand barrels of pork at \$15 a barrel and 27,600 pounds of pickled ham and bacon at eight cents a pound. That year livestock valued at 15 thousand dollars was shipped to New Orleans.

By 1825 Cincinnati was so well grounded in the meat slaughter business that its folk sang "Consumptive Mary Jane," "best rendered when rendering lard or skinning a beef" (now best rendered when the pigskin twirls down the field):

She promised that she'd meet me  
As the clock struck seventeen  
At the stockyards just nine miles out of town.

By 1826 many abattoirs were clustered along Deer Creek (now Eggleston Avenue), and processing houses were scattered over the city. The volume of pork packing in Cincinnati was equal to (and possibly greater than) that of Baltimore, Maryland. During the three months from November 1826 to February 1827 approximately 40 thousand hogs were processed and packed. About three-fourths of the total had been killed on farms and brought here for processing. But packers remarked that too little beef was packed and shipped from Cincinnati.

One step toward increased sales for local packers came with the opening of the Miami & Erie Canal (1827). Canal boats brought natural ice cut from rivers, creeks, lakes, and ponds nearby. Packers could then store fresh meats in enormous cold rooms, some of them 80 feet below street level. Mechanical

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refrigerating plants later became necessary, and today electricity keeps meats fresh for any length of time. Artificial ice is still widely used in railroad cars, motor trucks, and, in some cases, retail markets.

Deer Creek, often running red with slaughter, was a stinking cesspool. Citizens complained so vigorously that, with the opening of the Miami & Erie Canal, many of the abattoirs were removed to Brighton and the Mill Creek Valley, ostensibly to be closer to the canal and the stockyards, actually to avoid recurring complaints to city officials about slaughter-house odors. (Since 1900 modern methods of processing, coupled with more stringent health regulations, have practically eliminated all odors in slaughtering operations).

Among those having sensitive nostrils was Mrs. Frances Trollope (1780-1863), who came to Cincinnati from England about 1829 and opened a bazaar on East Third Street near Fort Washington. In her *Domestic Manners of the Americans* (1832), published after her return to the British Isles, she found words for her spleen:

It seems hardly fair to quarrel with a place because the staple commodity is not pretty, but I am sure I should have liked Cincinnati much better if the people had not dealt so very largely in hogs. The immense quantity of business done in this line would hardly be believed by those who had not witnessed it. I never saw a newspaper without remarking such advertisements as the following:

"Wanted, immediately, 4,000 fat hogs."

"For Sale, 2,000 barrels of prime pork."

But the annoyance came nearer than this. If I determined upon a walk up Main Street, the chances were 500 to 1 against my reaching the shady side without brushing by a snout fresh dripping from the kennel. When we had screwed our courage to the enterprise of mounting a certain noble looking, sugar loaf hill that promised pure air and a fine view, we found the brook we had to cross at its foot red with the stream from a pig slaughter-house, while our noses, instead of meeting "the thyme that loves the green Hill's breast," were greeted by odors that I will not describe, and which I heartily hope my readers cannot imagine; our feet that on leaving the city had expected to press the flowery sod, literally got intangled in pigs' tails and jawbones; and thus the prettiest walk in the neighborhood was interdicted forever.

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From 1810 until about 1880 the packing season was crowded into five months of the year, usually from November to March. During the 1832-33 season 85 thousand hogs were packed in Cincinnati plants. The hogs then raised for the market were derived from Irish Grazier, Byfield, Berkshire, Russia, and China stock, cross-bred to supply hams of proper size, fat, and shape. The Poland China hog was evolved during the period from 1816-1850, chiefly by the Shakers near Lebanon. (A monument to this breed stands beside US 25 near Blue Ball.) Lard was shipped to every part of the nation, and exported to Havana, Cuba, where it was not only used for cooking, but also was eaten instead of butter.

About 1830 the candle and soap making industries began to absorb slaughter-house by-products, especially fats and carcasses, from which thick grease was obtained. Immediately the early wastefulness of the industry began to wane. In 1840 local abattoirs unloaded from canal boats 2,123 hogs and 2,193,000 pounds of dressed pork ready to be processed. At that time many raisers of hogs did their own slaughtering, then transported the dressed pork to a local packing house for processing.

Probably the most vivid description of an early Cincinnati abattoir is in *Winter in the West*, written by poet Charles Fenno Hoffman after a visit here in 1834:

The most remarkable, however, of all the establishments of Cincinnati are those immense slaughter-houses where the business of butchering and packing pork is carried on. The minute division of labor and the fearful celerity of execution in these swinish workshops would equally delight a pasha and a political economist; for it is the mode in which the business is conducted, rather than its extent, which gives dignity to hog killing in Cincinnati, and imparts a tragic interest to the last moments of the doomed porkers that might inspire the savage genius of a Maturin or a Monk Lewis.

Imagine a long, narrow edifice, divided into various compartments, each communicating with the other and each furnished with some peculiar and appropriate engine of destruction. In one you see a gory block and gleaming axe; a seething cauldron nearly fills another, the walls of a third bristle with hooks newly sharpened for impale-



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ment; while a fourth is shrouded in darkness, that leaves you to conjure up images still more dire.

There are 40 ministers of fate distributed throughout these gloomy abodes, each with his particular office assigned him. And here, when the fearful carnival comes on, and the deep forests of Ohio have contributed their thousands of unoffending victims, the gauntlet of death is run by those selected for immolation.

The scene commences in the shadowy cell whose gloom we have not yet been allowed to penetrate. Fifty unhappy porkers are here incarcerated as one together, with bodies wedged so closely that they are incapacitated from all movement. And now the grim executioner—like him that battled with the monster that wooed Andromeda—leaps with his iron mace upon their backs and rains his ruthless blows around him. The unresisting victims fall on every side; but scarcely does one touch the ground before he is seized by a greedy hook protruded through an orifice below. His throat is severed instantly in the adjacent cell, and the quivering body is hurried onward, as if the hands of the Furies tossed it through the frightful suite of chambers.

The mallet, the knife, the axe, the boiling cauldron, the remorseless scraping iron, have each done their work; and the fated porker, that was one minute before grunting in the full enjoyment of bristling hoghood, now cadaverous and "chopfallen," hangs a stark and naked effigy among his immolated brethren.

Adding one more remark to the volumes said by travellers about Cincinnati pork, Harriet Martineau, in her *Retrospect of Western Travel* (1838), notes:

. . . Besides supplying the American navy, ship loads are sent to the West Indian Islands, and many other parts of the world. Dr. Drake showed me the dwelling and slaughter-house of an Englishman who was his servant in 1818; who then turned pork-butcher, and was, in a few years, worth ten thousand dollars.

The processing and curing of meat, though vastly improved since the days prior to Fosdick's discovery, was still a tedious and uncertain business. From 1810 until shortly before the Civil War, the old rocksalt and pickling cures were applied to both hams and bacon. Although packers were constantly seeking processes to evolve a better meat, it was not until a few

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years before the use of mechanical refrigeration in the early 1870's that the sugar cure became practical. This method for curing meats, with improvements, is used today. Mechanical refrigeration has made possible year-round curing and preserving of ham, bacon, and all fresh meat products. Experts now agree that cold storage adds tenderness and gives meat a better flavor.

On February 25; 1843, nine lives were lost in a fire and explosion which destroyed Pugh and Alvord's Pork House at Canal and Walnut Streets. The blaze was discovered in the underground smoke house. Although heroic efforts were made to check the flames by closing the tunnel doors, the entire structure collapsed in the gas explosion which followed.

Workers in Cincinnati's slaughtering plants often staged contests to decide who were the fastest butchers. The *Enquirer* of January 6, 1849 carried the following item:

William Lawrence and Hugh Weightman laid a wager the one could beat the other in killing and hanging up, all dressed, 50 sheep. Signals were procured, and at it they went. Lawrence hung up his 50 in 44 minutes, 56 seconds; Weightman in 53 minutes, 45 seconds.

Fellow employees, of course, also placed bets on their favorites; and thousands of dollars changed hands after each of these *affaires macabres*.

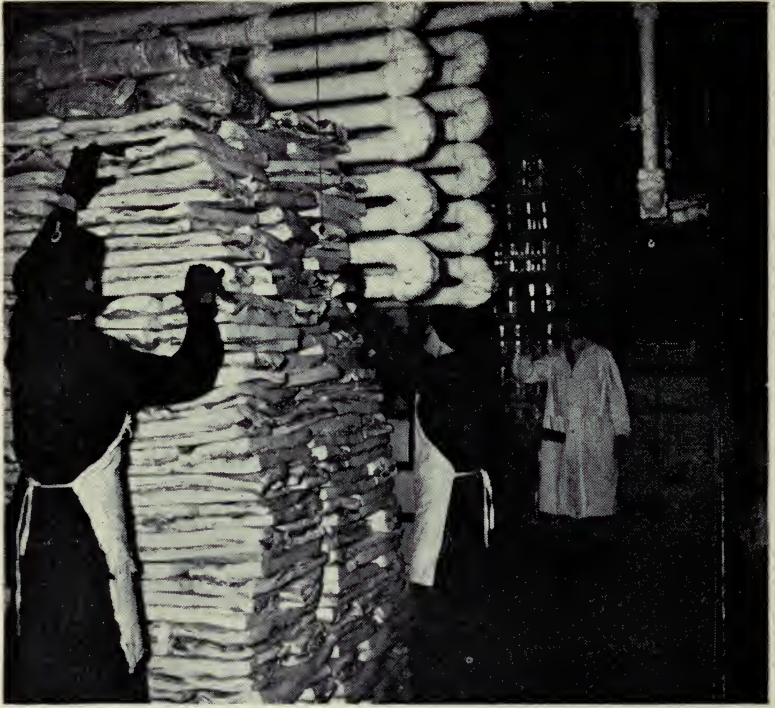
By 1850 Cincinnati was the principal hog market in the world, greater than Cork and Belfast, Ireland. That year the city was generally considered to be the leading pork packing center of the world, and its favorable situation as the main trading point for a sizable grain and hog growing region was bringing a great wealth to those in the business.

The number of hogs killed here increased, until in 1850-51 the total was 324, 539. In 1850-51 there were 33 large pork and beef packers and many smaller ones in the city.

Brighton, where most of the city's abattoirs were concentrated, was alive with activity during the decade from 1850 to 1860. In 1855 the largest abattoirs were those in Brighton. One firm, Bogens and Charwaters, operated an abattoir with



**BEEF: INSPECTING AND CUTTING**



COOLING AND SLICING BACON

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a slaughtering capacity of 3,500 hogs a day—considerably larger than that of any present plant.

Hogs and cattle were driven through city streets to the abattoirs. From curb to curb the thoroughfares would be packed with porkers, prodded on to the death by rods and by the drivers' hoarse "suke-suke." Winding up the long procession would jolt the horse-drawn wagons that carried the "pickups," hogs too tired and too fat to waddle farther. Some of these pickups averaged eight hundred pounds to the head. Today practically all hogs and cattle ride motor trucks; occasionally, however, a Cincinnati rising or getting home in the early morning sees drivers who carry red lanterns, guiding their flocks along the streets.

At the Brighton Landing of the Miami & Erie Canal stevedores and boat crews sweated and sang while they loaded cargo, most of it processed meat destined for far-off communities. Overlooking the canal at Central and Colerain Avenues and Central Parkway was the old Brighton House, built to accommodate the livestock drivers and owners who came to the Cincinnati hog market. On its tower stood the figure of a bull, symbol of the glory that was Brighton. The hotel was also headquarters for the "gut-riders," who went out to meet the drivers of hogs and cattle, bidding for entire droves to kill and dress so that they could obtain the gut fat for lard. They paid owners from 50 cents to a dollar per head.

Nearly every evening the Brighton House was gay. Drivers and owners, their pockets lined with notes paid them for livestock, were good pickings for professional gamblers. As many as 15 poker games went on in the noisy gaming rooms, and in the concert hall on the floor below crowds danced with slow abandon to the strains of *Blue Danube* and the other popular tunes of the day.

By 1870 the gaming tables and concert hall were deserted; an expanding population had pushed the markets two miles northwestward. Since the establishment of the Cincinnati Union Stock Yards (1871), the Avenue Hotel, Spring Grove Avenue, has been the inn of stockmen; but the boisterous days of the Brighton House have gone the way of the canal.

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In 1869 the first transcontinental railroad began to push farther west the frontier, and soon the great plains of the Middle West were checkered with livestock farms. The cost of transporting cattle and hogs to Cincinnati for processing was high; and Kansas City, East St. Louis, Omaha, and Chicago leaped ahead as the nation's meat centers. The decline of the local industry was gradual; not until about 1885 did Chicago's meat production surpass that of the Queen City. Today, although it is not ranked among the national leaders, the local packing industry is nevertheless substantial.

The meat packers continued to prosper locally until 1874-77, when sales of meat products slumped throughout the country. The packing trade suffered along with other phases of the industry. The last year of the crisis (1876-77) was especially disastrous, chiefly because of the remorseless speculation which kept prices down and forced local meat packers to take immense losses. At that time mess pork, which had sold for \$45 a barrel during the Civil War, dropped to \$12.75 and \$13 a barrel, and at one time sank to \$7.50. A slight price upturn came in 1878. By 1880 the packers who survived the crash were again making small profits from processing operations. But the slump brought the first decrease in the number of hogs slaughtered and processed in Cincinnati: that year only 522,425 hogs were packed—12,314 less than in the previous season.

From 1875 to 1925, more than 60 million head of livestock, including 38 million hogs and 10 million cattle, were slaughtered and processed in Cincinnati plants.

When Cincinnati was the world's center of the packing trade, and Chicago (whose meat production in 1929 was valued at \$654,957,981) was a mere infant in the business, "Porkopolis" had several hundred slaughtering houses. Although most of them were small, the aggregate valuation of the output was said to be upwards of 40 million dollars a year. After Chicago became the world's great livestock market place in the early 1880's the local industry fell back in the production race until the processing of meat dropped to less than 10 million dollars valuation in 1900. This total was the lowest figure in more than 50 years.

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From 1900 until 1920 activity in Cincinnati packing houses expanded again. In 1900 there were 21 establishments, employing 801 workers with a payroll of \$382,291, and an output valued at \$9,532,057; by 1920 the number of plants had doubled, the number of wage earners had more than doubled, and the yearly payroll had increased to \$2,113,562.

In 1906 the development of federal, state and city inspection and health regulations brought about added safety and standardization of production.

A total of 580 thousand hogs, compared with 718 thousand in 1908, were slaughtered in Cincinnati abattoirs in 1909. Cattle numbered 185 thousand—compared with 170 thousand the previous year—and about 150 thousand sheep. That year 915 thousand hogs, cattle, and sheep were slaughtered as against 900 thousand during the preceding year. Packers paid about 18 millions dollars for this livestock.

When the War came and livestock was hard to get, prices soared, and the packing business enjoyed happy days. In 1917 Cincinnati packers tried to market horse meat; but Cincinnati-ans turned up their noses at this substitute for beef, and the experiment was discontinued.

The local industry zoomed to record production in 1920, and then slumped—a reversal which completely upset several companies, among them the Cincinnati Abattoir Inc., at that time the city's largest slaughtering plant. From 1925 to 1931 the industry enjoyed its greatest upturn of modern times. Then the country suffered its biggest depression. Prices of livestock and processed meat dropped to near-record lows in 1933, and another pioneer in the business, the A. Sander Packing Company, had to quit. In 1934, however, when the heavy hand of drought smothered the Western plains, the Federal Government bought large numbers of cattle and hogs for distribution to the needy; and Cincinnati joined with other packing centers in the processing of this livestock. In 1935-36 the packing industry continued to improve; and the summer of 1937 brought prices back to where it was possible for packers to make a profit.

Local surveys show that the packing industry is virtually back to 1931 levels. In 1933 the total meat output in the city

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was valued at \$23,883,374, but production climbed to a valuation of more than 35 million dollars in 1936. These figures compare with the industry's peak in 1920, when the 42 local packing establishments produced meat worth \$62,428,358, employed 1,790 operatives, and paid \$2,113,652 in wages. The 1933 Federal industrial census figures disclose that during the worst depression year (1933) the 38 packing houses employed 1,676 and had a payroll of \$1,933,652.

Meat with a wholesale valuation of more than 35 million dollars was processed here in 1936. That year the industry directly employed about two thousand workers, whose annual earnings were more than \$2,500,000. Many thousands more were employed on farms and in transportation, sales, stockyards, and clerical work. In 1938 more than 40 packers of pork, beef, and lamb occupied the city and its satellite towns. At these plants 660,095 hogs, 205,433 cattle, 96,823 calves, and 214,776 sheep were slaughtered and processed. The peak year for hog slaughtering was 1929, when 1,040,187 were processed; 1934 has the record for cattle, with 245,646; and 1932 was tops for sheep, 231,299 being processed. In 1936 the largest number of calves were slaughtered—96,823.

Early packers, possibly because inefficient methods were applied to meat curing and processing, had to destroy great quantities of fresh pork, particularly spareribs and tenderloins. Cartload after cartload of these products was hauled from the abattoirs to the edge of the Ohio River, dumped there, and left to rot or to be carried downstream. (As late as 1850 it was possible to fill a large market-basket with tenderloins and spareribs for 10 cents.)

Today nothing is wasted. Tenderloins and spareribs are bought by housewives for the preparation of delectable dishes, and those parts of the carcass unfit for human consumption are sold as by-products. Among the by-products are fats, for lard; waste or tankage, for hog or chicken feed; hides, the materials for tanneries; hair bristles, stuck in brushes and employed as adhesive in plaster; bone, fashioned into knife handles, and collar buttons; wool, for clothing; steer horns, for combs; cattle hoofs, for glues; and certain hog organs, medicinal supplies.



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Co-operative marketing of livestock and the use of modern mechanical refrigeration and electrical machinery have driven the slaughtering business to a remarkable comeback since the days when Chicago meat packers took Cincinnati's business; and local meat packers may soon overtake and surpass the record production levels of 1920.

### *Cincinnati Packers*

CINCINNATI'S EARLY PACKERS laid the solid foundation on which has been built the present-day meat industry, now the city's third in product valuation. Many descendants of the founders today carry the family name in the same business.

The city's largest packing plant (twelfth in the nation) is operated by the E. Kahn's Sons Company; it comprises 11 modern buildings on a site of five acres on Spring Grove Avenue. The company was founded by Elias Kahn on September 29, 1882 in a small retail shop at what is now 1433 Central Avenue. Soon after opening the store Kahn fitted the rooms at the rear with the crude equipment and fixtures of the time and began slaughtering calves, lambs, and poultry. His enterprise was successful, and in 1885 he started killing cattle in an abattoir at Findlay and John Streets, a well-known neighborhood of the time. Later, as the business thrived, Kahn's sons, Eugene, Nathan, Louis, and Albert, became associated with their father; and the firm became E. Kahn and Sons Company. Following the death of Elias Kahn in 1900 the sons continued to operate the plant under the same name until 1907, when the business was incorporated as the E. Kahn's Sons Company. In October 1919 the company purchased the Butchers' Packing Company, and entered the pork branch of the business.

When the company needed more space, it bought the old plant of the closed Cincinnati Abattoir Inc. from the receivers (1926). After extensive remodeling and construction, the buildings were occupied in 1928. In 1938 the daily capacity of the plant was five hundred cattle, 2,500 calves and sheep, and two thousand hogs. From these the company processes beef,

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pork, veal, and lamb, cures such pork products as hams, bacons, picnic hams, butts, and tongues; manufactures sausage, lard, tallow, dried blood, fertilizer, tankage, grease, casings, live-stock and poultry feed; and cures and prepares hides sold to tanneries.

In the plant's beef slaughtering department 25 to 50 head of cattle are processed at one time. As the carcasses hang from overhead rails, they are sledged, stuck, and skinned, and their hoofs are removed. Hearts, lungs, and livers are thoroughly tested for disease by the five United States Government inspectors at the plant. The beef, which has been moving continuously, is then split and quartered, and pushed into the cooling rooms.

Walls in the departments where edible meat is prepared are of glazed tile. A laboratory is maintained to insure scientific control and uniformity of meat products and by-products. The firm also operates a large fleet of refrigerated motor trucks and railroad cars.

The H. H. Meyer Packing Company, Bank and Linn Streets and Central Avenue, is the city's largest exclusive packer of pork products. Founded in 1876 by Henry Huschard Meyer, the firm now is under executive direction of H. Harold Meyer, grandson of the founder. In 1869, at the age of 26, Henry H. Meyer became a bookkeeper of the Anderegg & Roth Packing Company. Major John Anderegg, head of the firm and Meyer's father-in-law, guided him to an executive job in the company.

In the 1870's, when mechanical refrigeration was first used by the packing industry, Meyer supervised the installation of ice-making machinery at the Anderegg & Roth Packing Company, the first Cincinnati plant to have this new contrivance. Later this type of refrigeration revolutionized the national methods for the marketing of fresh and cured meats.

In 1874, two years after forming a partnership with his cousin, Meyer opened a packing house in Baltimore. Afterward the plant was transferred to Cincinnati. When Major Anderegg died in 1882, Meyer purchased his interests and immediately changed the firm name to the Roth-Meyer Packing Company. He was vice-president and general manager until 1892, when

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he withdrew to direct the work of the Meyer-Huschard Company, renaming it the H. H. Meyer Packing Company. In 1919, Meyer died and his son, N. Raymond Meyer, became president; following his death in 1932, his son became head of the business.

The J. & F. Schroth Packing Company, Massachusetts Avenue and Township Street, another large pork packer, was established in 1882 and incorporated under the present name in 1892. Operations are conducted in a modern plant under the management of the sons and grandsons of the founders.

The Ideal Packing Company, Baymiller Street and Central Avenue, was established in 1884 by John Hoffman. The present executives, Charles Hauck, president, and Albert Goering, vice-president and general manager, were associated with the founder as bookkeeper and plant manager. When Hoffman retired in 1918, they assumed management.

John F. Stegner, the city's second largest processor of beef and veal, began business in a retail market at Thirteenth and Main Streets. After he had opened a second store, the demand for meat amounted to about 30 head of cattle weekly. In 1921 he acquired the abattoir at 3098 Colerain Avenue. Later the wholesale phase expanded so rapidly that Stegner abandoned the retail stores, and now his company has branch sales offices in Pittsburgh and other Eastern cities.

Cincinnati's rostrum of meat packers also includes C. Erhardt's & Sons, 545 Poplar Street; John Hilberg & Sons, 516 Poplar Street; John B. Ireton Co., 1715 John Street; Gus Juengling & Son, 2869 Massachusetts Avenue; Lohrey Packing Co., 2827 Massachusetts Avenue; William G. Rehn's Sons Co., 450 Bank Street; Jacob Schlachter's Sons Co., 2841 Colerain Avenue; and Joseph N. Rice, 1564 Water Street, Covington; Jacob Bauer's Sons, 2870 Massachusetts Avenue; Fern Blackburn, 2124 Baymiller Street; J. H. Blank & Company, 306 East Pearl Street; August N. Blust, 4382 Innes Avenue; Becker Bros., 203 West Sixth Street; Sam Gall, 2121 Freeman Avenue; Carl Grote, 515 West 12th Street, Covington; E. Huttenbauer & Son, 131 East Sixth Street; Herman Kemper Sons' Company, 2900 Sidney Avenue; Edward J. Kluener, 2908

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Sidney Avenue; Joseph Kluener, Jr., 2965 Cormany Avenue; A. Kock Sons' Company, 2900 Sidney Avenue; the Lowenstein Markets Company, 416 West Sixth Street; Mane Brothers, 3075 Sidney Avenue; Charles Megerle, Eighth Street and Central Avenue, Newport; Schultz Bros. Company, 417 Findlay Street; Harry Meyer Provisions, 1320 Ethan Avenue; Howard Pancero, 266 Stark Street; Lester Pancero, 1815 John Street; Scott Provision Company, 6481 Montgomery Avenue; August Walter, 1817 John Street; Florence McCoy, 330 Pike Street, Bromley, Kentucky; Haehnle Provision Company, 309 West 12th Street, Covington; C. Rice Packing Company, Patton Street and Eastern Avenue, Covington; and Lawrence Holley, Miamisville.

Several of these plants are exclusive kosher slaughterers. In addition, two of the three largest packers in the country, Armour and Company (1320 West Eighth Street) and Swift & Company (Front and Walnut Street), maintain small processing plants, storage warehouses, and sales forces here, while Wilson & Co., the other member of the "Big 3," has a city sales office. The Kroger Grocery & Baking Company, which formerly operated a large packing plant on Bank Street, now has a meat processing department at its factory and warehouse on State Avenue. Sausages and other wrapped meat products are processed here.

### *Sausage Making*

MANUFACTURE OF SAUSAGE in Cincinnati has become one of the major side-lines of the meat packing industry. Practically all local packers now produce various brands of sausage and market the product in bulk or packages. The demand for this product originated early in the 1840's when the tide of German immigration rolled highest toward Cincinnati and the West.

The H. F. Busch Company, 1332 Vine Street, founded in 1860, is the oldest sausage manufacturer in the city. Other large manufacturers are Becker Brothers Company, 942 Monmouth Street, Newport, Kentucky; Frederick Dinkelaker, 1918



PACKING



SAUSAGES

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Pleasant Street; Edelmann Provision Company, 2111 Kindel Avenue; Fritz Frey, 1134 Straight Street; Mane Brothers, 3075 Sidney Avenue; Ernst Mayer, 2905 Jessamine Street; Oehler Sausage Company, 2866 Massachusetts Avenue; I. Oscherwitz & Sons, producers of kosher sausages, 569 West Sixth Street; and George Wolff & Son, 116 West 12th Street.

### *The Cincinnati Stock Yards*

CINCINNATI UNION STOCKYARDS, INC., 3119 Spring Grove Avenue, supplies the city's packing and processing plants with livestock, and feeds and waters the stock enroute to other packing centers. The firm was established in 1871 as the United Railroads & Stock Yard Company; in 1883 the corporate name was changed to the Cincinnati Union Stock Yards, Inc.

As a combination of the old Brighton Yards and the Great Western Stock Yards, the Cincinnati Union Stock Yards was founded as a central receiving and delivery point for commission dealers and buyers of stock. During the 1850's many slaughter-house owners operated their own yards, scattered about the city. Since both buyers and sellers of livestock needed a central place to transact business, the idea of a union stockyard was soon conceived. The predecessor of the present company was later organized to meet the industry's needs.

In 1937 the Cincinnati stockyards, fifteenth largest of its kind in the United States, had a plant covering 40 acres, stocked with more than a thousand roofed pens for cattle, calves, hogs, and sheep. The plant has facilities for the simultaneous loading and unloading of 50 railroad cars and hundreds of motor trucks. Most shipments of stock to Cincinnati packers come from Ohio, Indiana, and Kentucky, within a radius of 200 miles. At times when slaughtering stock is scarce, cattle and hogs are sent here from points as far away as Texas. Livestock handled in 1936 totalled 1,438,116 head, including 787,479 hogs, 317,048 sheep, 224,338 cattle, and 109,251 calves. In 1937 the totals were: 703,497 hogs, 185,841 sheep, 154,721 cattle, and 99,524 calves.

### *Commission Brokers and Exchange*

ANOTHER IMPORTANT UNIT of the Cincinnati packing industry is the commission brokerage and exchange business. The 25 member commission brokers execute all packers' buy and sell orders for livestock; and the exchange handles through the United States Department of Agriculture the daily price quotations and movement of livestock in the Greater Cincinnati market, and co-operates with other American livestock markets. All brokers have offices in the Stockyards Exchange Building, while a few operate private pens for the handling and feeding of the stock they purchase.

### *Meat Packers' Supplies*

PRODUCTION OF SUPPLIES for packers has accompanied the meat industry in Cincinnati. The city's larger packing houses have their own departments for the manufacture of sausage-casings. One plant, The Kunz Casing Company, 2025 Elm Street, however, is devoted solely to the production of casings and sewed hogsbungs for packers in the Cincinnati area.

### *Machinery and Equipment*

MEAT PACKING PLANTS in Cincinnati, like those elsewhere in the nation, need and use many kinds of equipment. During the early days of the slaughtering trade instruments and processing methods were crude compared with present day standards. The manufacture of equipment developed with the meat industry from the old-time hand methods to the present system of electrically operated machines. Today several Cincinnati concerns produce these articles. The Cincinnati Butchers' Supply Company, 1972 Central Avenue, founded in 1886, maker of machinery and equipment and special electrical refrigeration systems and fixtures, is the largest. Next in size is the C. Schmidt Company, 1712 John Street, established in 1870 and incorporated in 1907, which manufactures refrigerators, equipment, and store fixtures.



## *Poultry Packing*

A FEW HENS and roosters were usually among the necessities brought along by early Cincinnati settlers. Though these first poultry flocks were practically decimated during the first winter (1788), many a chicken helped keep the wolf from the door. The raising and packing of poultry has since grown into one of the city's most important commercial units. From 1800 to 1815 because of the scarcity of money a heavy hen could be bought for four cents—about the equivalent of four dollars today! Poultry was used extensively as a medium of exchange and in barter; a workman often got a chicken and a small amount of cornmeal in payment for his labor.

There are now more than a hundred firms and individuals in Cincinnati buying, packing and marketing poultry, including chickens, turkeys, geese, ducks, and rabbits in season. In 1937 this branch of the packing industry gave employment to about five hundred workers. Annual wages were estimated at more than 600 thousand dollars.

Some of the large packers of poultry are Ray Belser, 520 Pike Street, Covington, Kentucky; George Bengert, 3110 Spring Grove Avenue; J. Bengert & Sons, 116 East Front Street; Bergewisch Company, 44 Walnut Street; Blue Grass Poultry, Inc., 313 East 12th Street; Jos. F. Boehnlein, 113 West Elder Street; J. H. Cain Fish and Poultry Company, 534 Main Street; W. H. Frye, 745 West Court Street; Harry Gersensfish, 521 West Court Street; William Hux, 2268 Spring Grove Avenue; IOK Farm Products Company, 3198 Spring Grove Avenue; John V. Kisker Company, 11 Main Street; Larry L. Long, 103 East Front Street; E. Mohlenkamp, 1668 Queen City Avenue; Peters Poultry Company, 122 West Court Street; Simmons & Norris Company, 51 Walnut Street; Fred Trefzger & Sons, 2162 Colerain Avenue; Alex Wilson Company, 104 West Front Street; New Fisheries Company, 332 West Sixth Street; and Wright Poultry & Egg Company, 113 East Front Street.

The prices of poultry, butter, eggs, and other farm products in the Greater Cincinnati market area are regulated through a

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system of supply and demand by the Cincinnati Mercantile Exchange, Chamber of Commerce Building, established in 1928 during the reorganization of the Old Produce Exchange, founded in 1883.

Farmers in the vicinity of Cincinnati raise large numbers of poultry (principally chickens) for the local market. Because a chicken can thrive on comparatively little attention, profits from sales of eggs and poultry add greatly to the income of nearby farmers.

## Chapter V

### *Soap Making • Beauty Preparations • Candle Manufacture • Chemicals, Drugs, and Medicines • Mixing of Paints and Varnishes*



ALLOW AND WOOD ashes were the ingredients used by the ancient Gauls when they made soap. Centuries later, excavators found among the ruins of Pompeii evidence of a soap factory believed to be 1,700 years old. These remains showed that the Pompeiian soap maker apparently mixed the same ingredients as those of the early Gauls. Soap was introduced to England during the latter part of the fourteenth century as a luxury which only the wealthy could afford. Gradually the making of soap became a household task for women. Shortly after immigrants to the United States brought with them their home formulas, small manufacturing plants were built; and a new industry was fashioned.

In the past 50 years chemists have worked out many combinations of the various soap ingredients for a wide variety of uses. Modern soaps range from types too mild to injure the skin of a baby, to compounds strong enough to take the varnish off furniture. Manufacturers in the United States annually produce more than two and a half billion pounds of soap for every conceivable purpose. The products have a retail valuation of about 300 million dollars.

In Cincinnati the making of soap has developed from a small industrial enterprise in 1814 to the city's largest single manufacture in 1938. Products of local soap factories, whose annual valuation exceeds a hundred million dollars, help carry the name of the city into every civilized nation. In 1938 the 14 plants employed about 4,500 workers, who earned wages of more than six million dollars a year.

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Soap making was a task for the women of the house during Cincinnati's pioneer days, as spinning and weaving had been household chores at a still earlier date. The typical formula of the time called for the boiling of fat with wood ashes or some other base; and the finished product had about the consistency of cold cream. This practice of making soap at home continued in Cincinnati until the Civil War. (In some rural parts of the country it is still a household art). When the industry started in Cincinnati there was only one kind of manufactured soap, called German soap, made from fats, tallow, grease, and red oil. It served all purposes, from the Monday wash to the Saturday night bath.

Present-day soap is made of the fatty acids resulting from a combination of sodium potassium with fat; solid or hard soap is usually made with soda only. The fats are treated with lye either by heat treatment just short of boiling, or boiling in open vessels, or by heating under pressure. Other substances, chiefly glycerine and perfumes, are often added in the manufacturing processes, some to bolster cleansing or lathering properties, others to add weight.

The constant progress made by the industry in its chemical and manufacturing processes has resulted in the development of such specialized articles as perfumed soaps, soaps for oily or dry skins, grease-removing soaps, hair shampoos, shaving preparations, waterless soap for household cleaning, and soap flakes, granules, and chips for washing machine use.

Methods of marketing have advanced with the improvement of soap processes. Soap is now wrapped and packed in attractive individual packages, while millions of dollars are spent annually in newspaper, magazine, radio, billboard, direct-mail, house-to-house, and premium advertising.

When the commercial manufacture of soap began, horse-drawn carts clattered over the streets of Cincinnati as the drivers collected grease and fats from the housewives. In return they bartered pieces of common soap. Later, when deliveries first were made to grocers, soap was sold in bulk, and pieces were cut to suit the wants of the purchaser. This merchandising method continued until after the turn of the century.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

The first soap-and-candle boilers and chandlers started business in Cincinnati about 1814. Two years later several of the local plants were doing so well that they began to export to the South and West. At that time all manufacturing operations were done by hand, and it was unusual for two blocks of the solidified grease, oils, and fats to be of the same quality and appearance. New formulas, new chemicals, mechanization, and improved technical methods are responsible for the standardized and nearly perfect soap product of 1938.

Judging from typical advertisements published in the *Cincinnati Gazette*, however, the soap of 1850 was rather better than perfect. The July 12, 1850 issue of the paper has this item:

Freckles, Pimples, Moth, Eruptions, Sallowness, Sunburn, Scurvy, Chaps, Chafes, and Cracks cured by using Howard's Improved Chemical Chloride Soap. It has fully stood the test of experiment and is deservedly more celebrated than any in use, for rendering the skin smooth and soft, removing chaps, pimples, and blemishes; for the preservation of the teeth and gums, and the cure of offensive breath; for cleaning and healing sores and wounds; for preventing and curing cancerous diseases, particularly in infants; for bleaching muslins and handkerchiefs, and for the removal of (recent) grease, paint, etc., from clothing.

On September 2, 1850 the same newspaper published the following:

Howard's Improved Chemical Chloride Soap A Blessing! A Miracle! A Wonder! . . . This soap is manufactured by a practical chemist and possesses virtues found in no other. By washing the face and hands every morning it will make the skin as smooth and soft as silk—changes the color of dark, yellow and disfigured skin to a fine, healthy and youthful appearance . . . Its component parts being chloride of soda renders it a very disinfecting article . . . It is a very superior article for washing and cleaning sores or wounds and preparing flesh to heal . . .

Today, newspapers and magazines would not accept an advertisement making quite such extravagant claims. Excerpts from an advertisement in the June 1937 issue of a current

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magazine show the different technique of modern soap advertisers:

Lucky for Me I learned this *Lovelier Way* to Avoid Offending! . . . Marvelous for your complexion too! This pure creamy soap has such a gentle, caressing lather. Yet it removes every trace of dirt and cosmetics—keeps your skin alluringly smooth and radiantly clear! . . . To keep fragrantly dainty—bathe with perfumed . . .

### *Procter and Gamble*

TWO YOUNG MEN, William Procter (1801-1884), the son of a Herefordshire preacher, and James Gamble (1803-1891), County Fermanagh, Ireland, in 1825 decided the New World offered greater opportunities for a livelihood than their homeland, and emigrated to the United States. With little more than health, youth, and ambition they came to Cincinnati, where Procter started a small soap works and Gamble made candles. For several years after their arrival they went their separate ways. Then they met for the first time (1832) as the swains of two sisters. That evening romance was forgotten as the two discussed plans. Later they married the sisters, and within a few years they went into partnership to make soap and candles. From this alliance sprang the Procter & Gamble Company, the world's largest manufacturer of soaps and allied products, doing a gross business of more than 225 million dollars in 1937.

In August 1837, during one of Cincinnati's early depressions, the two men pooled their savings of \$7,500 to start the manufacture of soap and candles in a small shack at the northeast corner of Sixth and Main Streets. Procter lived in a brick house behind the small shop. (Today the Gwynne Building, erected on the site of the original factory, houses the executive offices of the corporation). The partners took turns manufacturing the soap and candles and selling them from house to house. When a grocer gave them an order they made the deliveries together, pushing through the streets a clumsy wheelbarrow piled high with bulky cakes of soap.



IVORYDALE: CITY OF SOAP



EARLY SOAP MAKING



## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

During the first year total sales of the firm exceeded 50 thousand dollars. Later, with profits mounting, the partners realized they needed more manufacturing space. Since it was impossible to obtain more space in the neighborhood, they bought a plot of ground facing the Miami & Erie Canal and Central Avenue, north of Charlotte Street, and here they constructed a large brick building. The factory, equipped with the best machinery available, was on the edge of the city. The stockyards nearby were a convenient source for fats; the firm purchased hog fat from packers and rendered it into lard. Lard oil, used extensively for lamps before the days of petroleum, was made by squeezing out the liquid portion of the cold lard. Soon the young firm was one of the nation's largest producers of the oil.

New buildings were added to the Central Avenue plant, and expansion continued. Meanwhile the company tried to find new processes to improve the quality of its soap. Chemists then were experimenting with pure vegetable oils, from which it was hoped a white soap resembling castile could be made. At the time all Castile soap was imported, principally from Spain. About 1870 the firm was approached by a group of men anxious to sell a formula for American pseudo-Castile soap. The company bought the rights, and, proceeding according to the recipe, brought out the first white floating soap to be manufactured in the United States. In October 1879 the first bulk cake was sold; and the new product was immediately successful. At first the product was simply called "white soap." Later the slogan, "Ivory Soap, 99-44/100% pure; it floats," was developed.

For years many legends about accidental discoveries of new soap formulas have passed by word of mouth from one listener to another. Though the majority originate in the imagination, one story about Ivory Soap has been generally accepted as true. It is said that a soap maker fell asleep and allowed the ingredients to boil longer than the specified time. Passing by William Procter noticed that the soap was flakier and whiter than usual. He shook the man to consciousness and got from him an admission that he had overslept. The formula for white floating soap, so the story goes, was thus discovered.

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This accident, however, seems to have little basis so far as Ivory Soap is concerned; but one happening at the Procter & Gamble Company plant in 1850 did bring about the development of a new type of soap bar. One day, while the soap ingredients were boiling some blueing was carelessly dropped into the vat. When it solidified the soap was streaked with blue. As German mottled soap the product soon enjoyed wide popularity, but was discontinued in 1913.

One Sunday morning in 1887 Harley Procter sat in the family pew of an Episcopal church in Mt. Auburn. "All thy garments smell of myrrh and aloes and cassia out of the ivory palaces whereby they have made thee glad," read the pastor from the eighth verse of the forty-fifth psalm. "Ivory palaces—that's it!" thought Procter. "We'll call the white soap Ivory." So, on the wings of the psalmist, came the soap which floated. Firm members conferred and decided to name after the soap new factories then being planned; accordingly, the site was called Ivorydale.

A wharfhand was responsible for the adoption of the stars and the crescent moon as the corporation's trademark. In the 1840's boxes of candles from Procter & Gamble lay on the Cincinnati river front awaiting shipment to Louisville. A few idle moments, a can of paint, and a brush lay at hand, waiting to be used. On the boxes the wharfhand traced rough crosses for stars. So marked, the cases were taken to Louisville. The next shipment of candles was refused by the purchaser because the boxes did not carry the stars. Immediately all shipments were marked with stars, and several years later a crescent moon was added.

There were times when the firm struggled with adversity. On January 7, 1884 a fire razed all but one of the Central Avenue factory buildings, throwing five hundred employees temporarily out of work. The blaze, say newspapers of the time, caused a loss of 250 thousand dollars to the "largest soap factory in the world." Despite all the heat thrown off by the fire, the ultra-winter weather put ice coats on the firemen. Explosions shook the neighborhood when the flames reached oil stored in underground cellars, and the heavy walls of the south

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

soap factory collapsed—all within three hours of the time the flames were discovered. The oil storage building, candleware rooms, south soap factory, melting house, and press room were destroyed. The north soap factory, just built, was not damaged. James Gamble bought coffee pots and personally distributed to the firefighters more than 50 gallons of coffee and hundreds of sandwiches. The next day the gaunt walls were thick with heavy ice, and icicles 10 to 30 feet long hung from the telegraph poles.

As they eyed the ruins, Procter and Gamble were glum, but not to the point of giving up. Since business of the firm had quickened, they decided to get a new site instead of rebuilding on Central Avenue; for the city, now grown up about the factories there, limited expansion. So the partners bought an 11-acre tract of dairy and farm land on the outskirts of the city along Mill Creek near the Big Four and B. & O. Railroad tracks. Here in 1885 ground was broken and the erection of a new plant begun.

When designs for the factories were discussed with architects and engineers, the soap company executives demanded something new in industrial construction; they wanted a group that would please the eye. The structures, designed of gray stone with brick trim, were set among lawns and flower gardens. This beautification program has been continued, and playfields, tennis courts, and other recreational facilities have been added for the benefit of employees. During the company's centennial year (1937) plans for a research, engineering, and administrative building were approved by executives. This new unit of the plant, now being built at Spring Grove Avenue and June Street, will house the consolidated research laboratories of the chemical division, the superintendent's offices, and the engineering division.

In 1883, after William Cooper Procter (1862-1934), one of William Procter's sons, graduated from Princeton University, he returned to Cincinnati. Refusing a white-collar job, Procter slipped into a pair of overalls and went to work in the factory. Later this intimate contact with his fellow workers induced him to propose, in the interests of workers, radical

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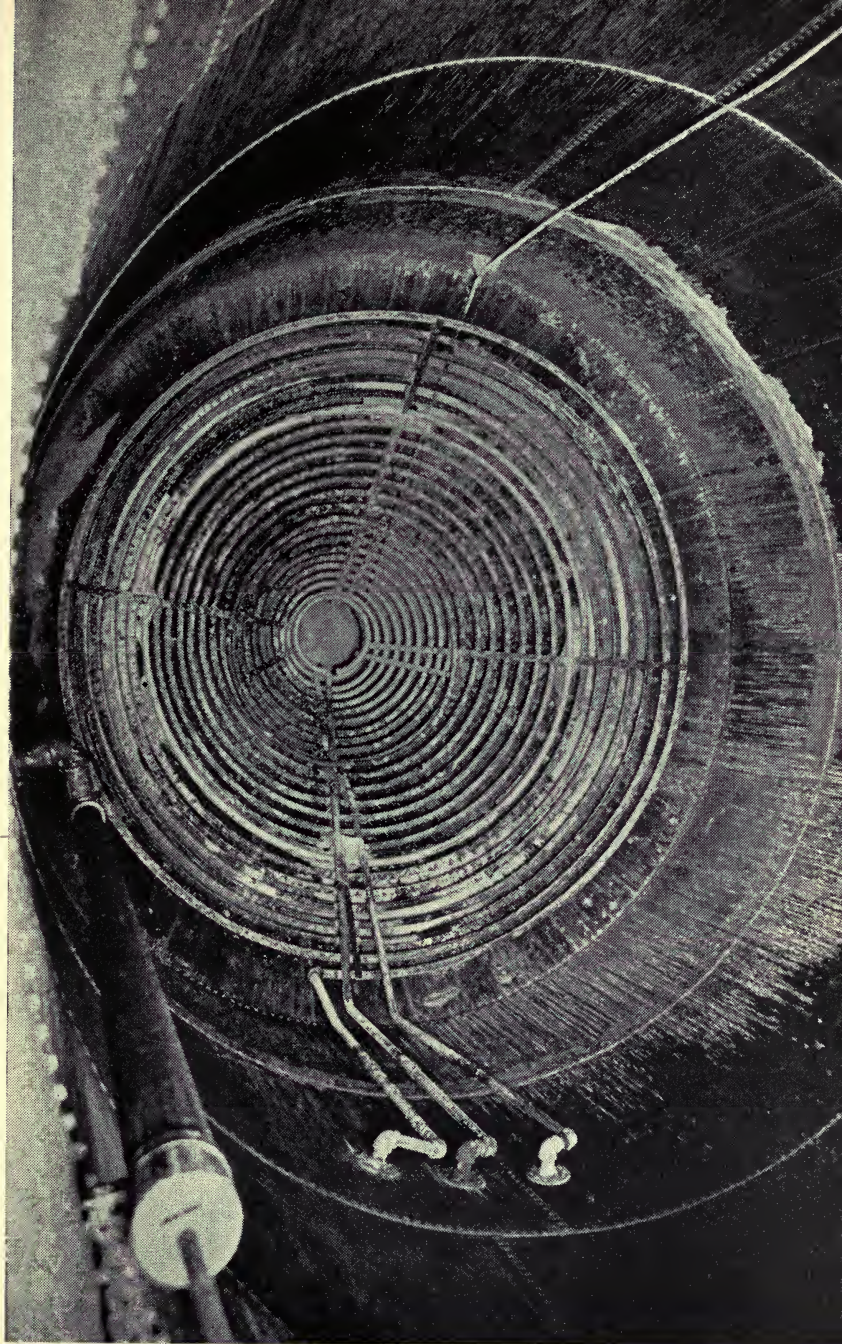
changes in management and plant operation. His ideas were at first opposed, but finally adopted. Though Procter's plans were to undergo much improvement and development, the basic principles were the same in 1938 as in 1885, and the Procter & Gamble Company has never had serious difficulty with employees about wages or working conditions.

Procter's first innovation was the Saturday afternoon holiday without reduction in pay—a plan considered by industrialists of the day to be the epitome of reckless extravagance. Becoming effective in 1885, it is said to have been the first move by American industry to give workers a weekly half-holiday.

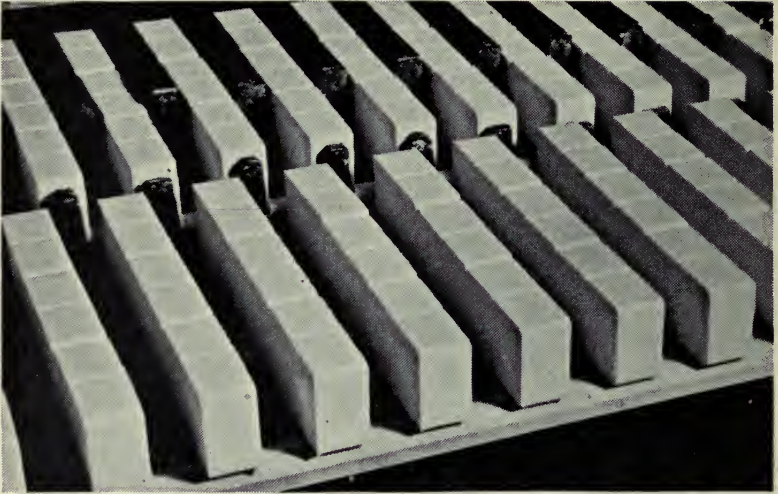
That year a plan was also worked out for dividing profits with employees; though changes and improvements have been made to bring it to present efficiency, the scheme was successful from the start. Profits, at first received by employees in the form of dividend checks, soon came to be regarded merely as a normal part of wages; and a system of broad stock ownership in the company was thus evolved. A pension and benefit plan (1887), supported jointly by the company and employees, assures aid in sickness, disability, old age, and death. In the case of death, payment equal to a year's wage is made. The last major benefit plan (1923) to be undertaken was the guarantee to workers of 48 weeks employment a year, with paid vacations.

Since 1887, when the profit-sharing plan became effective, the company has paid nearly 14 million dollars in dividends to employees in the United States and Canada. In 1937 the workers' dividend payments totalled 660 thousand dollars, of which 250 thousand dollars were distributed in Cincinnati.

In 1900 the company operated only the Ivorydale plant. Since that time manufacturing units have been added in Kansas City, Kansas; Port Ivory, New York; Macon, Georgia; Dallas, Texas; Chicago, Illinois; St. Louis, Missouri; Long Beach, California; Baltimore, Maryland; Dayton, Ohio; Hamilton (Ont.), Canada; Cuba; England; and the Phillipines. Sprinkled through the South are cotton-oil seed mills, while in the Phillipine Islands a purchasing office and testing laboratory handles copra, the dried cocconut meat from which soap



KETTLE PATTERN



**BOILING, CUTTING, AND PACKING SOAP**

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

oil is obtained. Olive oil comes to the plants from Spain, Algeria, and Greece. Australia ships sandalwood oil, the East Indies send their perfumes, the Mediterranean Islands contribute their volcanic pumice stone, Russia offers its oil of the sunflower, and France, Brazil, China, Japan, and India ship other exotic ingredients to the Procter & Gamble Company soap kettles.

The concern's entry into the edible fats business was a natural development. The firm had been using large quantities of cottonseed oil in soap making when, in 1901, a subsidiary, The Buckeye Cotton Oil Company, was organized to buy and crush cottonseed. It was discovered that when refined the better grades of cottonseed oil made an excellent shortening; so in 1902 the company began marketing Flakewhite, a lard substitute. In 1905 the manufacture of candles, one of the company's original products, was discontinued. Crisco, the first shortening made through a hydrogenation process, by which all the oil was brought to the same body and consistency, was introduced in 1908; today it is one of the most widely used products of its kind in America.

In 1927 the Procter & Gamble Company purchased the plant, trade mark, and formulas of the Globe Soap Company, situated directly opposite Ivorydale. This concern, originally founded in a factory on Water Street, was removed to Ivorydale in 1900 because of recurring floods in the city's bottoms district. The firm's products included Pearl Soap and Grandma Soap, both of which are still marketed.

From the many ingredients mixed together to cause chemical reactions comes the product called soap. The re-agents needed are fats, oils, and soda, and the change occurring when these materials are boiled together is called saponification. During saponification the fats and oils combine with the soda, forming glycerine and soap. The soda forces glycerine from the oil, and by taking its place forms a mass which after solidification is known as soap.

At the Procter & Gamble Company's Ivorydale plant the ingredients used in the manufacture of soap pass through intricate processes before the finished product is ready for shipment

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

to consumers. Ivory Soap is made as follows: First the materials, prepared fats, oils, and soda, are spouted through pipes into huge three-story-tall kettles, each of which holds 300 thousand pounds of soap—nearly 10 carloads. At the bottom of the tanks perforated steam pipes are coiled. The steam escaping through the coils supplies heat and at the same time churns and boils the ingredients. It is during this process that the fats and soda unite with each other to form glycerine and soap. When saponification is nearly complete, a soapmaker stirs the seething mass with a long, wooden paddle to test its consistency. Then some of the soap is withdrawn in a metal container, which is immediately sent to the laboratory for testing. After the chemist has approved the sample, the worker continues with the next process, called "graining." Several tons of salt are added, causing the soap to "curd" into millions of tiny granules, which thin out on top of a watery solution of glycerine, unused soda, and impurities. Later the watery solution is pumped away to be purified.

Next the thick soap left in the kettle is washed with water to free it from a sediment called nigre. Then it is ready to be pumped to the crutching machines through pipes leading from the tops of the kettles. Crutching machines are huge mixers equipped with rotary blades, which churn the soap, mixing and creaming it thoroughly into a smooth consistency. After 30 minutes of this violent agitation the soap is released into large, oblong iron boxes mounted on wheels. These boxes have removable sides and ends, and are called "frames"; each frame holds about a thousand pounds of soap. At this point there is a pause in production, for the soap must solidify and age. When aging is complete the sides and ends of the frames are removed and the cake of soap is ready for the first of the cutting operations, called slabbing. The huge blocks are forced through a machine on which is mounted a framework holding equally spaced piano wires to slice each block into horizontal layers the thickness of a cake of soap. The soap is then hurried to a cutting machine, which divides the slabs into long sticks, cut into cakes by a cross motion of the same machine. Wires are also used in this operation.



Then the rough bars of soap are piled on frames and the frames placed on racks, which are pushed onto a conveyor belt running into a drying tunnel. At the end of the tunnel the cakes are ready to be stamped, wrapped, and boxed. A machine with a capacity of a hundred thousand bars a day stamps the cake, imprinting the name of the soap. As the soap leaves the stamping machine a conveyor belt picks it up and carries it to an automatic wrapping machine. Inside and outside wrappers drop in front of the bar as it is fed into a mechanical hand. Partial folding is accomplished by this method, and a quarter turn of the hand completes the folding process. The ends are tucked in and glued while the cake is passing from the wrapping machine along another conveyor to the packing table. Here an operator places the bars of soap in cartons, which are then ready for shipment.

Processes used in the manufacture of other stamped bar soaps are similar to those for producing Ivory, while milled soaps are made somewhat differently.

Principal products of the Procter & Gamble Company today include three sizes of Ivory soap: Ivory Flakes and Ivory Snow; Camay, scented toilet soap; P & G White Naptha soap, for laundry use; Chipso, for laundry and dish use; Oxydol; Dreft, especially prepared for the washing of silks and woolens; Drene, a shampoo; Lava Soap, household cleaner in cake form; Kirk's Coco Hardwater Castile; Pall Mall, fine quality toilet soap; Crisco, vegetable-oil shortening; and glycerine and acids. The company also manufactures soaps and flakes for private concerns under the firms' own names.

### *Andrew Jergens*

THE ORIGINAL FACTORY of what is now the city's second largest producer of soap was established on Spring Grove Avenue in 1882 when Andrew Jergens organized the Jergens Soap Company, succeeding Charles H. Geilfus, one of the early men in the industry. At that time Jergens specialized in producing and marketing toilet soaps.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

When cosmetics for women became popular during the 1890's the firm began to experiment with the manufacture of face powders. This branch of the business expanded rapidly, and perfumes, face creams, and hand lotions have been added to the list of products.

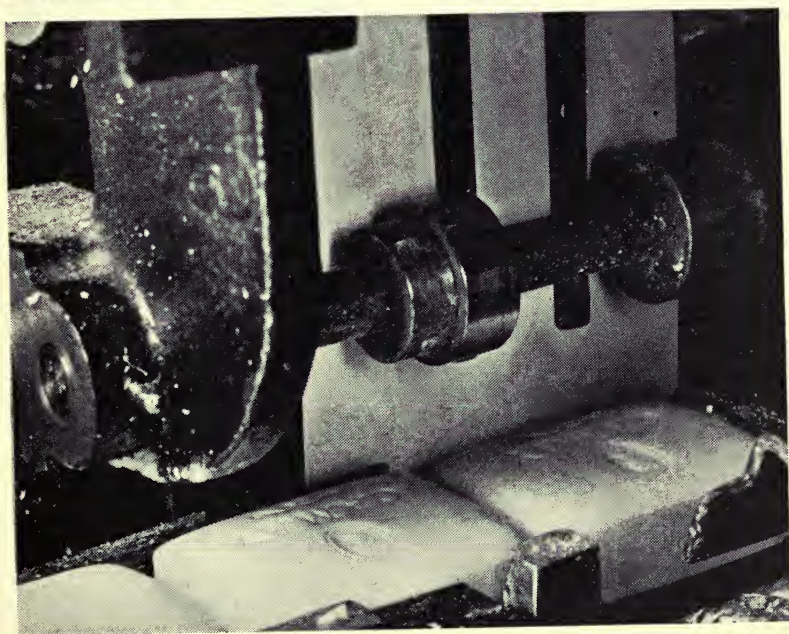
In 1894, the name of the firm which then employed 25 persons, was changed to Andrew Jergens & Company. In 1901 it bought the assets, trade name, and formulas of the John H. Woodbury Company, manufacturer of Woodbury's Facial Soap. The making of this brand of soap has been continued, and today Woodbury's is a sales leader among the higher-priced soaps.

In 1913 after a series of reorganizations the corporate name was changed to the Andrew Jergens Company. The company now has about a thousand workers at the main plant, Spring Grove Avenue and Alfred Street, operates branch factories in Los Angeles and Perth (Ont.) Canada, and maintains a warehouse in Brooklyn. In 1937 a 500 thousand dollar expansion program, including the erection of new buildings, improvements to old structures, and additional storage tanks for oils used in producing soaps, was completed. Products of the firm, Woodbury's Facial Soap, Jergens Violet and other toilet soaps, as well as lotions, face creams, powders, and perfumes, can be purchased almost everywhere.

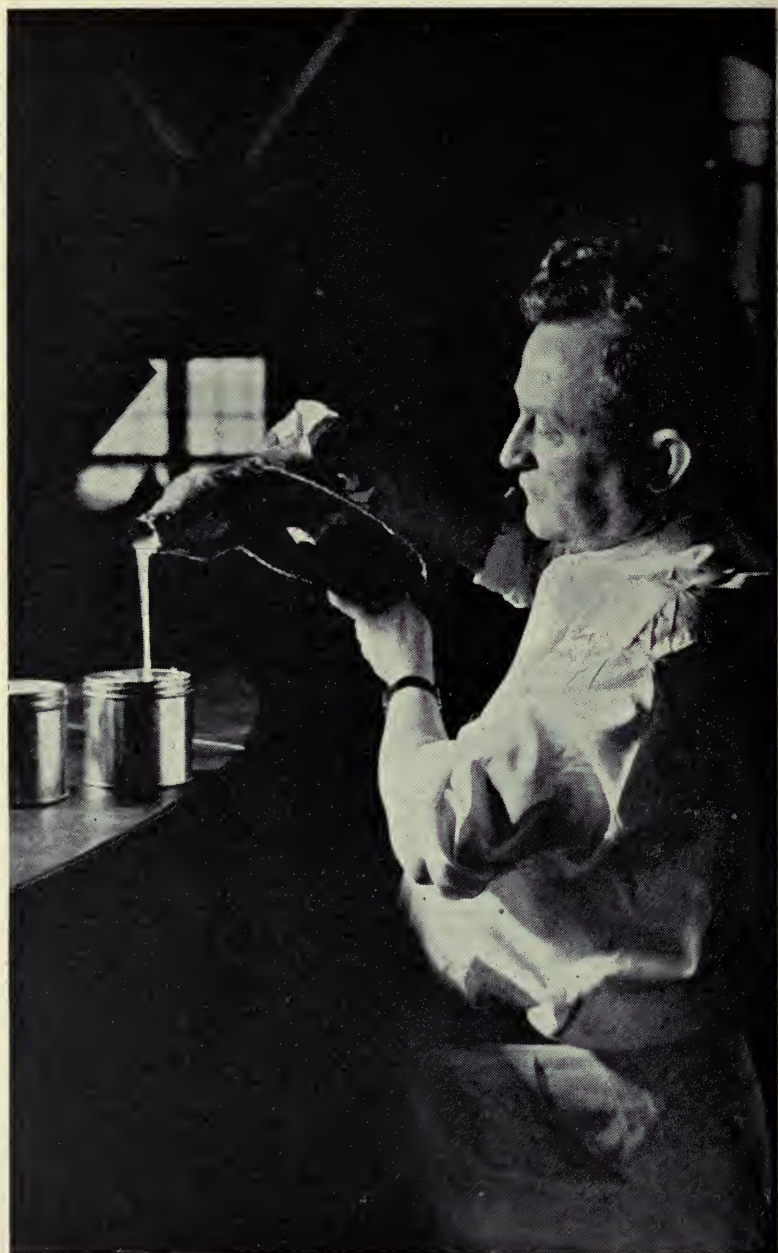
### *Michael Werk*

ANOTHER CINCINNATI PIONEER in the candle and soap industry was Michael Werk, who in 1832 began manufacturing candles in a small factory on Poplar Street, between Central Avenue and John Street. At first the dipped tallow candle, dating from an English discovery of the eleventh century, was his principal product; housewives brought their grease and tallow to the Werk plant and got candles in return. In the early day candles were made through continuous dipping by hand until the metal or pewter molds were filled. After they had solidified, the candles were taken from the molds.

When the stearic acid candle became popular (about 1880) the making of tallow candles was discontinued. Then Werk



CAKES AND BARS



TESTING SOAP

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

began manufacturing soap; he specialized in the pure, old-fashioned laundry variety, a product still marketed today.

In 1874 Werk's Poplar Street plant was demolished in a spectacular fire. Although the loss was great, the firm constructed another building on the same site and occupied it until 1912 when increased business demanded larger manufacturing quarters. Accordingly, the firm bought a tract of land on Murray Road, St. Bernard, near the Procter & Gamble Ivorydale plant and near the chemical plants with which Werk did business. Today the Werk Company operates the city's third largest soap plant, and its products, Tag Soap, Werx Chips and Flakes, and Werko, are sold nationally. The firm also manufactures acids, glycerine, and red oils.

### *Other Soap Makers*

DU BOIS SOAP COMPANY (1920), with a plant at 1120 West Front Street, is the most recent addition to Cincinnati's soap industry. Specializing in private-brand toilet soaps and dish-washing compounds, the company in 1937 completed factory improvements which doubled production capacity.

Other Cincinnati manufacturers of soap are Fisher's Surfa-Saver, Inc., Paddock Road and the B. & O. Railroad, producers of automobile and liquid toilet soaps; William Dock & Company, Murray Road, St. Bernard; Hunnewell Soap Company, 114 West Second Street; Kroger Soap Company, 207 Main Street; Pollyanna Waterless Cleanser Company, 416 East Pearl Street; William F. Siebenthaler Company, 372 East McMicken Avenue; United States Soap Company, 105 East Third Street; Floray Products Company, 1644 Central Avenue, manufacturer of Vanisope, a deodorant compound; Wiggins Chemical Company, 8 East Front Street; and Wissell Soap and Chemical Company, 1726 Andina Avenue.

### *Beauty Preparations*

MODERN BEAUTY AIDS, including face powders, perfumes, hand and face lotions, and deodorants, were first made in

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Cincinnati during the 1890's. Though rice powder had been used for centuries, earlier Victorians had frowned upon cosmetics. Today this type of manufacture each year accounts for many millions of dollars in business.

Besides the Andrew Jergens Company, the city's foremost producer of face powders, perfumes, and hand and face lotions, several other Cincinnati concerns manufacture these articles. Greater Cincinnati has also more than a thousand beauty shops and several schools where operators are taught the methods of beauty culture. Together, the manufacturers, schools, and shops employ about 2,500 workers, mostly women, with a yearly payroll estimated at three million dollars.

Among the manufacturers of cosmetics are Baumann Barber & Beauty Supply Company, Twelfth and Walnut Streets; Eugene Berninghaus Company, 1904 Western Avenue; Carlyle Cosmetic Company, 121 Opera Place; Central Supply Company, 225 East Third Street; Cincinnati Beauty Specialty Company, 2444 Gilbert Avenue; Goldey Brothers, Inc., 652 Main Street; D. E. Hannan Barber & Beauty Supply Company, 532 Main Street; LaJoie Laboratories, 1106 Locust Street; Old Reliable Beauty & Barber Supply Company, 30 Opera Place; Realistic Permanent Wave Machine Company, 3640 Realistic Avenue, Norwood; C. J. Reynolds Manufacturing Company, 327 Elm Street, Newport; S. S. Laboratories Inc., 3929 Montgomery Road, Norwood; and Sea Rose Laboratories, 804 Armory Avenue.

Beauty schools include Mar-Dell's School of Beauty Culture, 630 Walnut Street; Marguerite School of Beauty Culture, 2440 Gilbert Avenue; Marinello School of Beauty Culture, 128 East Sixth Street; Moler System of Beauty Culture, 111 West Fifth Street; and Nestle School of Beauty Culture, 439 Race Street.

### *Candle Manufacturing*

EMERY INDUSTRIES, INC., June Street and the B. & O. Railroad, Ivorydale, is Cincinnati's largest, though not its first, candle manufacturer. In 1840 Thomas J. and John J. Emery organized Thos. Emery Sons, and opened a small factory

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at Vine and Water Streets, where they processed dipped tallow candles. Lard oil was the next product the concern marketed, and in 1848 the oil factory of the firm was removed to 30 Water Street.

From this small beginning the Emerys, because of the excellence of the product manufactured at their factories, developed a large industrial enterprise. At first the Emery family applied profits to expanding the plant, but later started to buy Cincinnati real estate. Today much steel, stone, and brick in the downtown district attests the shrewdness of the speculators who turned modest profits from their candle business into highly lucrative real estate investments. The Carew Tower, the city's tallest office building, and its Netherland Plaza Hotel, Emery Auditorium, and Mariemont, a model residential village north-east of Cincinnati, all Emery properties, indicate the diversity of these real estate holdings.

Thos. Emery Sons were among the nation's first candle manufacturers to change from the tallow to the stearic acid method of production. In 1885 fire partially destroyed the Water Street plant. Since more space and better shipping facilities were necessary, seven acres of land in Ivorydale, fronting on the old Cincinnati, Hamilton & Dayton Railroad (now B. & O. Railroad), were purchased and modern factory buildings put up. In 1887 the firm name was changed to the Emery Candle Company, while in May 1928 the present title, Emery Industries, Inc., was adopted.

When oil, gas, and electric power began superseding candles for lighting purposes, the firm specialized in the making of industrial acids and red oils, products used for many manufacturing purposes. The corporation's present-day output includes candles and votive lights, decorations for cakes and pastries, and acids and oils.

Harkness & Cowing Company, Vine Street and Laidlaw Avenue (Murray Road), St Bernard, is one of Greater Cincinnati's pioneer manufacturers of wax candles for religious purposes. The firm also produces saponified red oil, acids, and crude glycerine. Another small manufacturer of candles is the I. A. Root Company, 1849 Hanfield Street.

### *Chemical Industry*

CINCINNATI'S CHEMICAL INDUSTRY dates from about 1850, when old rule-of-thumb methods began to give way to scientific processes. American industry depends upon the research chemist for new discoveries and for methods of improving present production. Hundreds of millions of dollars are spent annually in thousands of laboratories to carry on this work. In 1937 the cost to industry amounted to about 200 million dollars. But this enormous expenditure pays big dividends in the utilization of waste material for the manufacture of unexpected by-products.

Cottonseed is one of the former waste products which Cincinnati converts by chemical processes into the basis for a group of industries producing 200 million dollars worth of products annually. Commercial and industrial products of cottonseed come from three parts of the seed remaining after lint is removed by ginning—linters, hulls, and kernels, or meats. The kernel is the most valuable part of the seed, for it supplies the oil and the cottonseed cake, or meal.

Cottonseed cake, often fed to livestock, is obtained after the seed passes through linter machines, which remove the linters; hullers, which cut the seed; and shakers, which separate the loosened hulls from the kernels. The meats are flaked and cooked before the oil is pressed out under crushers. Among the products now made from the oil are vegetable shortening, margarine, salad oil, salad dressing, soap, washing powder, composition roofing, paint bases, linoleums, candles, medical emulsions, and cosmetics. Linters are used for the manufacture of rayon, smokeless powder, writing paper, gun cotton, absorbent cotton, photographic film, plastics, batting, felt, lacquers, and varnishes.

Chemists are now trying to find new uses to which cottonseed can be put. Among the latest discoveries are a new quick-drying oil for paints and a new source for vitamins B and G.

A local sample of an industrial research laboratory is the Kroger Food Foundation, 125 East Fifth Street, endowed in 1931 by the Kroger Grocery & Baking Company to test foods



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and meats sold in the corporation's stores. The foundation also surveys store locations, density of population and buying power, and merchandising trends.

For fifty years Cincinnati has had some of the country's best explorers in the land of chemistry. In 1937 the city's more than 15 chemical establishments employed more than a thousand workers, who earned about \$1,700,000 in wages. Many of the larger corporations also maintain laboratories operated by staff chemists. In 1936 the valuation of industrial chemicals produced here was estimated at more than 10 million dollars.

Cincinnati's first chemical plant was opened in 1802 by the Grasselli Chemicals Company for the production of sulphuric acid. Today the firm, operating a factory at Lockland, Ohio, where acids and heavy industrial and agricultural chemicals are made, is a division of E. I. DuPont de Nemours & Company, the world's largest manufacturer of chemicals. In 1826 the city's first chemical laboratory was opened by Allen & Company.

The chemical industry surged forward here about 1890, when a great deal of attention was suddenly given to chemical reactions in the making of soap. Before that time production had been based more or less on guesswork formulas, and products had often been unsatisfactory. In 1898 Dr. Ernst Twitchell discovered the saponification process for separating glycerine from neutral fats and oils. Saponification revolutionized production methods in the soap industry; it reduced waste and made possible the utilization of many by-products. In 1915 the Twitchell Process Company was incorporated and a plant opened adjoining the Emery Industries, Inc. Here various chemical processes for industry have been discovered and developed. In 1917 Dr. Twitchell was awarded the Perkin medal, the highest official honor a chemical savant can secure.

The city's largest manufacturer of chemicals is the Cincinnati Chemicals Works, Inc., with a main plant at 1743 Cleneay Avenue, Norwood, and a branch on Murray Road, St. Bernard. Chemicals of all types are produced at the main factory, while operations at the branch are devoted to the manufacture of a variety of dyes.

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Another large plant on Murray Road, St. Bernard, is operated by the Globe Chemical Company, which produces the following chemicals: acetic, battery, muriatic, nitric, sulphuric, oxalic, boric, and chromic acids; ash, bicarbonate, bisulphate, bisulphite, caustic, cyanide, silicate, and sal sodas; and calcium chloride, carbon tetrachloride, tri-soda phosphate, ammonia alum, aluminum sulphate, acetone pure, ammonia pure, ammonia aqua, and chloride borax.

Other industrial and agricultural chemical manufacturers with local plants are Hilton-Davis Chemical Company (August 1936, formerly Hilton-Davis Company), Langdon Farm Road and the Pennsylvania Railroad, producer of fine and industrial chemicals, dye-stuffs, dry colors, and inks; Ace Chemical Company, Second and Main Streets; American Cyanide & Chemical Company, Vine Street and Murray Road, St. Bernard; E. Berhausen Chemical Co., 915 Carr Street; Brighton Products Co., 2166 Patterson Street; C. G. Buchanan Chemical Co., 4650 Baker Avenue, Norwood; Coleman & Bell Company, 4101 Montgomery Avenue, Norwood; Fries & Fries, Inc., 1540 Brewster Avenue; Shephard Chemical Co., Highland Avenue, near Orchard Street, Norwood; White Chemical Company, 216 West Sixth Street; Corkins Chemical Company, 1114 Elm Street; and Hydro-Pel Chemical Company (1937), 1608 Logan Street, manufacturing water and acid repellants. In 1937 the Palmer Chemical Company, Covington, purchased a tract of land near Chester Park, where the firm plans to erect a factory. Another unit of the industry is the Cincinnati Scientific Company, 224 Main Street, which develops and manufactures equipment for firms producing chemicals.

Besides the production factories there are in the city a number of research laboratories, where men bent over test tubes try to discover some new process to benefit industry.

### *Manufacture of Drugs and Medicines*

MANUFACTURE OF DRUGS for medical purposes is one of the world's oldest applied sciences. In 1804 William S. Merrell opened the city's first chemist's shop. From this beginning

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sprang the pharmaceutical branch of the Cincinnati chemical industry, which in 1937 carried nearly a thousand workers on a payroll estimated at more than \$1,600,000.

From the time he opened his little shop Merrell kept busy. Soon the demand of physicians for supplies drew him into the wholesale trade. Later he compounded prescriptions to be sold at other retail stores; eventually emphasizing this phase of his business, he established the Wm. J. Merrell Company (1828, America's oldest manufacturer of pharmaceutical supplies), which produces about a thousand medical prescriptions used by physicians, surgeons, hospitals, and homes.

The company's present plant is on the outskirts of the city, near Reading. Built at a cost of 800 thousand dollars, the factory, laboratory, research, and administration buildings were completed in 1937. In January 1938 stockholders approved a reorganization plan whereby the Vick Chemical Company, New York City and Wilmington, Delaware, acquired the local company's assets in exchange for Vick stock. The sale in no way affects the operations of the Merrell Company or its personnel, since, by terms of the agreement, the Cincinnati concern continues as a separate organization. About three hundred workers, including a staff of 25 chemists and technicians, are employed locally.

Lloyd Brothers, Inc. (1845), northwest corner of Court and Plumb Streets, is another leading manufacturer of pharmaceutical supplies. This corporation specializes in the mixing of ingredients secured from plants and vegetables, and its research laboratories are credited with many discoveries in modern pharmacy. In 1938 all property, assets, and good will were sold to S. B. Penick & Co., New York pharmaceutical manufacturer, for \$338,250. Lloyd Brothers, Inc., will be operated as a branch by the New York concern. The nationally famous Lloyd Library, 309 West Court Street, which contains valuable papers and formulas on materia medica, pharmacy, chemistry, botany, and related subjects, was founded by John Uri Lloyd (1849-1936), and his brother, Nelson Ashley Lloyd.

The career of John Uri Lloyd is the "rags to riches" story so familiar to Americans. Showing a marked aptitude for chem-

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istry, he was apprenticed in 1863 to W. J. M. Gordon, a pharmacist with a shop at Eighth Street and Central Avenue. By constant application Lloyd became a prescription clerk in two years. Then he served a second two-year apprenticeship with George Eger, a German immigrant-chemist.

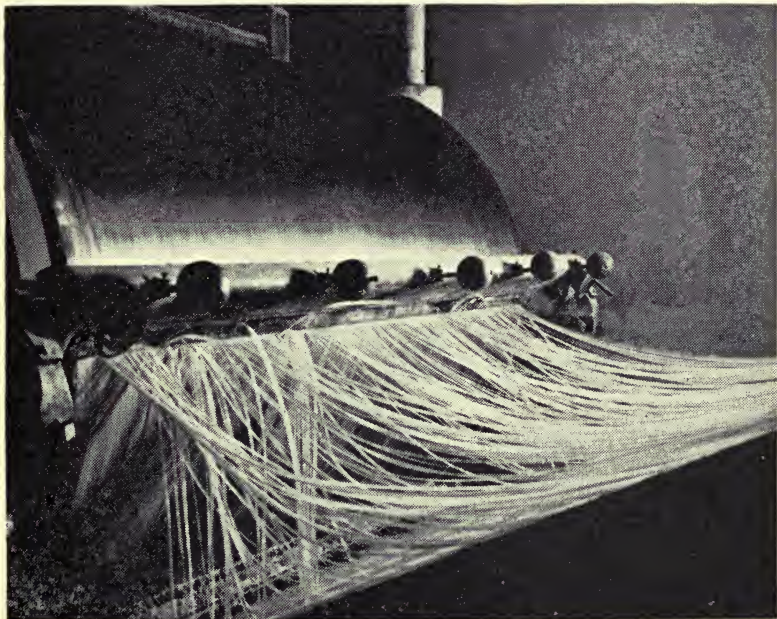
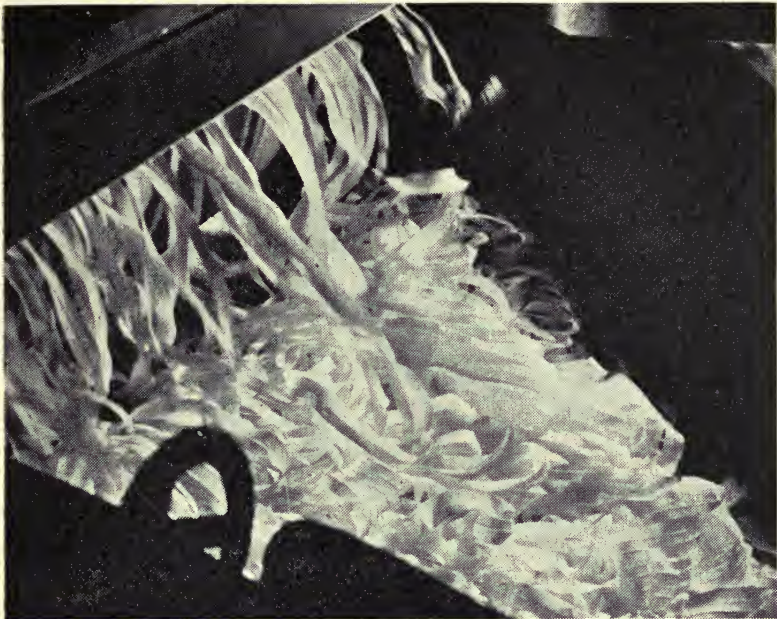
Tucking his certificate of proficiency under his arm, Lloyd went to work in 1868 as a chemist for H. M. Merrell (1845), Court and Plum Streets. Meanwhile he continued his studies of plant pharmacy; he made a few discoveries and embarked on a lifetime of study, experimentation, and research in vegetable materia medica.

Lloyd's success in research was rewarded by his employer. In 1887 he was made a junior partner, and the firm name was changed to Merrell, Thorp and Lloyd; when Merrell retired in 1881 the concern became Thorp and Lloyd Brothers, and in 1885 Lloyd Brothers.

Lloyd's explorations in pharmacy brought fame. For 17 years he taught chemistry and pharmacy at the Eclectic Medical College. Meantime he managed to crowd in four years of teaching at the Cincinnati College of Pharmacy, and wrote numerous articles for pharmaceutical journals, several volumes on plant life and medicines, and also such fiction as his *Stringtown on the Pike* (1900).

John Thomas Lloyd (1884), son of John Uri Lloyd, was associated for 17 years with his father as research chemist. In 1938 he established the John T. Lloyd Laboratories, Inc., 412 Central Avenue, to manufacture medicinal vegetable extracts. New discoveries, it is said, will permit him to make ingredients almost free of metallic contamination.

In 1937 scientists at the Institutum Divi Thomae, Mt. Washington, reported to the American Association for the Advancement of Science the discovery of a new chemical which heals burns quickly and without scars. Preparation of the compound was made by Drs. George Sperti and Andre Cueto, and John R. Loofbourow, John C. Farden, and Elton Cook, after more than three years' research. The chemical is a fluid made by injuring yeast cells. It grows fresh, normal skin over the burned areas on the body, instead of the usual tightly drawn,



RIBBONS OF SOAP



CHEMICAL LABORATORIES

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disfiguring scar tissue. Recuperation of a burned victim is considerably hastened by use of the chemical, which has been successfully used at St. Mary's Hospital, Cincinnati.

The Institutum Divi Thomae is a graduate school endowed and operated by the Cincinnati Archdiocese of the Roman Catholic Church. Doctor Sperti, the director, former director of the Basic Science Research Laboratory at the University of Cincinnati, has made many recent discoveries during the course of his vitamin research. Dr. Cueto is the inventor of the Xervac machine, a Cincinnati-made device used in scalp treatments.

Other Cincinnati manufacturing pharmacists are Bell Chemical Works, 121 Eighth Street, Dayton, Kentucky; General Pharmacal Company, 205 East Sixth Street; Caldwell Pharmaceutical Laboratories, 410 West Eighth Street; Hydrosal Company, 333 West Eighth Street; Cincinnati Economy Drug Company, 209 East Court Street; Gordon Pharmacal Company, 810 West Fifth Street; Hale-Justis Drug Company, 9 West Third Street; Hy-Pure Laboratories, Inc. (1923), 704 Plum Street; McKesson & Robbins, Inc., 217 East Sixth Street; Pharmacal Products Company, 514 Main Street; Roosa & Ratliff Chemical Company, 104 West Second Street; and Warner Drug & Chemical Company, 914 Race Street.

A number of patent and proprietary medicine manufacturers also operate plants in Cincinnati. In 1938 these firms, employing about 250 workers, were Audrey Products Company, 3147 Evergreen Avenue; Cel-Ton-Sa Remedy Company, 1016 Central Avenue; Ching Fow Industries, 321 West Seventh Street; W. H. Davis, 1910 Eastern Avenue; Durand Medicine Company (1879), 1542 Elm Street; Evans Chemical Company, 214 Main Street; Indo-Vin, Inc., Third and Vine Streets; Dr. Kerr Laboratories, 306 East Third Street; Landis Medicine Company, 134 Mary Lane; Merit Medicine Company, 308 Main Street; Payne's Laboratories, 234 East Second Street, Covington; Quaker Herb Company, 220 George Street; Paul J. Reiner Medicine Company, 3942 Marburg Avenue; C. Scheuerman, 408 West Fourth Street; Sedafan Products Company, 534 Sycamore Street; Sumlak Co., 226 East Sixth Street; and Southern Ohio Viavi Company, Sixth and Main Streets.

## *Manufacture of Paints and Varnishes*

CINCINNATI HAS BEEN important in the development of America's paint industry—an industry carried on by more than 1,400 scattered factories, with an annual production valuation of more than 350 million dollars. Since early in 1815, when the Cincinnati Manufacturing Company began making red and white lead, the industry has been represented here by one or more plants.

For more than a century after 1815 paint was paint; it consisted of lead pigments finely ground and suspended in linseed oil. The early painter usually added a little turpentine to thin the product. The modern evolution of the business began shortly after the World War, when scientific research brought to the market such new industrial finishes as lacquers and quick-drying enamels in a variety of colors and tints. Later these finishes were adapted to other uses.

The modern industry is a model of scientific accuracy. Chemical research and the control of ingredients has superseded the haphazard handcraft of former days, while electrically operated mixers and mills turn endlessly to make thousands of gallons of a uniform product.

Present-day paint processes usually operate as follows: Dry pigments, coloring matter, and oils are combined in vats to form a thick paste, which is then stirred mechanically, and carried in a gravity trough to mechanical mixers called mills. As the paste is ground between the mill stones, it is gradually pushed toward the edge of the revolving stones. Then a mechanical arm shoves the pasty mass into tanks, more oils and tints are added, and the mixture is churned until it has the proper paint consistency. Before the paint is packed for shipment, samples are examined in testing laboratories.

Processes for the manufacture of varnishes and lacquers differ from those of paint. The ingredients of varnishes are mixed in vats and submitted to treatment by heat. Chemicals are added to prevent solidification.

In 1936 the valuation of all paints, varnishes, and lacquers, architectural and industrial, manufactured in the Cincinnati area



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was more than \$7,125,000, about five percent of the national total. Leading local manufacturers are Perry & Derrick Company (1913), 908 Central Avenue (factory, Dayton, Ky.), formerly the Paff Varnish Company, producer of both architectural and industrial finishes; Wilson Paint Company (1907), 410 Reading Road, architectural finishes; Ault & Wiborg Corporation (1850), a unit of Interchemical Companies, Montgomery Road and Dana Avenue, industrial finishes; Beck, Köller & Co. Inc., 49 Central Avenue; Chas. Moser Company, 215 East Ninth Street, architectural and industrial finishes; the Rainbo Wall Paper and Paint Company, 415 Commercial Square; Steelcote Manufacturing Company, 4642 Montgomery Road, industrial finishes; Kolbe Paint Company, 231 West Fifth Street; R. F. Johnston Paint Company (1906), 3925 Huston Avenue, architectural and industrial finishes; Foy Paint Company, Inc., Mentor and Huston Avenues; Charles J. Hardig, 1111 Harrison Avenue; Cook Paint & Varnish Company, 2200 Dana Avenue, and Cincinnati Color Company, 122 East Sixth Street.

Among local firms making architectural and industrial varnishes and lacquers are the R. A. Becker Varnish Company, (1891) Langdon Farm Road and the Pennsylvania Railroad; Burgett Varnish Works (1915), Smith Road and the Pennsylvania Railroad, Norwood; the Black Diamond Paint & Varnish Works, Inc., 1217 Bank Street; Aluminum Industries, Inc., since 1932 manufacturers of aluminum paint; A. L. Boehmer Paint Company, 114 Pike Street, Covington; Cincinnati Lacquer Company (1927), 2700 Highland Avenue, and Egyptian Lacquer Manufacturing Company, 49 Central Avenue.

A natural development of Cincinnati's paint industry is the production of pigments used in paint making. The Eagle-Picher White Lead Company, Reading Road and Broadway, has the city's most important pigment plant. Founded in 1843, the company is one of the nation's sizable producers of white lead and by-products. The present company was formed in 1906 through a merger of the Eagle Lead Company and the Picher Lead Company (1874), of Joplin, Missouri. The combined title was not used until the concern was incorporated in 1916.

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A subsidiary, the Eagle-Picher Mining and Smelting Company, operating lead mines in Missouri, Kansas, Oklahoma, and Arizona, was organized in 1930.

Present products include white lead carbonate, red lead, sublimed blue and white lead, flattening oil, zinc oxide, and lithopone for painters; lead pipe, roof flanges, lead traps, bends, fittings ferrules, and solders for plumbers; bearing metals, lead wool, and rope socket metal for the oil industry, and insulation cement, waterproofing cement, wool, and oxides for insulation purposes.

Besides the main Cincinnati plant, the corporation has branch factories at Argo, Hillsboro, Chicago, and East St. Louis, Illinois; Newark, New Jersey, and Joplin.

Another concern manufacturing similar products is the National Lead Company (Dutch Boy) with a plant at 659 Freeman Avenue.

## Chapter VI

*Brewing • An Era of Drought •  
Brewers' Equipment • Wine Making •  
Liquor Distilling • Soft Drinks •  
Cooperage.*



HOSTS NIGHTLY STAGGER, it is said, through a Central Avenue brewery which sits stodgily on an old graveyard. It is assumed that the ghosts grow friendly over sips of beer and talk of the day when Cincinnati was America's beer capital. They perhaps tell many a story of *Brewmeister* and brews, of *Bierstuben*, of singing *Kellner*, of nights at Wielert's and the Atlantic Gardens.

Cincinnati remembers something of all this as it sees its beer served up in big glasses to familiar evening crowds at its many beer places. Greater Cincinnati's brewing, distilling, and spirit-rectifying trades rank seventh in the nation. Beer, ale, whisky, wine and gin, produced and bottled in local plants, are shipped throughout the world to slake an everlasting thirst.

The city is not doing so well with its wine business; but it remembers when Longfellow praised the bottle of Catawba wine which the first Nick Longworth sent him and penned a rhyming toast

To the Queen of the West,  
In her garlands dressed,  
On the banks of the beautiful river.

Although extensive wine-making has slipped up to the Lake Erie shore, many vintages made in the Queen City today are available at wineries throughout the country. There are now fewer plants than in the years before prohibition (1919 in Ohio), but those operating are larger, many of the firms have established branch factories, and the number of workers and their wages have increased.

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In 1938 Greater Cincinnati's 13 breweries employed about 2,500 persons, whose payroll was estimated at \$4,500,000. About two thousand are in the production departments, while the rest handle sales, clerical, and office work. The combined corporations represent an investment of more than eight million dollars in property, buildings, and equipment.

Since the repeal of the prohibition laws the distilling industry has tended toward bigger plants, with national sales and distribution, instead of the small local distilleries of the pre-prohibition era. There is only one large distillery in the city proper, but Greater Cincinnati has several others, including two plants in Lawrenceburg, Indiana.

The art of brewing is old. Beer is a beverage prepared from malted barley (rarely from malted wheat); rice, corn, or their by-products are often added. Basically all beer is alike, although special formulas, jealously guarded, give distinctive flavors to the finished brew.

The manufacture of beer involves two distinct operations—malting and brewing. Malting changes the chemical composition of the barley grains to make them soluble in water, to produce a liquid which can afterward be fermented. The brewing process converts the malt into beer. The crushed malt is extracted in hot water when the diastase completes its action in changing the starch to dextrine maltose. After the malt has been treated, the solution is drawn off; the resulting mixture, called wort, is rapidly cooled, yeast is added, and fermentation begins. Then the sugar is split into alcohol and carbonic acid gas—a process which releases a little free acid, glycerine, and aromatic bodies in small quantities. From these processes comes the beverage called beer. The brew is then placed in vats, so that it can properly age and undergo the slow process of after-fermentation and ripening. It is filtered and finally put through a completely mechanized process of barreling, bottling, or canning. Bottles, barrels, and metal containers are cleaned and filled by means of immense and intricate machines; manpower merely keeps the products moving.

Until 1870 the industry made few changes in its ancient production methods. Most of the machinery had been purchased

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in Europe, and all beer distributed in barrels was drawn from the wood. After Pasteur's discovery (1870) that bottled beer, after heat treatment, or "steaming," as it was then called, would keep its original flavor for a long time, brewers in the United States experimented with this revolutionary plan of marketing their products. In 1873 a St. Louis brewer sold the first bottled brew, and immediately several Cincinnati brewers built bottling factories. Prior to the introduction of bottled beer, consumers "rushed the growler," or spent their leisure moments with elbows on the bar of the sawdust-strewn corner saloons.

At the turn of the century Cincinnati shared in the prosperity of a new industry, glass blowing. The Charles Boldt Glass Works, East End, became a leading maker of beer bottles and other products, but in 1910 fire destroyed the plant. Though the company was financially successful, changing conditions in the industry made it impracticable to rebuild here. Later a new plant was built in Huntington, West Virginia.

Cincinnati's first brewery was set in 1809 on the river bank at the foot of Race Street by Davis Embry, member of a family which was later to become active in other local industrial enterprises. Two years elapsed, however, before the first heavy German-style beer produced by Embry was ready for sale. The product found a ready market. By 1816 several other brewers had opened plants, but since these had been built farther back from the Ohio River they had trouble getting enough pure water for their needs. The Embry plant used river water: the others depended upon cisterns and wells. Beer, porter, and ale were exported west to the Mississippi River and as far south as New Orleans. Distillation of cordials for home use and the rectification of spirits began here about the same time.

Later, because of the difficulty in getting water, several of the smaller breweries were forced to close. In 1819 only two plants were operating, but they worked hard enough to satisfy Cincinnati's virile thirst.

Progress of the industry was steady. From 1840 to 1860, when many German emigrants settled here, it burst forward, and many plants began brewing beer. (Several are still doing business). In 1840 eight breweries were in the city.

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The Foss-Schneider Brewing Company, now the city's oldest brewery, was opened in 1849 in a plant on Augusta Street, near John Street. In 1863 the present buildings on Freeman Avenue were put up. In 1884 the company was incorporated with capital of 600 thousand dollars and the present name was adopted. Since 1879, when the bottling department was opened, the plant has been in constant service except during the 14 years of prohibition. In 1933 it was one of the first breweries in the city to reopen after repeal of the Eighteenth Amendment.

The Bruckmann Brewing Company, Ludlow Avenue and Central Parkway, has Cincinnati's oldest plant in continuous operation. Established in 1865 on the present site, it was the only brewery to continue production during the prohibition years. At that time the brew was de-alcoholized and marketed as near beer. Since repeal of the prohibition act the original plant has been modernized and new buildings have been added. Expansion has been so rapid that there is now a branch factory on Spring Grove Avenue in the plant formerly occupied by the Cincinnati Beverage Products Company. The concern produces beer and ale, marketed in barrels, bottles, and cans.

Before the passage of the prohibition laws the Herancourt Brewing Company (1840), Harrison Avenue and the Western Hills Viaduct, was the city's oldest plant. The firm and its products enjoyed great success until 1919, when portions of the brewery were dismantled. An artificial ice manufacturer now occupies one building, while the rest is used by Rose Brothers, distributors of building and contractors' supplies.

The equipment of the Fairmount Brewing Company, Westwood Avenue and Quebec Road, another of the pioneer firms which suspended operations in 1919, has also been taken down. The building is used for the manufacture of artificial ice.

Christian Moerlein Brewing Company, one of the biggest producers in America until prohibition suspended its activity in 1919, was founded in 1853 by Christian Moerlein, who came to Cincinnati in 1842 from Germany. Moerlein opened a blacksmith shop on the west side of Elm Street, near McMicken Avenue, where in 1853 was to rise the malt house of his brewery. Originally he brewed common beer, but soon after

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starting production he conceived the idea of a light brew which would be more generally accepted for home consumption. After two years of experimentation, the world's first lager beer went into manufacture. (An Eastern brewer also makes this claim.)

Lager beer was an overnight success; the light brew changed the drinking habits of the beer world. As sales increased new buildings were added to the Moerlein plant. As demand continued to grow, other local brewers put lager on their production schedules. In 1864 Moerlein discontinued the manufacture of common beer, and in 1881 the Moerlein Brewing Company was incorporated with paid capital of a million dollars. Since 1919 the plant has been dismantled; a large tailoring concern has most of the floor space.

The introduction of lager beer brought boom days to the Cincinnati brewing industry. At the time (1860) it was generally agreed that Cincinnati brewers "fear no competition, because the excellence and fame of their brews create a demand for them even in cities whose brewers have a greater aggregate capital invested."

In 1872-73 beer shipments from Cincinnati totalled 123,625 barrels; almost 20 years later, in 1891-92, 600 thousand barrels were exported. The entire local output that year was 1,350,865 barrels, about three times the production of two decades before.

In 1891-92 Cincinnati consumption of beer and ale was 815 thousand barrels, or 22,265,000 gallons, an average of 40 gallons per capita for an estimated Greater Cincinnati population of 500 thousand. Local consumers paid 10 million dollars, or an average of \$20 a person for beer and ale. The breweries that year used about 2,200,000 bushels of malt and 1,525,000 pounds of hops, while the United States Internal Revenue Department collected about \$1,500,000 in taxes.

Wages paid brewery workers at the time were among the highest in Cincinnati, averaging from about \$1.50 a day (and all the beer a common laborer could drink!) up to 15 thousand dollars a year for the brewmaster. About four thousand men worked in the 33 Greater Cincinnati breweries that year.

In 1914 there were 24 local plants producing 1,500,000 barrels of beer annually. During the first prohibition year (1919),

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

23 breweries with an annual production of slightly more than a million barrels were operating. In 1936, two and a half years after the repeal of the prohibition laws, the production of Greater Cincinnati breweries was 1,512,400 barrels, on which Federal and state taxes of \$7,561,000 were paid. Cincinnati plants accounted for 1,270,000 barrels, or 34 percent of the state production of 3,742,000 barrels. Ohio received \$2,956,000 in levies. During the first eight months of 1937 Federal stamp taxes paid by Greater Cincinnati brewers totalled \$5,595,376.53, an increase of about 10 percent over the same months of the previous year. Owing to the industrial and business recession during the final three months of 1937, the production of beer slumped temporarily.

Before the imposition of higher tax levies the consumption of beer in the United States, under a Federal tax of a dollar per barrel, continued to increase until 1914, when national production reached a peak of 66 million barrels. In 1916 when the tax levy was increased to \$1.50 there was a decrease of six million barrels. When the two dollar rate became effective (1918) consumption dropped another 10,500,000 barrels. Under a six dollar rate in 1919, only 23 million barrels were brewed in the nation.

After repeal in 1933 more than 27 million barrels of beer were turned out, the Federal Government collecting 137 million dollars in revenue. Brewers now believe that national production should reach or surpass the record of 66 million barrels—production in 1937 was estimated at nearly 60 million—before 1940.

In 1933 the Federal tax rate on beer was set at five dollars a barrel. Through its Liquor Control Commission Ohio levied \$1.50 a barrel on 3.2 percent beer and \$2.50 on beer containing a higher alcoholic content. Thus the direct taxes paid by Ohio breweries range from \$6.50 to \$7.50 a barrel. The present tax is still greater. In Ohio the total levy for 3.2 percent beer is \$8.18 a barrel, and \$8.98 for beer with more than 3.2 percent alcoholic volume.

In 1937 Ohio brewers estimated that 60 cents of every dollar collected by the manufacturer is paid out again in Federal, state,



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and local taxes. Labor and material costs have also increased over those in effect before prohibition. The hourly wage scale of truck drivers, bottlers, engineers, and firemen has more than doubled since 1915. Coal cost about \$2.25 a ton in 1915, while in 1937 the price averaged about \$5. That year (1937) the production costs in local breweries were attributed as follows: taxes 60 percent; materials, 19 percent; salaries and wages, 13 percent; distribution, two percent; container replacement, one percent; depreciation, four percent; and advertising, two percent.

In 1887 brewery employees here formed an organization to "promote the social and economic welfare of the workers engaged in the industry," and on December 26, 1879, adopted the name, *Brauer Gesellen Union*. From this organization has developed the present International Union of the United Brewery Workmen of America (1900). Headquarters of the union, which now has about 50 thousand members in the United States and Canada, are at 2347 Vine Street. Under its trades jurisdiction are brewery, flour, cereal, malt, grain elevator, yeast, vinegar, alcohol, cider, cereal beverage, soft drink and mineral water workers.

Clyffside Brewing Company (1933), 242 West McMicken Avenue, occupies the modernized plant of the old Mohawk Brewing Company, closed in 1919 when prohibition became effective. The present firm, headed by Paul Esselborn, has swiftly expanded production. In 1937 a new bottling plant and stockhouse were completed at a cost of 75 thousand dollars. Esselborn served his apprenticeship in his father's plant, the Portsmouth (Ohio) Brewing and Ice Company, and later studied at the Royal Bavarian School of Brewing at Weihenstephen, Germany. He assumed management of his father's plant upon his return from abroad, operating it until prohibition.

Vienna Brewing Company (1933), 322 Reading Road, is Cincinnati's smallest plant. Before prohibition the buildings were occupied by the Gambrinus Stock Company. Since 1935 a new brewhouse, cellars, bottling plant, and offices have been constructed.

Delatron Brewing Company (1934), Reading and Amity Roads, is Greater Cincinnati's newest brewery. George Delatron,

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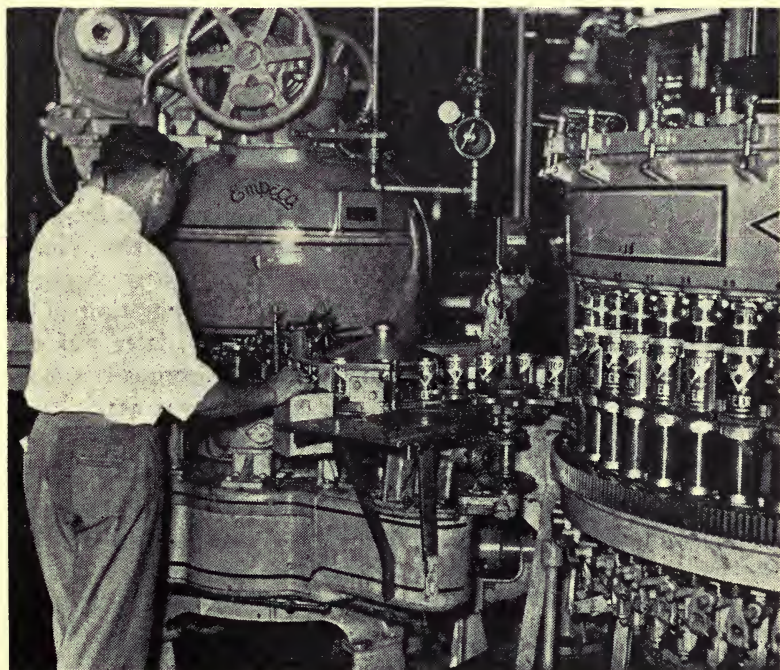
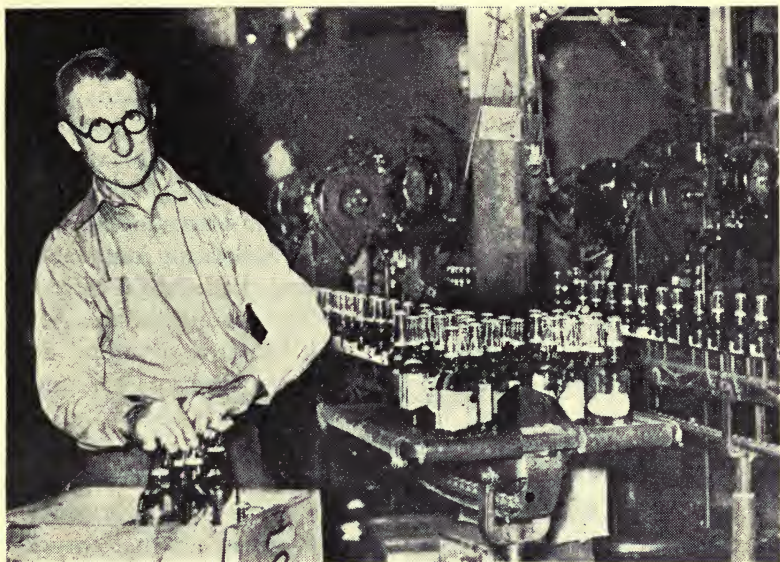
president of the corporation, was one of the founders of the Vienna Brewing Company. A year after repeal he withdrew from the firm to organize his own company. Since 1935 a new bottling plant and extra cellars have been added. Delatron is his own master brewer.

Burger Brewing Company, Liberty Street and Central Parkway, was established in 1935 when the Burger Brothers Company purchased the Lion Brewing Company, organized in 1933 by a syndicate of northern Ohio capitalists. The firm occupies the plant of the old Windisch-Mulhauser (Lion) Brewing Company, which opened in 1866. W. J. Huster is president of the corporation.

Hudepohl Brewing Company, 40 East McMicken Avenue, is Cincinnati's largest plant, with an aging capacity of more than a million gallons. Louis Hudepohl and George Kotte, the founders, in 1885 purchased the old Koehler Brewery, and immediately changed the name to Buckeye. The present title was adopted in 1892, when the firm was reorganized after Kotte's death. After the nation went dry the firm produced near beer for a short time, then made soft drinks, and for three years before repeal acted as distributor for out-of-city near beers. Since 1935 a No. 2 plant has been operated at the old Lackman Brewery on West Sixth Street. Both breweries have undergone extensive improvement.

Schoehling Brewing & Ice Company (1933), 1624 Central Avenue, was founded by E. Schoenling, owner of the Schoenling Ice & Coal Company, who had an entire new plant constructed for the making of draft beer. In 1934 a bottling plant was added.

Red Top Brewing Company, 1747 Central Avenue, dates back to 1863, when John Hauck and John U. Windisch opened a small brewery. In 1881 the John Hauck Brewing Company, which was to become one of Cincinnati's leading producers of beer, was organized. When prohibition came the Haucks closed the plant and retired. Other interests afterward leased the buildings and formed the Red Top Malting Company. Shortly after repeal in 1933, the production of beer was started. L. Ullmann is president of the company.



**BEER BOTTLING AND CANNING**

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In 1832 a small brewery began operating in Cincinnati. Until 1863 when it became the Jackson Brewing Company, with a plant at McMicken Avenue and Elm Street, it had been brewing under various names. It was closed in 1920 after the prohibition law went into effect. In 1934 Cincinnati capitalists reopened the plant, renaming it the Squibb-Pattison Brewery; but the firm had financial troubles after operating only about a year. Early in 1935 Detroit capitalists, headed by Philip G. Benjamin, purchased the plant for 135 thousand dollars. After extensive remodelling, including a new hundred thousand dollar bottling and storage building, it was reopened in 1937 under the old Jackson Brewing Corporation name. Capacity of the bottling plant (said to be the most modern in the United States) is 7,500 bottles an hour. The storage building has a capacity of 50 thousand cases.

Three breweries are now functioning in northern Kentucky—two in Covington, the other in Newport.

In 1870 George Wiedemann in partnership with John Butcher founded the Wiedemann Brewing Company at 601 Columbia Street, Newport. The plant's beers and ale instantly pleased consumers, and by 1890, when the company was incorporated, the brewery was one of the largest in the Cincinnati area. It was closed during the 13 years of prohibition. Shortly after repeal, out-of-city capital took over the plant, but incurred financial difficulty. Dr. W. B. Weaver, a member of the Wiedemann family by marriage, became president of a new corporation, the Wiedemann Brewing and Distilling Corporation. The former title, the Wiedemann Brewing Company, later was re-adopted. Since the change in management the company's beer has again become popular. In 1937 production was nearly that of pre-prohibition days.

Heidelberg Brewing Company (1935), 500 West Fourth Street, Covington, occupies a new and modern plant. George H. Meyerratkin is president. Bavarian Brewing Company, 528 West Twelfth Street, Covington, was organized in 1889. Closed during prohibition, the plant was remodeled after repeal and re-opened in 1934. In December 1937 after a receivership of several months the plant and assets were purchased by George

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M., William C., Louis, and Chris Schott, who paid 55 thousand dollars in cash, and assumed debts of 21 thousand dollars. Immediately after Federal courts approved the purchase, production of beer began.

Another plant in the Greater Cincinnati area is the Hamilton Brewing Company, Hamilton, which in pre-prohibition days was known as the Martin Mason Brewing Company. Before 1919 the Cincinnati Brewing Company had the biggest brewery in Hamilton.

### *Reform Movement and Prohibition*

MOVEMENT FOR REFORM of the beer and whisky trades, which eventually resulted in prohibition, began in Cincinnati in 1828 at a meeting conducted by Dr. Daniel Drake. The company recessed for "old rye" at McFarland's Tavern nearby. Dickens describes in his *American Notes* a temperance parade which he saw here in 1842, and comments that the speeches which climaxed the demonstration "were certainly adapted to the occasion, as having that degree of relationship to cold water which wet blankets may claim."

National headquarters of the Women's Christian Temperance Union had been established earlier in Westerville, Ohio; and local units of the W.C.T.U. and of the Anti-Saloon League were later opened in practically every city and town of the nation. Because of its position as a great brewing center, Cincinnati became a center for these dry crusaders as well. Although the Prohibition Party later entered candidates in national elections, the party never developed political importance in Cincinnati.

Temperance organizations hammered away at local abuses of the brewing and liquor trades, and, because there was little opposition, in time succeeded in having local option elections. The result was that some villages permitted the sale of beer and whisky, while others, often in the same county, voted dry. In Hamilton County, North Bend declared for prohibition, while adjoining towns refused to ratify the proposal. At Milford, which straddles the Hamilton-Clermont County line, residents

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of the Clermont County section of the village were prohibited by law from drinking intoxicants, while their neighbors across the street in Hamilton County could buy all the liquor they wanted. In Cincinnati a section of Avondale was dry for several years under this option plan.

Wet agitation and dry agitation were for some years twin American sports. Parades, prayer, mass-meetings, music—all the familiar means of propaganda were in use. Drys sang their indifference to the handsome draft horses that drew the heavy beer wagons:

Oh, the brewer's big horses coming down the road:  
They step so high and they step so free,  
But the turnpike's free wherever I go,  
And the brewer's big horses can't run over me!  
Oh no, boys, oh no:  
The turnpike's free wherever I go!  
I'm a temperance engine, don't you see?  
And the brewer's big horses can't run over me!

Wets countered in kind. They drew on a long tradition of boisterous drinking songs, and wrote new ones:

I've been floating down that old Green River  
On the good ship Rock-and-Rye  
And I floated too far,  
Got stuck on a bar,  
I was out there all alone  
Wishing I was home.  
The mate got drunk with the captain and crew,  
And there was nothing left for me to do;  
So I had to drink that whole damn river dry  
To get back home to you.

The World War speeded the adoption by states of the Eighteenth Amendment. The Wartime Prohibition Act, passed by Congress on November 19, 1918, provided for restrictions on the sale of whisky. At the time Ohio was the largest state to approve the dry law legislation. On May 27, 1919 the law became effective. On May 26 the nearly two thousand saloons (there were about 5,800 in the state) in Hamilton County were crowded with patrons out for a final fling from early in the morning until closing time. In January 1920 national pro-

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hibitory laws, enforced by city, state, and Federal authorities, went into effect.

For a time conditions improved. It appeared that prohibition would do what the reform elements claimed for it—reduce crime and increase employment. But dissatisfaction among many people, who believed the law took away rights not specifically covered by the Constitution, brought about desultory private manufacture of beer and whisky. In time this circumvention of the prohibitory laws became the largest illegal system of production and distribution of intoxicants the country has ever known. About 1921 came the bootleggers, who not only produced and distributed beer and whisky, but in many cases used dynamite and sawed-off machine guns to hi-jack shipments of rivals.

Soon Cincinnati, like other cities, was honeycombed with home brew parlors, speakeasies, private "clubs," and "blind tigers." Arrests of operators were frequent, but convictions were hard to get.

Although several members of the police department were convicted and sentenced (1925) for accepting bribes from known violators of the prohibition law, Cincinnati was comparatively free of organized law breaking. Enforcement facilities of the Federal, state, and local governments were increased annually in an effort to halt the growing disregard for violation. But the traffic in illegal liquor only became heavier and more damaging.

Cincinnati became the headquarters of George Remus, an attorney from Chicago, whose exploits as directing head of a bootlegging gang brought widespread publicity. Remus and several of his lieutenants, who had built an organization which owned distilleries and breweries doing an illegal yearly business estimated at 25 million dollars, were arrested when Federal enforcement agents raided "Death Valley," a wooded section of valley and hills along Queen City Avenue used by the gang for liquor storage and distribution, and patrolled by heavily armed guards. The city heard rumors of pitched battles, of deaths when rival gangs were repulsed; but no official reports were made, and it was impossible to check their accuracy. Remus and

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his lieutenants were tried and convicted in Federal Court here. They served sentences up to a year and a day, and paid large fines.

The conviction of Remus destroyed large-scale illegal liquor operations in Cincinnati, but it did not end violations of the law—which continued to increase. By 1928 popular opinion against the national prohibition act had become so strong that several organizations, including the Crusaders, a nationwide group maintaining a local office, actively sponsored a movement for repeal of the law. The Twenty-first Amendment was approved by the 36 necessary states in 1933. In March President Franklin D. Roosevelt signed the act repealing the dry laws.

In the national elections of 1932 the voters of Ohio had ratified the amendment. So ended 14 years of prohibition in Cincinnati; and so began the rebuilding of the brewing and distilling industries. In Ohio the licensing of beer, wine and liquor dispensaries is now vested in a State Liquor Control Commission. Sales of bottled and bulk whisky and gin, both wholesale and retail, are supervised by this agency; only licensed bars are permitted to dispense liquor by the glass.

Since repeal, national reorganization of the Women's Christian Temperance Union has been completed. The organization is now concentrating its propagandist activities on local option elections, especially in the nation's rural sections. More than half the rural townships in Ohio have again voted themselves partly or totally dry.

### *Malt and Extracts*

MANUFACTURERS AND DISTRIBUTORS of malt syrup and extracts for 14 years could thank the Eighteenth Amendment for their profits. When the making of homebrew became a household task in the early 1920's, Cincinnati plants began instantly to turn out the necessary ingredients.

In pre-prohibition days the American Diamalt Company, which supplied malt extracts to brewers and medicinal manufacturers, was the only concern here engaged in the malting trade. But the sensational spread of homebrewing pushed the



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malting industry steadily upward to its 1932 peak, when six firms were making and distributing syrups and extracts: The American Diamalt Company, Southside Avenue, Riverside, with general offices at 419 Plum Street; Foss-Schneider Company, using part of the old Foss-Schneider Brewery, 1005 Freeman Avenue; Burger Brothers Company, 633 Evans Street; American Beauty Malt Company (Bachrach-Feld Company), 318 East Third Street; Red Top Malt Company, 1747 Central Avenue; and American Girl Malt Company, 1600 Central Avenue. During the prohibition era, despite the various state taxes on the product several local firms achieved national distribution for their brands—Red Top, Burger Brothers' Buckeye, Bachrach-Feld's American Beauty and Old Wurzburg, and American Girl.

The return of legal beer did not end production of malt syrups, although demand fell off. Since 1933 thousands of persons who made homebrew during prohibition have continued to make their own beer. Today both a Federal and a state tax are levied on malt products.

In 1938 Sherbrook Distributing Company, 319 East Eighth Street, was national distributor for Old Wurzburg Malt; Red Top Malt Syrup was being sold by salesmen of the Red Top Brewing Company; and Burger Brothers' Buckeye brand was being distributed by the Burger Brewing Company. The American Diamalt Company has continued to supply brewers and other manufacturers with malted products.

F. L. Emmert Company, 2001 Dunlap Street, sells grain and other products to brewers and distributes mash to farmers.

### *Equipment for Brewers*

CINCINNATI SUPPLIES MUCH of the equipment needed for the production of beer and whiskies. Since repeal of the prohibition act this industry has employed many workers for the making of new, and the modernization of old furnishings.

Local firms now producing brewing and distilling apparatus are Littleford Brothers, 505 East Pearl Street, producers of mash and lauter tubs, brew kettles, cookers for mash, rice or grits,

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fermenters, lager and finishing tanks, and grain bins and grain handling systems; Lunkenheimer Company, Beekman Street, manufacturers of valves; United States Bung Manufacturing Company (1857), Evans Street, producers of barrel bungs, faucet plugs, credited with originating the patented New York and Keystone tapping systems; Bishopric Products Company (1900), manufacturing German-style and steel-var pitch, vatvar, and lastiglas, and having a chemical research laboratory credited with many brewing practice discoveries; American Can Company branch plant on Spring Grove Avenue, which supplies cans; and Karl Kiefer Machine Company, manufacturer of filters, filtermassee washers, pumps, and can washers.

### *Grape Culture and Wine Industry*

CULTURE OF GRAPES began in the vicinity of Cincinnati early in the 1800's, and the fertility of hill soil soon led to the growing of immense vineyards. As production of Concord and Catawba grapes increased, the fruit was bought by factors. Grape juices later were fermented. The quality of these vintages quickly gave wine-making importance in Cincinnati industry.

Nicholas Longworth I, who was here in the years following 1811, was the first Cincinnati to produce wine commercially. In what is now Eden Park he had extensive vineyards which gave thousands of bushels of grapes each year; under the building at 515 Sycamore Street were his huge cellars for wine production and aging. The cellar extended from under the Sycamore Street sidewalk on the west side of the street two hundred feet to the alley. With the exception of the great wooden casks and tanks in which the grapes were fermented, now decayed or otherwise destroyed, the cellars remain the same as when the last wine makers used them. The walls in some places are from five to seven feet thick. From the ceiling hang iron arms which once supported catwalks above the tanks and casks, one of which had a capacity of 50 thousand gallons.

Along these catwalks the winemakers went, stirring the fermenting juices. In the middle of the cellar was a bricked gutter, into which was poured the waste fluid. The gutter emptied into

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quicksand pits, one of which was a hundred feet deep. Temperature of the cellar was always kept at 52 degrees.

Traces of other wine cellars can still be seen in the city. One was near Sixth and Culvert Streets, while on the hillside on the west side of Reading Road near Elsinore Place is the entrance to another, once operated in connection with the old Green Hill Tavern.

From these cellars and from many smaller ones came millions of gallons of wine, great quantities of which were exported to every part of the nation. During early days wine was shipped and dispensed from barrels; the present method of bottling dates from about 1880.

The success of Cincinnati-made wines attracted additional grape culturists. By 1850 three hundred vineyards covered nine hundred acres within 20 miles of the city. Most of the farms were east and north of the city. Near Indian Hill, where the world-famous Ives grape seedling first was grown, sprawled large vineyards. That year (1850) the local production of wine was about 120 thousand gallons. The industry employed about five hundred persons, who made wine valued at 150 thousand dollars. Cincinnati's grape growing and wine production were important until 1860. At that time many growers facing severe losses because of black rot, a vine disease which blighted crops, decided to remove to northwestern New York, where after several years they developed a new Eastern center for the culture of grapes. About 1880 the California vineyards became commercially significant in the American wine industry.

Despite the black rot, many grape growers remained, and continued to sell their crops to wine makers. During the 1890's Cincinnati wine gardens were the meeting place for the elegant society of the day. Among the most conspicuous were Metz's Garden, on Queen City Avenue, and Griess', on Quebec Road. Both places had their own vineyards on the hills nearby; their private brands of wine were popular with connoisseurs. After the prohibition laws became operative both places closed. Metz's has never re-opened, while Griess' Garden now is known as Quebec Gardens, a beer and liquor dispensary. Another popular rendezvous was Eichler's Wine Garden, Bishop Street and

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Jefferson Avenue. At most of these places could be had the choice Benedictine and Red Rose Wine, *Monte Casino*, bottled in Covington by lay brothers of the religious Order of St. Benedict, who attended to the vats and vineyards from 1877 until 1918.

In 1938 the principal producers of wine in Greater Cincinnati were Edward Fey, 2287 Colerain Avenue; Vintage Wine Company, 235 Scott Boulevard, John C. Meier Grape Juice Company, Inc. (1895), 6955 Plainfield Pike, Silverton, and the Fred M. Stetter Estate, 338 West Sixth Street, producers and distributors of sacramental wine. About 125 workers were given employment and wages were estimated at 190 thousand dollars annually.

### *Rectification of Spirits and Blending*

RECTIFICATION OF SPIRITS and the blending of whiskies and fruit juices for mixed drinks and cordials began here about 1816 and came right along with the distilling industry. In 1919 prohibition forced all these firms to suspend operations. Since 1933 several new enterprises have entered this business and secured a great demand for their products.

In 1938 the largest Cincinnati firm rectifying, blending, and bottling mixed drinks and cordials was the Lippincott Cordials, Inc., 42 Main Street, distributors of sloe gin; whisky, and gin mixed with fruit juices, liquors, and wines. Others were Paragon Distilling Company, 219 East Court Street; Tom Collins Corporation, 125 Pike Street, Covington; Bernheim-Rexinger & Company, 123 East Sixth Street; United Distilling Company, 216 East Pearl Street; James Walsh & Company, Inc., 7 West Sixth Street; Milson Company, Enquirer Building; and Western Reserve Distilling Company, 2501 Norwood Avenue, Norwood. These firms gave employment to about five hundred persons, while the annual payroll was estimated at more than 600 thousand dollars.

### *Greater Cincinnati Distilleries*

WHEN THE FIRST white settlers came to Losantiville they brought with them plenty of whisky; in those days a

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barrel of "Old Monogehela" was literally worth its weight in gold. The liquor could be bartered for practically anything of value—land, food, clothing, or labor—and it was an excellent substitute for water.

During those frontier days most of the whisky was brought down the Ohio River on flatboats. Later, when the rich Miami Valley was gold and green with bumper corn crops, farmers began to distill spirits as a side line. Still later the opening of the Miami & Erie Canal gave easy transportation of the alcohol to rectifiers and blenders here, and the liquor industry arose. By 1815 the industry had expanded so rapidly that distillers were able to export 80 thousand gallons that year.

Cincinnati soon became noted for the quality of the rye and bourbon whiskies aged and barrelled here. Many small distilleries stood near the Ohio River, along the Miami & Erie Canal, and in outlying sections of the city. By 1820 nine distilleries were operating in the city. A survey revealed 520 distilleries in Ohio, but about 90 percent of them were small stills of farmer-owners.

The distilling industry prospered. By 1835 Cincinnati factors were handling more than 30 thousand barrels each year; and practically every storekeeper in the city kept a barrel on hand for customers, who got a free drink while shopping. In 1850 local distillers were producing 1,145 barrels of whisky daily. The following year 188,873 barrels were exported, while the value of the total production of whisky amounted to \$2,857,000. On January 5, 1881 the city's 10 leading distillers announced their combined production in 1880 was 1,861,067 gallons, on which a government tax of \$10,281,567 was paid.

State and municipal licensing and regulations did away with free drinks; but the liquor trade did not suffer. The production of whisky continued to increase until the enactment of dry laws in various states brought about a decline in demand. Reform closed smaller manufactories, and eventually, with the enactment of prohibition laws all plants in the Greater Cincinnati area stopped business in 1919. Among local plants which suspended operations were the Klein Brothers, Walsh, Fleisch-



**FERMENTING AND PACKING WHISKY**



INSPECTING AND PACKING

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mann, and Clifton Springs distilleries. During the 14 years of prohibition, stocks of whisky stored in warehouses were released under government supervision for medicinal purposes.

Since repeal, partly because of governmental regulations, which make large central control and sales organizations more practical than the smaller distilleries of former years, there has been a marked change in liquor trade practices. Since 1933 the Federal Alcohol Administration has been charged with the supervision of the sale and distribution of liquor. Its task has been to bring about co-operation between States and the Federal Government in carrying out provisions of the Twenty-first Amendment. The organization has had to contend with such difficulties as intra-state discriminatory legislation; protection of dry and monopoly states; revocation or suspension of Federal permits, deceptive or fraudulent labels, objectionable advertising, and other practices arising from resumption of the legal sale of alcoholic beverages.

In December 1937 some 18 million gallons of whisky produced in the country since repeal had obtained the legal minimum of four years aging, had become eligible for payment of internal revenue tax, and were ready to be marketed. That year Greater Cincinnati's distilling industry employed about 2,200 workers, earning wages estimated at more than three million dollars.

The making of whisky has always been a traditional craft, the secrets of which have been passed down from father to son, who have carefully guarded their own special formulas. The basic processes followed in making the various types of whisky are almost identical, the chief difference being in the materials used. Because private formulas, local conditions, water, and materials differ to some extent, no two whiskies are ever exactly alike.

Bourbon whisky is made from corn, rye, and barley malt; rye whisky is made from rye and either rye or barley malt. Several methods are used for malting rye or barley grain. In America the one usually followed calls for spreading the grain six inches deep on a floor, then moistening it. In a few days the grain begins to sprout. The sprout is removed by heating the



grain. During sprouting, changes take place in the grain similar to those which occur when it is planted. A natural sugar called diastase is formed, which later plays an important part in the whisky making.

Bourbon whisky contains from 10 to 40 percent of small grain (rye and barley malt). The proportion used to each hundred bushels is usually 60 to 90 bushels of corn and 10 to 40 bushels of other grain, rye, and barley malt. At least 10 percent of malt must be used to convert the starch into sugar.

The corn grain is ground into meal, then mixed with water and heated almost to the boiling point. The resulting mash is then cooled, the rye and barley malt are added, and the mash is vigorously stirred. During this process the diastase in the malt changes the starch content of the corn and rye to sugar. The mash is next drawn off into a large wooden vat, called a fermenter, and more water is added. This mixture is then left to sour and ferment. During fermentation the sugar formed by the diastase is changed into alcohol.

Nature's bacteria are enough to produce fermentation. The distiller, however, hastens and at the same time controls fermentation by adding yeast to the mash. When the yeast begins its work, the contents of the vat, at first inert, are gradually set in motion. During this period of agitation the mass is so activated by the carbonic gas which the yeast releases that the sugar content is transformed into alcohol. This process continues about three days. The resulting liquid is called "beer," though it has no resemblance to the amber beverage which the consumer knows. After passing through a preheating process, it is drawn off into a copper receptacle known as a beer still, where it is boiled. The steam rising from the still is carried into a water-cooled condenser, where it becomes a liquid called "low wine," which has a high percentage of alcohol. The first distillation is thus completed.

At this point the solids (grain mash residue) are removed from the still, dried, and sold as "distiller's dried grain" for cattle-feed or fertilizer. The "low wine" is run into a copper vessel known as a doubler, and is again boiled, vaporized, and condensed. From these processes comes a clean liquid, as spark-

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ling and clear as the purest spring water—"new whisky," ready for aging.

All distillers, much as they differ on other points, agree that charred barrels are essential to the production of fine bourbon and rye whisky. During the entire period of aging, which varies from 18 months to seven years, the temperature and the humidity of the warehouses are continually regulated. While aging whisky undergoes a subtle process of chemical change. It takes on an amber color, and its flavor is enhanced by the charred barrel staves. When finally aged the whisky is smooth and mellow in flavor, ready for bottling. Complete mechanical processes now are used in bottling and boxing departments.

Greater Cincinnati's largest producer of whisky is the Carthage Distillery, 7818 Anthony Wayne Avenue, Carthage, which, together with Gilbey's Gin Distillery, is operated by National Distillers Products Corporation. This organization was formed through the merger of nine of the nation's most famous distillers, the first unit of which was established in 1763 when America was still a British colony. Executive offices of the firm are at 120 Broadway, New York.

Before 1934 Gilbey's London Gry Gin was made only in England, Canada, and Australia. Since the construction of the Carthage (Cincinnati) plant, the firm has become the leading producer of gin and sloe gin the world.

Carthage Distillery, opened in 1893, was purchased by National Distillers Products Corporation in August 1933, a few months after repeal. An expansion program, which cost several millions of dollars, made the plant the second largest in the United States, with a capacity of 40 thousand gallons of whisky daily. The bottling capacity is more than 50 thousand bottles of whisky and gin an hour. The plant now covers more than 10 acres, and its facilities include an unloading capacity of 10 thousand bushels of grain daily.

Joseph E. Seagram & Sons Distillery, formerly the John Wilson Distillery, at Lawrenceburg, Indiana, is the second largest plant in Greater Cincinnati. Purchased by Seagram's in 1933, the distillery now employs about eight hundred persons. During the 1937 flood the firm lost more than 250 thousand

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gallons of whisky. In November 1937 construction began on new still houses, cookers, coolers, and water softeners, the improvements to cost two million dollars. Another plant operated in Lawrenceburg is Walsh's Distillery (1840), whose present capacity is about 20 thousand barrels a year.

Other distilleries in Greater Cincinnati are The Cave Springs Distillery Corporation, Wilders, Kentucky; Paragon Distilling Company, 219 East Court Street; Pattison Brothers Kentucky Bourbon Distillery Company, 133 Park Place, Covington; Western Reserve Distilling Company, 2501 Norwood Avenue, Norwood; and United Distilling Company, 216 East Pearl Street.

### *Non-Alcoholic Beverages*

MANUFACTURE OF CARBONATED, or non-alcoholic, beverages in Cincinnati has grown into an industry which gave employment to about a thousand workers in 1937, with an annual payroll estimated at \$1,500,000. As early as 1814 the first carbonated water beverage plant was opened for the production of mineral waters; but sales were meager, and it was closed after two weeks.

The modern development of this manufacturing unit began in 1869 when W. T. Wagner's Sons Company was formed. Today this concern is the city's largest producer of carbonated water (ordinary water to which carbon dioxide gas has been added under pressure), fruit drinks, and syrups for fountain service, manufactured and bottled in a plant at 1924 Race Street.

The Coca Cola Bottling Works Inc. (1907), Woodburn and Dana Avenues, in 1938 opened what is said to be the most modern bottling plant in America. Intricate mechanical devices clean the bottles, drop in the syrup and carbonates, and cap the containers before every bottle is inspected and made ready for shipment. Daily capacity is 10 thousand cases, or 240 thousand bottles.

Other manufacturers are Royal Bottling Company, Inc., 213 East Seventh Street; Tom Collins Corporation, 125 Pike

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Street, Covington; Queen City Bottling Company, 109 Corwine Street; Union Bottling Works, Blue Rock and Delaney Streets; Grand Pop Bottling Company, 810 West Fifth Street; Eagle Bottling Company, 224 East Clifton Avenue; Louis Fritz Mineral & Soda Water Company, 340 Pike Street, Covington; and Newport Mineral Water Company, 16 East Sixth Street, Newport. Several local companies distribute beverage products bottled in other cities.

### *Cooperage Manufacturing*

CINCINNATI'S EARLY WHISKY and pork packing industries needed a large supply of barrels and hogsheads; so cooperage became one of the city's important trades as early as 1815. The industry grew rapidly, creeping for some distance along the Ohio River into Clermont County towns, which supplied Cincinnati with barrels. By 1890 the largest cooperage factory in the world was operating here. At that time the Cincinnati Cooperage Company was manufacturing beer and whisky barrels in a plant at Riverside which employed about seven hundred men. Because lumber supplies were hard to get nearby, the firm discontinued production activities shortly after the turn of the century.

In 1937 Joseph Oker Son's Company (1856), operating a factory at 420 Findlay Street, was Hamilton County's only manufacturer of "tight" cooperage. Daily capacity is six hundred barrels, which are sold to distillers of whisky and to other concerns using wooden containers for storage or shipment of fluids. The company has a lumber storage and seasoning department in Arkansas and a large stave storage yard on Central Avenue. About 60 workers, earning 75 thousand dollars a year are regularly employed.

## Chapter VII

### *Boots and Shoes • Tanners and Makers of Leather • Sporting Goods • The Story of Clothes*



FOR SEVERAL YEARS after Cincinnati was settled the residents wore the usual heavy leather boots or moccasins of the time. They did not need dress shoes to work the fields or build a home, and lack of money kept the weary settler away from the social events at Fort Washington. But the spreading fame of the city attracted boot-makers, and by 1790 several were practicing their trade. Even the use of awkward old hand methods did not stop the progress of the shoe industry in Cincinnati.

Before the invention of machinery the trade was one for craftsmen; its secrets had been transmitted from generation to generation—father to son and sometimes to apprentice. With his simple tools the early shoemaker fashioned either boots or shoes from lasts measured to the individual foot. Cutting, turning, welting, and pegging of the product were done by hand.

Most of Cincinnati's early shoemakers had their shops either at the front or rear of their homes. In 1820 some prominent shoemakers were John Brocks, 250 Main Street; Ayre Cartwright, East Front Street; William Davis, Front Street; Thomas Davis, Western Row; Ephraim Dunlap, Longworth Street, near Western Row; Benjamin Decker, Sixth Street; Joseph Pettit, 62 Water Street; James Russell, Sr., Fourth Street, near Elm Street; John Starbuck, Front Street, near the "steam grist mill"; Samuel Emmett, 42 East Front Street; John Budd, 6 East Front Street; John Bard, 6 East Front Street; Morris Hopson, West Fifth Street; Henry and Edward H. Handy, Elm Street, near Second Street; Thomas Ward, Seventh Street; and Samuel P. Murray, 202 Main Street.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Among the bootmakers (who also made shoes) were J. and E. Capps, 264 Main Street; William Carrigan, 10 East Front Street; Peter Furay, 69 Main Street; John Hayes, 17 Lower Market Street; James Jordan, 23 Main Street; Samuel Maddux, East Second Street; Increase Newall, Plum Street, between Front and Water Streets; and John Rose, Front Street between Plum and Elm Streets.

When the Germans thronged in the city in the 1840's, they enriched, among other things, Cincinnati's shoemaking history. Many wore wooden shoes, which they either made themselves or bought in the front room of the "shoester's" place. Wooden Shoe Hollow folk went to Cumminsville for sturdy wooden shoes for daily wear or stout leather ones for "good." The "shoester" often enhanced the worth of his shoes in children's eyes by clipping or sewing radiant "tossels" and bright buttons to the tops.

The first mechanical step in the manufacture of footwear came about 1850, when shoemakers began using the "rolling machine," a device which flattened out a side of leather in a minute—compared with the hour or more required by the old hammer and lapstone method.

In 1850 about 450 thousand pairs of boots and shoes were bought by Cincinnatians at the average price of three dollars a pair. In that year the city's 374 boot and shoe companies employed more than 1,750 hands, and the value of their products exceeded \$1,180,000. In 1862 the Civil War boosted the average price of a pair of shoes to \$12.

In the early 1850's the most important manufacturers, all doing ready-made as well as custom work, were C. M. Williams, Fifth Street, east of Walnut Street, employing about a hundred skilled hands on men's dress boots and Congress boots, women's shoes and garter boots, and slippers; James Eshelby, 10 West Sixth Street, having 30 employees specializing in the production of imported calf skin boots; E. G. Webster & Company, Fifth and Lodge Streets, working a hundred persons, who each year made more than 50 thousand pairs of women's and children's shoes and a few men's dress boots; and William Hart & Company, Fifth Street, known by its sign, the big "red heart."

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

A machine for sewing on buttons was introduced about 1866. Then came stitching machines, cutting machines, and other modern mechanical devices. The installation of these labor-saving machines wrought considerable change. Instead of waiting for days or weeks while shoes were made to order, a purchaser could in a few minutes make his selection from the hundreds of pairs of ready-made shoes in the retail shoe store.

The steady improvement of machine methods, producing uniform and cheaper products, helped the industry to become even more sizable. The shoemaking business changed quickly from the small shops with one, two, or three employees, to huge organizations with hundreds of machines and workers, manufacturing more shoes in a day than the old-time shoemaker had been able to stitch together in a year. Because it was a major leather market, Cincinnati was able to share in this program.

Through steady increases of sales, Cincinnati shoemakers were getting bigger, and their owners were looking forward to the day when the Queen City could wrest from New England the honor of being the nation's shoe center. This dream was never realized, but Cincinnati did become, for some curious reason, one of the Middle West's leading centers for the making of women's shoes.

Beginning with the machine era the local manufacture of men's shoes declined, while that of women's footwear increased. By 1910, however, production figures of men's shoes were slightly higher than those for the preceding decade, and executives of one plant began planning a huge enlargement program. But before they could act, Cincinnatians ran to watch their costliest commercial fire. They may have seen in the smoldering ruins at Ninth and Sycamore Streets the hopes for revival of a major local industry.

Starting December 21, 1910, the fire razed an entire city block of 12 factory buildings, from Eighth to Ninth Streets and from Sycamore Street to Broadway. Burning for seven days, it killed four, injured seven, and damaged more than two million dollars worth of property. The Krippendorf-O'Neal Shoe Company, manufacturer of men's shoes, suffered

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

such loss that it had to quit business. Machinery and stock of the concern, founded in 1904, was ruined, and three hundred employees were out on the streets looking for other jobs.

Other leather goods companies suffering heavy fire losses but managing to stay in business were Sachs Shoe Company, five hundred employees; Cahill Shoe Company, 350; Twinlock Leather Company, 125; Griess-Pfleger Leather Company, 50; and A. Nurre Company, 40.

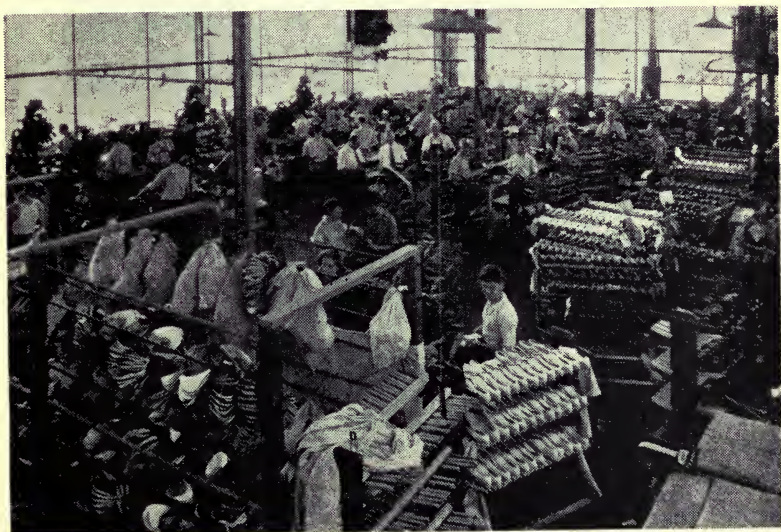
From 1910 to 1920 the local shoe industry grew gradually. Then began a long period of maladjustment, caused by labor trouble in practically every plant. As unions tried to organize shoe workers, local production sank. Several factories closed here and later re-opened in more tranquil communities—which gave the city more hungry mouths. The Julian & Kokenge Company moved to Columbus, and the Charles Meis Shoe Company opened a factory at Lebanon. Both organizations, however, still maintain executive offices here.

The employers and the workers finally came to terms, and in 1928 the United States Shoe Corporation, now Cincinnati's largest shoe producer, was formed. Like other successful ventures, the company began with a small plant and then expanded. The concern went blithely along even in the deepest depression years (1930-33). Today, in addition to the main plant at 1638 Herald Avenue, branch factories are operated at Chillicothe (Ohio) and Rochester, New York. Locally some 1,800 skilled workers are employed in the production of "Red Cross" shoes for women. They make about 8,000 pairs every working day.

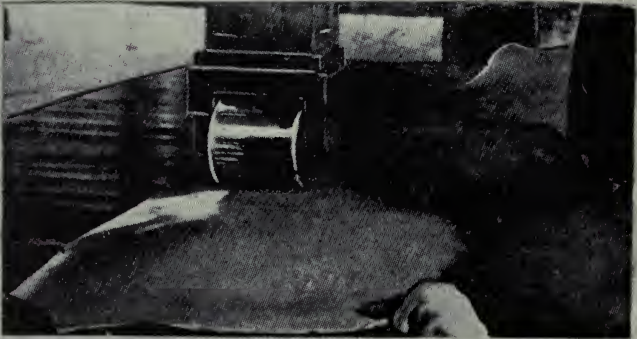
Cincinnati's second largest plant is operated by the Krippendorf-Dittman Company, 317 East Seventh Street, makers of "Foot Rest" shoes for women. Charles Krippendorf opened a small plant in 1872 and formed a partnership with Dittman in 1895. Employing seven hundred workmen, the company since 1885 has occupied the Seventh Street building.

Today Cincinnati is one of the nation's major women's shoe manufacturing centers, having more than 11 establishments, which employ some three thousand skilled hands making more than two million dollars in wages each year. Value of the





SHOE PEGGING (1852, 1938)



CUTTING, TACKING, AND ROLLING HIDES

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

shoe output for 1935 was more than \$6,357,000. The only men's shoes now made here are custom-built; the annual value of these products probably does not exceed 10 thousand dollars. Several shoemaking companies have executive offices here but plants elsewhere in the country.

Other leading Cincinnati shoe manufacturers are the Altman Brothers Shoe Manufacturing Company, 1911 West Eighth Street; Big K Shoe Manufacturing Company, 803 Sycamore Street; Brown Shoe Company, 528 Walnut Street; Cincinnati Shoe Manufacturing Company, 834 West Sixth Street; Consolidated Shoe Corporation, 229 East Sixth Street; H. K. Manufacturing Company, 434 Elm Street; J. and B. Shoe Company, 123 West Central Parkway; Logini Shoe Company (1832), 1401 Central Parkway; L. V. Marks & Sons, 534 Sycamore Street; Miller Shoe Company (1922), 2531 Cook Street; Plaut-Butler Inc., 400 Pike Street; The Schwaee-Gerwin Company, 4015 Cherry Street; Stix-Altman-Weiner Inc., Floral and Park Avenues, Norwood; and P. Sullivan Shoe Company, 536 Sycamore Street.

Specializing in the manufacture of burial shoes, Paul Shoe Manufacturing Company (1904), 317 Sycamore Street, is planning to start the manufacture of women's house slippers.

### *Tanners and Leather Manufacturers*

OPERATION OF TANNERIES and leatherwork shops has long been part of Cincinnati's industrial life. As early as 1791 a local tannery was busy drying and working skins. In the early 1820's the packing industry provided an abundant supply of hides, and the big demand for leather products made such ventures prosperous. The leather manufacturing industry paced most of the city's early enterprises.

The first known method of curing, in use several hundred years ago, was to rub the skins with fat, or to smoke them over a wood fire. In Egypt and Asia Minor, later processors found that by soaking the hides in fermented oak bark, chestnut bark, or gall nuts they got a soft leather, easy to work. The American Indian and the white trapper used the same method,

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removing all fats, rubbing salt over the pelt, and tacking the hide in the sun over a flat surface. When it was sufficiently dry the skin was inserted between two smooth logs and rolled until pliable. The first commercial tanneries in Cincinnati used alum to treat hides after cleaning.

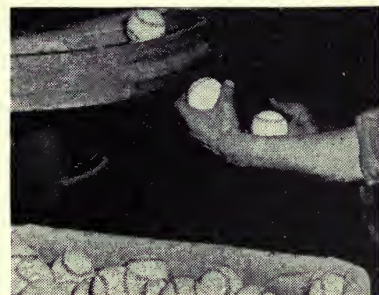
The modern tanner washes the skins free of blood and dirt, removes adhering flesh, and then soaks the hides in milk of lime to loosen the outer skin and the hair. The hair and the epidermis are scraped off, and the lime is washed out in a solution of pancreatin. The skins are then moved, day by day, into stronger tanning solutions, until they have been properly treated with tannins to form commercial leather.

Another modern method of tanning is to tumble skins into vats containing chromium sulphate, a chemical which converts them into chrome leather in about two days. Although this system is cheaper and faster than tanning with bark solutions, it is not used locally.

The largest Cincinnati tannery is operated by the American Oak Leather Company (1881), 1401 Dalton Street, which makes shoe soles, upholstery, and patent, enamelled, and novelty leathers. Covering  $7\frac{1}{2}$  acres and employing 550, the plant is one of the largest in the country. The company has branch tanneries in Louisville, Kentucky, and Decatur, Alabama, while sales offices are maintained in Chicago, Boston, St. Louis, Detroit, and New York City.

Other tanneries sharing in the Cincinnati leather industry are Haffner Brothers Company, 1130 Hopple Street; Queen City Tanning Company, York Street and McLean Avenue; Rasche Brothers, 2002 Central Parkway; and Simon Wolfstein and Company, 2036 Branch Street.

Local producers making luggage, bags, cases, and other kinds of leather goods are Champion Bag and Suitcase Company, 1 East Pearl Street; Cincinnati Trunk and Case Company, 28 West Pearl Street, sample cases and suitcases; Leather Specialty Company, 1401 Central Parkway; Ohio Bag and Suitcase Company, 30 West Pearl Street; Triangle Luggage Inc. (1904), 129 West Third Street; Webster Tray and Case Company, 427 Plum Street; Schell Leather Goods Company, 2965 Central



**BAIT FOR THE BATTER**



FOR THE LINKS AND DIAMOND

Parkway; and Whiteman Saddle & Leather Goods Manufacturing Company, 1676 Hoffner Street.

### *Manufacture of Sporting Goods*

THE SPORTS WORLD has known Cincinnati as a "baseball town" since the days when the world's first professional baseball team, the Cincinnati Red Stockings, played their maiden games to local crowds in 1869. Interest in the sport and the wealth of available raw materials induced Philip Goldsmith to try his hand at making baseballs for profit, and in 1875, from a small factory in Covington, he put on the market the first handmade balls.

Baseball and the business of making the balls and equipment for the game have grown up together. By 1880 the sales of Goldsmith baseballs had so increased that the firm leased larger quarters. Then they started making other kinds of sports equipment, and in 1897 Goldsmith bought a factory on East Pearl Street. In 1910 the Goldsmith concern occupied the building at John and Findlay Streets, and in 1928, because business was growing, they built a five-story addition at York and John Streets. In 1938 still more space was leased at Evans and Gest Streets. Today the company, managed by the third generation of the founder, produces almost every type of athletic equipment, including baseballs; indoor balls; bats; gloves, baseball, football, and basketball uniforms; shoes; and golf clubs.

Production methods combine hand and machine processes. A good example of the procedure in making sports equipment is the manufacture of a baseball. First the string which covers the small rubber center of the ball is wound by machines until it gets to the right size. Then the leather covers are stitched by hand. Each ball undergoes careful inspection for weight, size, roundness, and perfection of seams before it is stamped and packed for shipment, ready for the cry, "Play Ball."

Other Cincinnati concerns with an output of sporting goods are Ohio-Kentucky Manufacturing Company, 1416 Vine Street; Hutchinson Brothers Leather Company, 1928 West Eighth Street; Zephyr Products Company, 2530 Spring Grove Avenue;

and National Billiard Manufacturing Company (1880), 1019 Broadway.

### *Clothes Through the Years*

THE COMMERCIAL MANUFACTURE of clothing has come a long way up the years. It was a household art in the Cincinnati of 1788 when homespun and apparel made from skins of animals were the rule. From the early linsey-woolsey days the women spun, dyed, and sewed by hand all the necessary materials; and even when flatboats brought the expensive, but highly desirable "boughten" cassimeres, cambrics, and muslins, housewives were tailors. Comfort, durability, and warmth were prime considerations; style was negligible to them, a thing of the past. When fastidious Mrs. Trollope visited a farm family near Cincinnati (1829), she was considerably surprised to find them making their own clothes—and careless about style.

But style was to come in the future. With more leisure time and with greater comforts, and also with the coming of elegant visitors, Cincinnati, like other cities emerging from the backwoods, paid more attention to clothes. Dr. William Goforth, the first medical doctor, had a New York tradition and a courtly manner. He dressed meticulously; his hair was freshly clubbed and powdered; and in one gloved hand he bore a gold-headed cane. He was jeered at first, but emulated later.

In the first decade of the nineteenth century fashionable lady visitors and residents were wearing long dresses with bloused waists and "round" skirts or trains. The skirts were rather skimpy, for they measured only two yards around the bottom. Wraps of muslin, with or without sleeves, were sometimes worn; for the waists were cut low about the shoulders. Accessories included shawls, veils, long gloves, furs or muffs, and bonnets with high crowns, tied with ribbons under the chin. Extremists today would be surprised to learn that these muffs were often carried in the summer months. Tight underwear of lamb's wool, not unlike the present-day union suit, was worn because it did not interfere with the tight-fitting dress. Gather-



## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

ing puffs and frills and discarding them as they went through the nineteenth century, Cincinnati women who could afford it dressed according to the latest edicts of the East.

After Doctor Goforth sallied into Cincinnati streets, the better-dressed men wore gay blue, red, or green coats, and tan or buff short breeches, the pantaloons about which a contemporary English wag wrote:

The French we conquered once  
Now give us laws for pantaloons.

Their whole outfit was touched with flutings of lace or cambric frills. By and large, however, the average Cincinnati wore simple shirts, breeches, and coats made at home. Cincinnatians were so informal with their dress through the nineteenth century that Dr. Thomas Nichols, when he visited the city in 1841, remarked:

At the Broadway Hotel, at that day the best in the place, it was very warm, and I think half the guests, many of them regular boarders—solid business men of Cincinnati—took off their coats and dined comfortably in their shirt-sleeves.

The forerunner of the modern man's suit, somber and form-fitting, came in the 1870's, when Cincinnati was the men's clothing center of the nation. The city's tailoring business was prosperous. Tall factories lined Third Street from Vine Street westward; and many Cincinnati fortunes were built in clothes. After the World War, however, the men's ready-made clothing industry shifted eastward. New York City became the nation's center for cheaper ready-made clothes, Rochester for fine clothes. Cincinnati resorted to a mail-order business, and soon became the country's leader in ready-made clothes sold through orders in the mail.

Representative of modern machine methods in the making of clothes is the procedure of the A. Nash Company, 1916 Elm Street, a leading maker of custom-tailored clothes for men. A sales organization of some 2,500 operating from 59 company-owned branch offices, takes orders and measurements. At the plant these are sorted according to size, material, and pattern.

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Then electrical machines are used to cut the cloth; sections are sewn together; and linings, holes, and buttons are attached. After the garment is pressed and inspected, it is delivered to the purchaser.

The company was founded in 1918 by Arthur Nash, who believed firmly that

The Golden Rule is the divine law governing human relationships, accepted by all religions, and proclaimed by all prophets and teachers of every creed. It is the only infallible, workable, industrial and economic law in the universe today.

With Nash the "Golden Rule" was more than a motto; he put it into practice in his business. The remarkable success of the A. Nash Company soon made his plan a model in industrial relationship between employer and employee. Co-operative in principle, it made every worker a part owner, and gave each an equal voice in shaping policies of the company. Little was known about the "Golden Rule" until 1924 when Nash asked, in a radio broadcast, what he should do with 660 thousand dollars worth of stock allotted him when capital of the company was increased. Thousands of advisory letters flowed into the Nash office. After wading through the suggestions, Nash reached a decision that made the founder of a huge business simply a minority stockholder. He vested full control of company affairs in the hands of employees.

Since Nash's death the business has continued to make good with the "Golden Rule" plan. The plant today covers several acres, and employs in season as many as two thousand persons.

Most men's tailoring concerns in Cincinnati do a custom-made business. Other large tailor-made manufacturers besides the A. Nash Company are The Globe Tailoring Company, 205 West Fourth Street, maker of particularly fine clothes; The P. H. Davis Tailoring Company (1912), 2314 Iowa Street; Schaefer Tailoring Company, 311 Elm Street; The Storrs-Schaefer Company (1906), McMillan Street and Essex Place; Siebler Tailoring Company, Fourth and Lawrence Streets; Leonard Custom Tailors Company, 205 West Fourth Street; Schwartz Tailoring Company, 224 East Eighth Street; Hamil-



THE YEARS STEP BACK



TAILORING

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

ton Tailoring Company (1910), 404 Pike Street; Ohio Custom Garment Company, 224 Eighth Street; Cincinnati Tailoring Company, 224 East Eighth Street; Comello Brothers & Company, 224 East Eighth Street; Becker Tailoring Company, 22 West Third Street; Herbert Custom Tailoring Company, 228 West Seventh Street; and N. Valerio Company, 406 West Ninth Street. Numerous smaller firms in Cincinnati make men's clothes to order; a good many more tailor coats, pants, and vests on contract for the larger concerns; and some shops specialize in tailors' supplies, such as pads, canvas, buttons, and trimmings.

Production methods used by ready-to-wear clothing manufacturers differ slightly from those of mail-order organizations. Many suits are cut to size from a variety of seasonal patterns, and then distributed to retail stores for resale. Because of mass production methods ready-made clothing is comparatively cheaper than the custom-made article. Several Cincinnati manufacturers also operate retail stores.

Although Cincinnati is particularly noted for its custom-made men's clothes, it has also a few big factories turning out men's high-grade "stock," or ready-made, suits for the better class retail stores. Among the largest are Levine Brothers, Sixth and Washington Streets (Newport); H. A. Seinsheimer Company, 400 Pike Street; Silverstein & Sons Company, 1100 Sycamore Street; and Heldman-Schild, Inc., 400 Pike Street.

In 1903 a small shop was set up at 10 East Pearl Street for the manufacture of overalls, pants, underwear, and various other kinds of men's garments. In 1918 when the present five-story, fireproof factory at Third, Plum, and MacFarland Streets was opened, Crown Overall Manufacturing Company discontinued all products except overalls. In 1920 when the company faced a shortage of raw materials, executives solved the problem by buying the cotton-mill town of Stonewall, Mississippi, a community of two thousand population. At the mill nearly a thousand workers are employed to produce the best grades of denim and chambray cloth used by the parent company. The Headlight Overall Company is a sales subsidiary of the Crown Overall Manufacturing Company, today one of

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

the country's outstanding makers of overalls. Other local manufacturers of overalls are The Globe Manufacturing Company, 419 West Fifth Street, and the Ironall Factories Company, 224 East Eighth Street.

Allied with clothing making is the manufacture of uniforms for doctors, dentists, nurses, chauffeurs, band musicians, police, firemen, bakers, maids, waitresses, gasoline station attendants, and hotel, theater, and railway employees. The Pettibone Brothers Manufacturing Company, 630 Main Street, and The Fecheimer Bros. Company, 400 Pike Street, are the city's leading producers of uniforms. Other manufacturers are All In One Manufacturing Company, 643 Main Street; Cincinnati Regalia Company, 145 West Fourth Street; Kahl Uniform Company, 717 Sycamore Street; Star Uniform Company, 3347 Madison Road; and Werner Garments, Inc., 222 West Fourth Street.

It is appropriate that Cincinnati, sweltering each year in summer heat, should have the nation's largest tailoring plant devoted to the manufacture of Palm Beach cloth and summer clothing for men. And Cincinnatians are inclined to take advantage of the relief such suiting brings. In a plant equipped with the best available machinery more than four hundred workers fashion these articles for the Goodall Company, Thirty-fourth and Robertson Avenues, Oakley. Processing of cloth is done in Maine and Tennessee; branch factories are in Lorain, Ohio, and Somerset, Kentucky. Besides the men's ties made at the Goodall plant, Cincinnati fashions many more on the premises of Beau Brummel Tie Manufacturers, McMillan Street and Reading Road.

Cincinnati's textile trades also make men's shirts. In four factories hundreds of workers use the latest type machines for the ready-made, and handcraft for the custom-made, product. The Mack Shirt Corporation, 209 East Sixth Street, and the Rauh Co., 904 Sycamore Street, are the leading shirtmakers. Others are Clifton Shirt Company, 419 West Fifth Street, and Harry Slomer, 609 Vine Street, custom made. The Crown Overall Company, Third and Plum Streets, manufactures a variety of denim shirts.

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The Adler Company, Harrison and Queen City Avenues, operates Hamilton County's only wool spinning mill. Machines weave men's socks, wash and dish rags, and meat sacks. Nearly two hundred workers are regularly employed by this concern, which dates back to 1874. As early as 1815 Cincinnati had a cotton spinning mill. That year about 350 spindles were being operated for the production of the coarse fabrics of the day.

Meanwhile, as the men's garment industry went through its ups and downs, the making of women's wear in Cincinnati flourished through the nineteenth century and into the World War period.

Since the turn of the century the industry has been plagued by change, beginning with the switch to mechanical production methods. Designers and salesmen have vied with each other to be the first with the latest styles. Naturally this competition has lowered costs, but it has not helped stabilize the industry, which is forever tottering on the brink of ruin.

Cincinnati's modern dress manufacturer has taken advantage of every mechanical device to speed production. He tries to sell originals, but usually finds that copies of the latest Hollywood or Paris modes go faster. However, still hanging on the walls, thumbed over by designers, are dresses of a bygone day, whose style is occasionally resurrected for the modern woman.

The foremost dress manufacturer is Fashion Frocks, Inc. (Princess Garment Co.), 3301 Colerian Avenue, set up in 1919 as a small downtown shop. The company produces silk, crepe, and cotton dresses, and suits and curtains. A private motor bus is operated from the plant and downtown for the convenience of employees. An extensive mail order trade has been built by the firm. Other manufacturers are Attractive Frocks Inc., 222 West Fourth Street; Cincinnati Garments Inc., 809 Walnut Street; Claire Frocks Inc., 424 East Fourth Street; Gilsey Garment Company, 225 West Fourth Street; Glen Garment Company, 505 Elm Street; Louis Levine & Sons, 228 West Seventh Street; New York Garment Company, Inc., 228 West Fourth Street; The Ohio Dress & Coat Company, 225 West Fourth Street; Queen Garment Company, 213 West Fourth Street;

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R B Manufacturing Company, 116 West Fourth Street; Rosenthaler Brothers, 222 West Fourth Street; Summit Garment Company, 208 Post Square; and Supreme Garment Company, 238 West Fourth Street.

About 8,250 Cincinnatians produce wearing apparel for men, women, and children. In 1935 the valuation of articles made in the 91 establishments was more than \$31,505,877, and the combined payrolls aggregated \$15,470,296. In 1937 the value of products was somewhat higher, but complete figures are still not available.



## Chapter VIII

### *Heavy Industry • Machine Tools • Aluminum • Castings and Patterns • Sheet Metal Products • Iron and Steel Plants*



THE STEEL AGE that began transforming America after the Civil War caught Cincinnati momentarily flatfooted. The city's prosperity depended to a great extent upon liquor and horses; and both were out of step with the new industrialism based upon steel. Cincinnati's rapid growth was checked, but the city did not allow itself to become stagnant. It had basic resources which could be adjusted to the new demands. For many years it had nourished shops making metal articles, and the city's mechanics were among its wealthiest citizens. When Dr. Thomas Nichols visited Cincinnati ("one of the most industrious places in the world") just before the Civil War, he was particularly impressed by its "great iron foundries and machine shops."

When Cincinnati saw that steel was entering on a long American reign, it began to capitalize on its machine shops, and soon it was feeding machinery to American industry in its phenomenal transition from handcraft to the machine. Shortly after the turn of the century the city had become the national center for machine tools. Nearly a third of the nation's machine tools are now made in Greater Cincinnati factories. But machine tool production is only one phase of the metal trades industry, which includes foundry work, iron and steel mill operations, manufacturing and fabrication of sheet metal specialties, brass, bronze, and aluminum castings and products, and the making of all kinds of machinery. These combined trades annually produce articles valued at more than a hundred million dollars. In 1937 the various "heavy" industrial units

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gave employment to more than 25 thousand workers, while the estimated payroll was about 35 million dollars.

When Cincinnati was first settled the manufacturing world still relied upon old handcraft methods. Steel was unknown; but iron was being smelted as early as 1804 in a furnace on Yellow Creek, near the present site of Youngstown. In 1817 William Greene opened the Cincinnati Bell, Brass & Iron Foundry, the first successful durable goods manufactory in the Northwest Territory. In the same year F. H. Lawson patched together a small shop and began making metal household specialties with such shrewdness and skill that his enterprise has come down through the years and today exists as F. H. Lawson Company, Cincinnati's oldest manufacturing firm.

About 1818, following Jackson's victory at New Orleans, the demand of the South and Southwest for manufactured goods was felt in Cincinnati, and the city became a strategic distributing center. Scores of charcoal furnaces were opened in southeastern Ohio, the Ohio River brought their products to Cincinnati; and soon every conceivable kind of metal product was cast or forged in the city.

The middle years of the century brought difficult problems. In 1856 Sir Henry Bessemer (1813-1898) discovered a rapid and cheap method of converting pig iron into steel by blowing a blast of air through iron in a state of fusion. This process was to revolutionize heavy industry, but Cincinnatians at first gave the discovery little notice. Cincinnati industry suffered. The metal trades, however, managed to adjust themselves to the steel era, and Cincinnati, together with its "little steel" independents at Newport, Middletown, and Hamilton, has kept in the vanguard among America's manufacturing cities.

Today the heavy goods industry, in addition to the trade of foundries and iron and steel mills, is represented in the Cincinnati area by many manufacturing plants, in which are made almost every kind of metal article, from huge precision machine tools and delicate surgical equipment to simple garment hangers and metal toys. During the past quarter-century the Cincinnati metal industries have developed so many different products that Cincinnati plants have never suffered a complete shutdown

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

even during periods of dire depression. Some types of metal manufacturing, including the making of stoves, valves, iron pipe, laundry, paint, baking, and X-ray machinery, have been built into major units employing thousands of skilled workmen; and many smaller factories are equipped to stamp and finish a surprisingly varied group of articles, from cutlery to roller skates.

### *Machine Tool Industry*

THE MACHINE TOOL industry in America has a brilliant story of fast growth and great achievement. It began in 1833 when the firm of Brown and Sharpe, Providence, Rhode Island, developed a small steam-operated shaping machine to cut and shape metal into parts for church clocks. Since the machine was successful, the company launched the tool phase of its business and soon began building shapers for other machinists.

Probably the first Cincinnati to invest mind, brawn, and money in the business of manufacturing machine tools was John Steptoe, a foundryman who hustled about his shop on Clay Street. About 1850 Steptoe fashioned a wood planer, a machine used extensively in local woodworking plants. Marketing his product proved so profitable that Steptoe in 1855 took in as a partner Thomas McFarlan, carpenter, who not only believed that woodworkers needed machines to increase production, but also that he could give them exactly what they wished. The firm of Steptoe & McFarlan was therefore soon putting out mortising and ennoning machines which were revolutionary in trade practices. By 1859 Lane & Bodley, at that time the city's leading machine shop, manufactured centerless saws for tooling purposes. Another pioneer producer of machinery, the Bradford Machine Company, was making flour and distilling equipment.

This Cincinnati industry then slowed down, but capitalists had learned the value of machines for increasing production. As in other industries, competitive research and discovery aided growth. Beginning in the 1880's local plants began to be recognized as leaders in machine tool quality and design, and

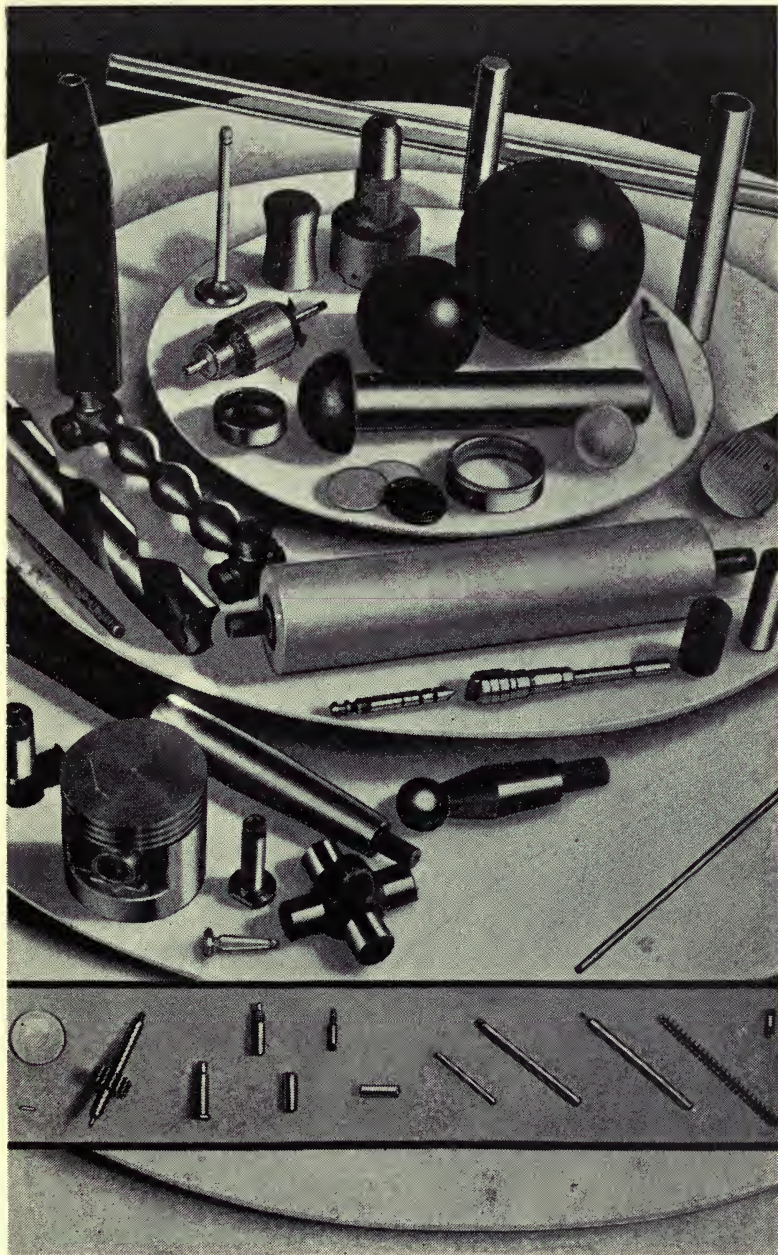
## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

capital gravitated to the local trade, which reached its peak during the World War. However much havoc it wrought with modern civilization, the War was good for the Cincinnati machine tool industry, which in more than one way went to the front.

The industry's greatest stimulus, however, was not the War, but the need for mechanized automotive units in the post-war period. Since radical changes in car design are made nearly every year, new tools are also necessary, and orders from motor car manufacturers have been tonics whenever dull periods have constricted the industry. Although it has comparatively few factories and its dollar valuation does not approach that of other industries the American machine tool trade is today one of the most accurate barometers of business conditions. During economic crises, commitments are made for tools months before general commercial conditions show improvement, while a slackening of production may mean that the nation faces another recession.

The world's largest machine tool plant is the Cincinnati Milling Machine Company—Cincinnati Grinders, Inc., Marburg Avenue and South Street, Oakley. In 1884 Frederick A. Geier organized the Cincinnati Screw and Tap Company and opened a small factory to make screws and taps. The struggling firm soon built a milling machine for its own use. Later, when several local machine shops heard of it, they asked if duplicates could be made. So in 1889 the Cincinnati Milling Machine Company was organized. In 1893 the company received its first big order, but found itself without sufficient capital to purchase raw materials and pay wages. The problem was solved when Geier told his 10 employees he could borrow money to buy materials if they would accept half cash and half scrip for wages until the machines were paid for. The workers agreed, and they found creditors willing to accept the company scrip.

During the following years the company grew rapidly. By 1907 a modern foundry had been built at Oakley; in 1910 an office building and machine shop were added; and in 1922 the assets of Cincinnati Grinder Co. were purchased and the concern began making grinders. Present area of the plant is



PRODUCTS OF THE MACHINE TOOL



STEEL

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

16½ acres. Milling machines, grinders, planers, and broachers made in this modern factory are shipped to all parts of the world. Modern millers can fashion machined work accurate to .0032 inch. In 1937 the company's average employment was about three thousand.

Back in 1887 Richard K. LeBlond, a machinist, decided on a business career and set up a small shop where he built lathes. Even as he scratched for orders to keep his small force of employees busy, LeBlond found time to work on his pet idea, a gun-boring lathe. For years he toiled, spending every cent he could lay his hands on for experimental work. By 1910 he had reached success; he had built the only gun-boring lathe in the world. At the time, however, he could find no one anxious to buy such a device. In 1914 the sounding of war drums sent armament makers scurrying for machines to make implements of war. Then LeBlond could dictate terms; he held patents on the world's only practicable gun-boring lathe. Orders piled up, and the original shop was too small to take care of all the work. All during the War period the LeBlond Machine Tool Company, Madison and Edwards Roads, Oakley, worked night and day building these tools. Today the plant is still a busy place, but it constructs tools for building, rather than for destroying, civilization.

Other large machine tool producers are Acme Machine Tool Company (1908), 4955 Spring Grove Avenue, all types of lathes; American Tool Works Company, Inc., East Pearl Street and Eggleston Avenue, lathes, radical drills, and shapers; H. J. Averbeck Machinery Company (1900), 110 East Second Street, Covington; Avey Drilling Machine Company (1907), 25 Third Street, Covington; Bradford Machine Tool Company (1840, incorporated 1900), 657 Evans Street, lathes, drillers, and tappers; Brokaw Machinery Company, 329 West Fourth Street; Carlton Machine Tool Company (1916), 2994 Spring Grove Avenue, electric radical drills; William Carrol & Son, 1776 Lexington Avenue; Cincinnati Bickford Tool Company (1909), 3220 Forrer Avenue, tappers and radical drills; Cincinnati Lathe & Tool Company, 3207 Disney Avenue; Cincinnati Planer Company (1898, incorporated 1899), 3120

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Forrer Avenue (Oakley), planers, planer type millers, and vertical boring mills; Dresses Machine Tool Company, 3360 Beekman Street; W. C. Dunn Company (1915), 832 West Sixth Street; Fosdick Machine Tool Company (1890), 1638 Blue Rock Street, upright and radical drills and combination drill and jig borers; G. A. Gray Company (incorporated 1886), 3611 Woodburn Avenue, planers; William T. Johnston Company (1907), 214 Vine Street; Jones Machine Tool Company (1925), 530 East Front Street; King Machine Tool Company (1901), Clifton Avenue and B. & O. R. R.; E. A. Kinsey Company (1886), 335 West Fourth Street, lathes; Lodge & Shipley Machine Tool Company (1892), 3055 Colerain Avenue; Morris Machine Tool Company (1910), 933 Harriet Street; Ad Muchmat, 434 Elm Street; National Machine Tool Company, 2270 Spring Grove Avenue; Precision Truing Machine Tool Company (1918), 515 Scott Boulevard, Covington; Rahn-Larmon Company (1899), 2941 Spring Grove Avenue, lathes; Smith & Mills Company (1907), 2889 Spring Grove Avenue, shapers; United States Machine Tool Company (1917), 1950 Riverside Drive; United States Electrical Tool Company (1897), 2490 Riverside Drive, drills, grinders, buffers, and flexible shaft machines; Greaves Machine Tool Company, 2009 Eastern Avenue; Boye & Emmes Machine Tool Company, Caldwell Drive, lathes; Hisey-Wolf Machine Company (1896), 2745 Colerain Avenue; and General Machinery Corporation, Hamilton, lathes.

A number of companies rebuild and repair machine tools for resale: Cincinnati Machinery & Supply Company, 28 West Second Street; Collet Machinery Company, 420 East Pearl Street; Eastern Machinery Company, 3261 Spring Grove Avenue; Jones Machine Tool Company, 530 East Front Street; E. A. Kinsey Company, 3288 Spring Grove Avenue; Norton-Broadway Machinery Company, 610 Baymiller Street; and Ohio Machinery & Supply Company, 433 East Pearl Street. Several of the firms have in stock as many as 1,500 machines of all kinds.

Because a great many improved, as well as newly designed, machines are being made here, some companies specialize in



## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

this type of research and engineering: Anthe Machine Works, 407 Madison Avenue, Covington; Bossert Machine Company, 617 East Pearl Street; F. W. Brehmer Machine & Tool Company, 815 Broadway; Buob & Kimmerle Machine Tool Company, 216 Post Square; Chris Erhart Foundry & Machine Company, 1237 West Sixth Street; J. & C. Machine Shop, 212 West 14th Street, Covington; The Machine Service Company, 1052 Gilbert Avenue, models, tools, and research; Production Machine Tool Company, 629 East Pearl Street; J. Metzger Company, 2165 Spring Grove Avenue; Queen Engineering Company, 650 Evans Street; and Riehle Machine Company, 6115 Wooster Pike, engineering, designing, and research.

These plants have made Cincinnati the recognized world center for machine tool production. More than 35 of the 150 plants in America are situated here. They build practically every tool used in industry—lathes of all sizes, large and small grinders, millers, tappers, radial drills, from the smallest to largest shapers, shearers, broachers, swing lathes, buffers, planers, flexible shaft machines, hammers, brakes, welders, punchers, key seaters, sanders.

The industry reached a national peak in valuation, payrolls, and employment in 1929, when production was appraised at 175 million dollars and employees numbered 50 thousand. That year Cincinnati shops employed about 14 thousand, while their products were appraised at nearly 60 million dollars. In 1932, when employment dipped to its lowest level, nearly four thousand of the 12 thousand persons employed by the industry nationally were working in local plants. The value of American production that year was 20 million dollars. Of the national product valuation estimated at 100 million dollars in 1937, the Cincinnati area accounted for about 25 million dollars. Employment was given to more than 4,500 persons.

Some types of modern machine tools can be bought for as low as a hundred dollars; other types cost as much as 100 thousand dollars to build. Sales are about equally divided among automotive, electrical, and general machinery manufacturers, and about a third of all orders are being placed by foreign users. And, paradoxically, this industry, primarily respon-

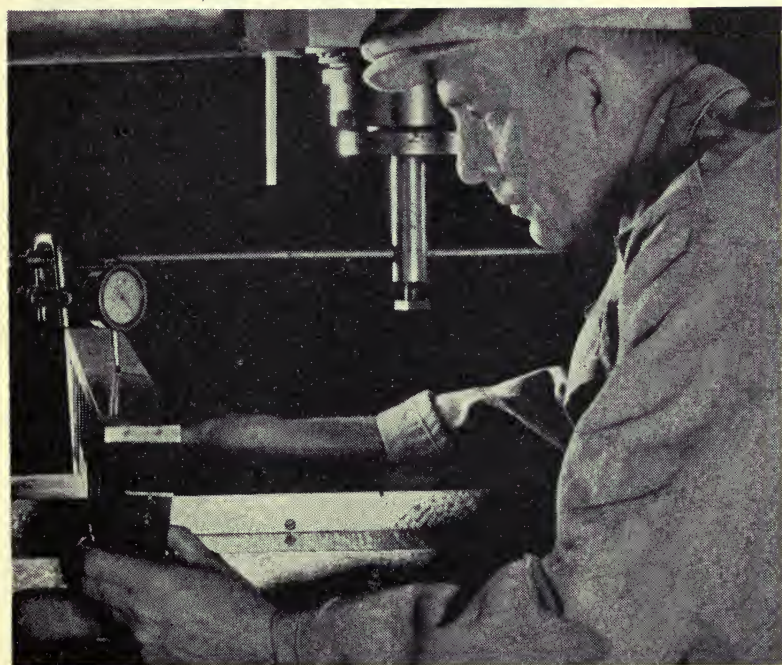
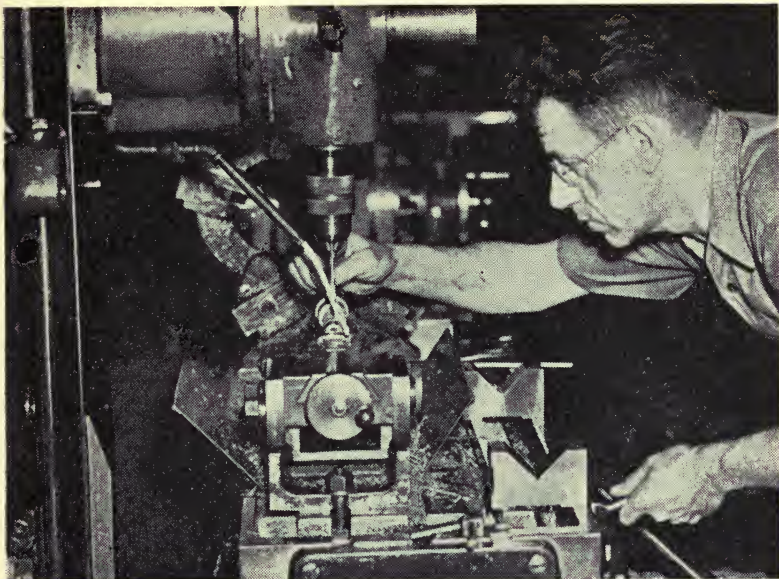
sible for machine-made goods, is itself one of the few remaining industries requiring skilled hand labor.

### *Aluminum Products*

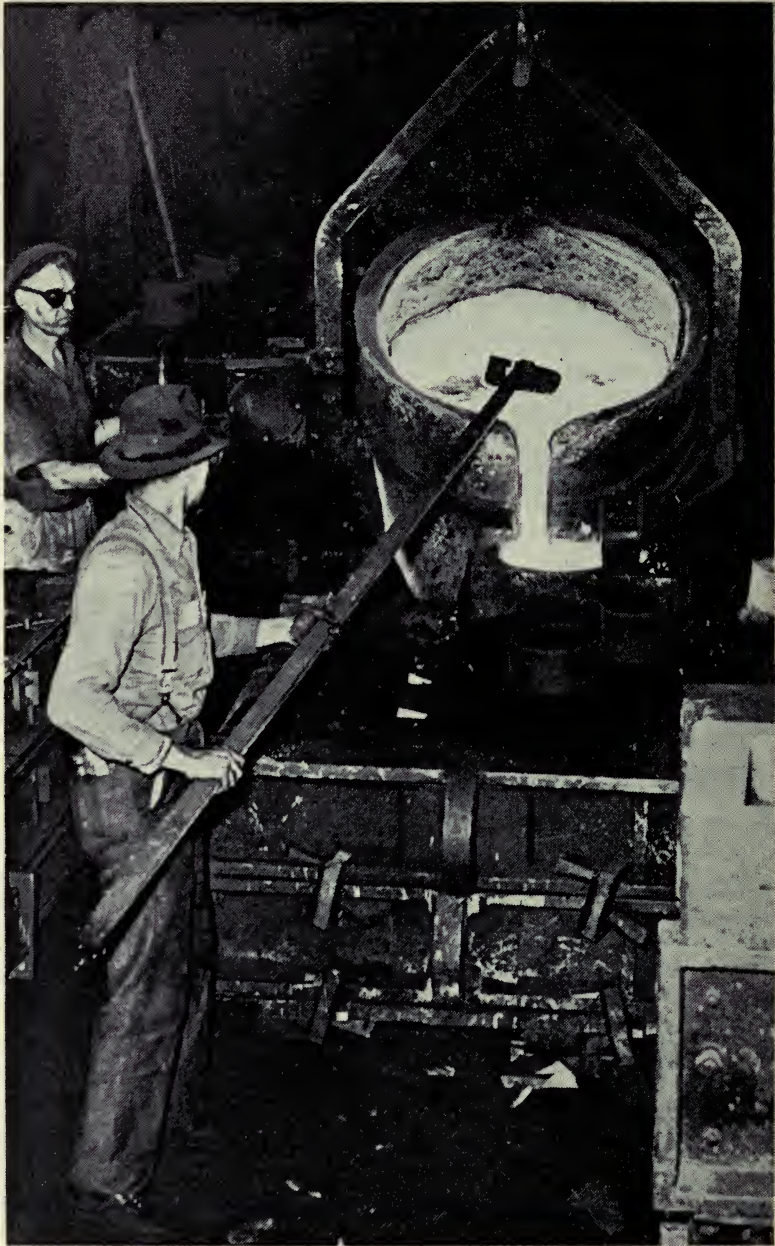
USE OF ALUMINUM, a white metal somewhat like silver—and one of the most malleable metals—has a comparatively recent origin. Although aluminum was discovered by Wöhler in 1827, a practical method of commercial production was not invented until 1886. The discovery, now called the Hall-Heroult process, could make a fascinating chapter in a tome on research in American industry. After H. St. Clair Deville had isolated aluminum into a state of nearly perfect purity (1853), scientists in America and Europe tried to find a feasible way of making the metal. In America 23-year-old Professor C. M. Hall, of Oberlin College, was one of several savants knotting their minds on the problem. Unknown to Hall, 23-year-old P. L. Heroult was also busy at aluminum research in a French laboratory. Although the two were separated by more than four thousand miles, the solution came to both men almost simultaneously. On the same day they announced perfection of identical discoveries. Carrying the strange coincidences of their lives to a proper end, both men died in 1914.

Rights to the joint discovery were purchased by Pittsburgh capitalists, and in 1888 the first aluminum ingots were cast by a company (the Aluminum Corporation of America) which is now the world's largest producer of the metal. Because it is a good conductor, aluminum has been put to many uses. Since it becomes as hard as iron when hammered or rolled, it is extensively employed in construction work. A by-product, duralumin, produced as an alloy from aluminum copper, enters aircraft and automobile construction, is widely used for ornamental and optical work, and is also fashioned into bearings and shafts.

In 1935 the value of new aluminum produced in America exceeded 22 million dollars; more than 50 percent of the total was processed at Massena, New York. Most of the world's supply of the metal is now manufactured in the United States, in Germany, and in Russia.



**PRECISION WORK: MACHINING AND TESTING**



IRON MOLDERS

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Until 1920 Cincinnati saw only minor activity in aluminum, principally with castings; but that year the Kant-Skore Piston Company was formed. Employing 20 persons, the concern stepped up production rapidly, and in 1926 became Aluminum Industries, Inc. and opened the present plant at 2438 Beekman Street. Now Aluminum Industries, Inc. has five factories (three in Cincinnati) and is the nation's third largest producer of aluminum products, ranking next to the Aluminum Corporation of America, Pittsburgh, and the Bohn Aluminum and Brass Company, Detroit. Although it specializes in making aluminum parts for aircraft and automobile engines, the firm also shapes other products, such as household articles. In 1937 about a thousand persons were on the company's payroll.

In addition to Aluminum Industries, Inc., other local firms with an output of aluminum castings are Aluminum Foundry Company, 816 East Pearl Street; Gustav A. Wendt, 3624 Colerain Avenue; E. E. Cushman, 3615 Clarion Avenue; Newman Brothers, Inc., 666 West Fourth Street; Warmin-Martin Aluminum Foundry Company, 2010 Elm Street; Reading Bronze & Aluminum Foundry Company, Reading, Ohio; Ohio Pattern Works & Foundry Company, 2735 Colerain Avenue; Hukon Manufacturing Company, 11 East 14th Street, spins aluminum; and Metalcrafts Company, 712 Reading Road, produces a great variety of ornamental aluminum articles, some in intricate designs. In recent years the use of aluminum castings has increased greatly.

### *Cincinnati Foundries*

CINCINNATI SINCE 1817, when Greene opened his foundry, has been one of the nation's centers for foundry work, the casting and molding of metal articles. By 1860 the city was the brawniest molder in America. During the Civil War many a cannon peppering the Confederate lines had been cast in local shops. When steel hardened the cast of American industry, the iron molder feared for his future. But new uses for iron were found, and the Cincinnati molder with renewed vigor threw shovelful of sand about the pattern into which flowed the molten metal. About a thousand persons are now employed in

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

foundry work, while the annual payroll is estimated at more than \$1,100,000.

Although molding machines have superseded hand methods in some industries, the processes used in a modern foundry still require the hand and the machine. The original pattern from which a casting is made is built usually of wood; shaping in sand and removing the pattern from the cast often tax ingenuity. Foundries generally specialize in one type of castings—iron, steel, gray iron, aluminum, brass, bronze, or copper.

In the days when Cincinnati knew the river well, it recognized each steamboat even from afar. For every vessel had a distinctive bell. And bell making gave the city's oldest foundry, the E. W. Vanduzen Company, (1837), 428 East Second Street, its first business. Today this concern makes gray iron and brass castings, steam-jets, and pumps. The company is especially known for its casting of the world's largest swinging bell, *Joseph*, whose 30 thousand pounds of iron hang in the tower of St. Francis de Sales Church, Woodburn Avenue and Madison Road. The bell is rarely used, for its vibrations damage property in the neighborhood.

In 1876 Dom Pedro, Emperor of Brazil, visited Cincinnati. He did not wish to see the mayor and other prominent citizens, said Dom Pedro, but he must inspect the foundry which had cast so many bells for the churches in his beloved Brazil. And off he went to the Vanduzen foundry.

Another pioneer foundry still operating is the F. A. Klaine Company, Front Street and Central Avenue. Founded in 1848 as Adams and Pecksholder, the foundry operated under several names until the present company was incorporated on May 9, 1904. It specializes in casting parts for stoves, ranges, and furnaces.

The modern foundry in Cincinnati is perhaps best represented by the Ohio Pattern Works & Foundry Company (1892), 2735 Colerain Avenue, the largest concern of its kind in Ohio. Here the modern making of a pattern can be seen. Beginning with a blue print, a pattern is built either in wood or metal; then a casting is poured, machined, polished, trimmed, finished, and made ready for shipment.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

The company was organized as the Ohio Pattern Works. In 1905 increased business caused its move from limited quarters on Second Street to more spacious ones on Spring Grove Avenue. In 1917 a stock concern was formed as the Ohio Pattern Works & Foundry Company, with capital of 500 thousand dollars (later increased to a million dollars). Today the company occupies more than 300 thousand feet of floor space, and employs about three hundred people in the pattern shops, the polishing, plating, and art bronze departments, the machine shop, and the brass and aluminum foundry.

In 1908 E. H. Bardes opened a small foundry for casting stove and range parts. Other kinds of castings were later added to the list of Bardes products. Now the E. H. Bardes Range & Foundry Company in a plant at 2619 Colerain Avenue produces iron roof and street drains, sewer and manhole covers, and stove and range castings.

Other Cincinnati commercial foundries are Blackburn Foundry Company, Murray Road; Buckeye Foundry Company (1910), 2800 Beekman Street; Central Brass & Aluminum Foundry Company (1923), 1020 Woodrow Street; Cincinnati Foundry Company (1914), 4238 Mitchell Avenue; Cincinnati Steel Castings Company, 3212 Spring Grove Avenue; Chris Erhard Foundry & Machine Company, 1237 West Sixth Street; Martin Foundry Company, Third Street and C. & O. Bridge, Covington; Northside Pattern & Foundry Company, 3616 Colerain Avenue; Oberhelman-Ritter Foundry Company, 3223 Colerain Avenue; Peerless Foundry Company, Vine Street and Township Avenue; Permanent Mould Engineering & Casting Company, 1918 West Eighth Street; Reliance Foundry Company, 506 East Front Street; Sawbrook Steel Castings Company, Lockland; Schaible Foundry and Brass Works Company, 1086 Summer Street; Standard Castings of Cincinnati, Inc., 1738 Powers Street; The Star Foundry Company, 221 Main Street, Covington; and United States Pipe & Foundry Company, Addyston.

Many foundries are operated by Cincinnati manufactories. Largest are Lunkenheimer, Williamson Heater Company, Cincinnati Milling Machine Company, and J. H. Day Company.

## *Pattern Makers*

WOOD AND METAL patterns are essential to foundry work. Cincinnati pattern makers fabricate many molds for the casting of articles in iron, steel, brass, bronze, copper, aluminum, and other metal alloys.

Among the city's pattern plants are Ace Pattern Company (1932), 322 East Third Street; Acme Pattern Works, 717 Sycamore Street; B. & B. Pattern Works, 414 East Pearl Street; Cincinnati Pattern Works, Front and Lawrence Streets; Crescent Pattern Works (1937), 3902 Colerain Avenue; Domestic Pattern Company, 909 State Avenue; Economy Pattern & Castings Company, 1728 Powers Street; General Pattern Works (1898), 2231 Buck Street; J. W. Henke Pattern & Castings Company, 601 West McMicken Avenue; Ideal Pattern Works & Foundry Company, Murray Road; Mersfelder Patterns Works, 219 Butler Street; Superior Pattern Company, 1116 Straight Street; Standard Pattern Works (1913), 2405 Spring Grove Avenue; Tri-State Pattern Works, 4660 Spring Grove Avenue; O. J. Shafer Pattern Works Inc., 207 East Sixth Street; Schuchert Patterns Works Inc., 440 East Front Street; Reliable Pattern & Castings Company (1922), 3530 Spring Grove Avenue; Muntifer Bros., Ralston Avenue near Spring Grove Avenue; Tom Murphy, Winton Road, Mt. Healthy; Northside Pattern & Foundry Company, 3616 Colerain Avenue; Norwood Pattern Works, 4212 Smith Road; Oakley Pattern & Foundry Company (1919, incorporated 1929), 4423 Verne Avenue; and Ohio Pattern Works & Foundry Company, 2735 Colerain Avenue.

## *Manufacture of Valves*

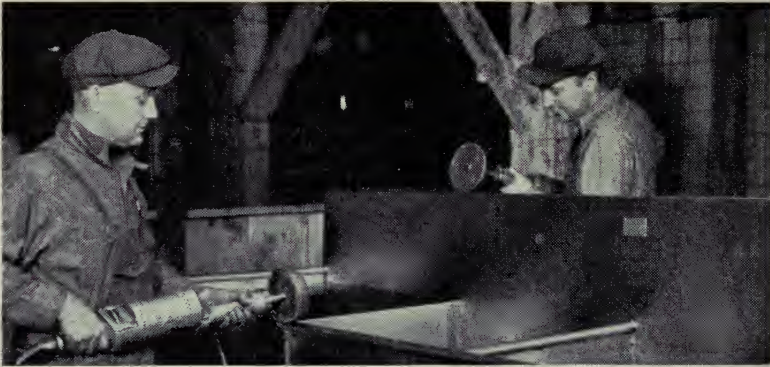
CINCINNATI MAKES VALVES from iron, brass, bronze, steel, or alloys. Since valves are used in many kinds of machines, and also for domestic and general industrial purposes, the industry seldom is greatly disturbed by business recessions.

One of the nation's leading manufacturers of iron and brass pressure valves is the Lunkenheimer Company, Beekman Street





REAMING BARS AND SETTING MOLDS



POLISHING AND GALVANIZING

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

and Waverly Avenue, founded in 1862 by Frederick Lunkenheimer, incorporated in 1889 and reorganized in 1893. In addition to its main plant, the company also has a branch manufactory in Carthage (Cincinnati), and maintains sales offices in many other American cities and also abroad. Its products are shipped to China, Japan, South America, Australia, South Africa, and to almost every European country. At the main plant are 24 melting furnaces, two bronze foundries, and a pattern department stocked with more than 50 thousand different molds.

Still another major local valve manufacturer is the William Powell Company (1846), 2525 Spring Grove Avenue. Operating its own foundry, the firm has enlarged considerably during the last decade. In 1937 capacity was doubled with the completion of a new manufacturing building.

Smaller makers of valves are the Bourbon Copper & Brass Works Company, 618 East Front Street, and D. T. Williams Valve Company, 2892 Spring Grove Avenue.

### *Elevator Manufacturing*

ALONG ABOUT 1850 the construction of multi-storied office and factory structures in Cincinnati and other cities led to elevator manufacturing. Warren Warner, Cincinnati, an engineer studying the vertical transportation problem, in 1860 designed and built the first hydraulic elevator to be used locally, and founded the Warner Elevator Manufacturing Company, 2613-31 Spring Grove Avenue. Incorporated in 1887, the company is now the third largest elevator manufacturer in the country. When electric power superseded water pressure in the late nineteenth century, the local concern kept stride with progress by designing electric-driven elevators. Today it makes every type of elevator, from the high-speed passenger and freight elevator to the dumbwaiter. An exclusive product is its electrically driven, plunger type elevator for residential use.

Another important producer is the Shepard Elevator Company (1921), 2425 Colerain Avenue, which has its own foundry. Local elevator manufacturers also include Cincinnati Elevator Works, 212 West Second Street; Economy Elevator Com-

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

pany, 12 Laurel Street; National Elevator Manufacturing Company, 7 West Second Street; and Schatzman Elevator Works, 119 West Second Street.

### *Production of Tin Cans*

THE TIN CAN has come to be a symbol of modern American life, with emphasis on variety, sanitation, and speed. But the tin container dates back to 1825 when a patent was issued at Washington for a forerunner of the modern tin can. Since the hand processes were slow and expensive and the container was neither durable nor leakproof, it at first aroused little interest. Then in 1847 the unbreakable, stamped can, which prevented spoilage by means of a soldered top and bottom, was invented and put into immediate widespread use.

Since 1850 the industry's growth has been sensational. Constant advancement in machine facilities and in can design, together with the low cost of the article, have made it possible for manufacturers to preserve for a long time cooked foods, meats, liquids, coffee, and various other foods. Today's tin can, whether cylindrical or box-like, is made of steel sheets coated with a thin layer of tinplate.

The modern can manufacturing plant emphasizes the machine method. A single line of machinery, which cuts and shapes the flat sheet of tinplate into the finished article, can turn out about three hundred cans a minute. Cans enameled on the inside are made the same way. Flat sheets of tinplate, coated with enamel, used to prevent bleaching, or discoloration, are put into a hot oven which bakes the enamel.

Cincinnati's largest manufacturer of cans is the Heekin Can Company, which operates two huge plants—one at 435 New Street, the other at Park and Forest Avenues, Norwood. In these factories millions of plain and lithographed cans are produced annually for foodstuffs, pastes, alcohol, shoe polish, oil, paint, varnish, gasoline, furniture polish, white lead, paste, putty, insecticide, pharmaceuticals, talcum powder, fish, candy, cakes, tea, coffee, and beer. Heekin makes the entire supply of lithographed cans used by an Eastern tobacco manufacturer.

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Other large local tin can makers are Continental Can Co., Inc., 2510 Highland Avenue, Norwood; the machine plant of the American Can Company, Spring Grove Avenue and Fergus Street; and Fischer Can Company (1916), Central Avenue and Kruger Street, Hamilton, since December 1930 a unit of the National Can Co., Inc., operating plants in Brooklyn, Baltimore, Chicago, and Maspeth (Long Island).

Cincinnati also makes garbage and ash cans, usually of galvanized steel sheets. The biggest producers of these cans are F. H. Lawson Company (1817), Evans Street and Whately Avenue, and the Witt Cornice Company, 2118 Winchell Avenue. In 1937 can manufacturing companies gave employment to about 1,500, who received wages estimated at \$2,250,000. The value of their cans amounted to more than 10 million dollars.

### *Machinery, Stoves, and Sheet Metal Products*

CINCINNATI'S BIG UNITS of manufacturing, including machinery, stoves, and sheet metal products, date from 1817 when F. H. Lawson opened a small shop to fashion a variety of metal household articles. Through skill and application Lawson made fine products; he built a small, but firm base for Cincinnati's present-day corporations making machinery, pumps, electrical equipment, safes and bank vaults, stoves, ranges, furnaces, air conditioning devices, blower systems, tanks, hospital and kitchen equipment, washing machines, matches, burial caskets, and a wide assortment of cut and stamped metal articles. Although little fanfare has accompanied the rise of these industries, all have been significant in building Cincinnati.

Until 1825 Cincinnatians had to be satisfied with the open fireplace for heating and cooking. Then the invention of a crude cooking stove which was placed on a stack of brick or rock gave rise to a new industry, one which has developed steadily from the square cooking oven of sheet metal and the potbellied heating stove to the modern circulating heater, the gas and electric range, the steam and warm-air furnace, and the air-conditioning system.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

The largest Cincinnati concern producing such devices is the Williamson Heater Company, Marburg Avenue and Madison Road, founded in 1882 as the Bennett Furnace Company. About 1890 it became the Bennett & Peck Company, then the Peck and Williamson Heating and Ventilating Company. In 1912 the concern assumed the present name. Executive and sales offices of the corporation are at 337 West Fifth Street.

Williamson research engineers have perfected many highly intricate products needed in a modern heating plant. Among these have been the marketing of the first automatic furnace stoker (1910) and later of a heat regulator to overcome fire hazards. More recently they have solved the problem of iron-plate expansion and contraction by changing the chemical composition of the iron. The company has thereby been able to guarantee a furnace for 20 years, instead of a former six years. At present engineers are developing pre-fabricated air-conditioning systems. The home owner can now install ducts to carry either warm or cool air, depending upon the season.

In 1937 the company completed a 65 thousand dollar program of modernization and expansion. About four hundred persons are regularly employed.

The leading stove manufacturer in the Cincinnati industrial area is the Estate Stove Company, founded at Cincinnati in 1842 but since 1885 situated at East and Edison Avenues, Hamilton. Covering 13 acres, the plant produces the nationally known Heatrola and Estate Gas Range.

Cincinnati stove and range manufacturers also include F. A. Klaine Company, Front Street and Central Avenue; Huenefeld Company, 2701 Spring Grove Avenue; E. H. Bardes Range & Foundry Company, 2619 Colerain Avenue; Crosley Radio Corporation's gas and electric range department, 1329 Arlington Street; John Van Range Company, Fifth and Butler Streets, and the Burton Range Company, Seventh and Sycamore Streets. Both the Van and the Burton companies manufacture equipment for hotels, restaurants, and institutions.

One of the four safe and lock companies which have combined to form the Herring-Hall-Marvin Safe Company (1838), Grand Boulevard, Hamilton, was the Hall Safe and Lock Com-

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

pany, founded in the early 1840's at Cincinnati. The present corporation, situated in Hamilton since 1897, is one of the country's largest producers of safes and bank vaults. It represents a merger of Herring & Co. (New York), Hall Safe and Lock Company (Cincinnati), the Marvin Safe Company (New York), and Ferrell & Co. (Philadelphia). The output of Herring-Hall-Marvin and of the Mosler Safe Company, established at Cincinnati (1844) and since 1890 on Grand Boulevard, Hamilton, gives Hamilton nearly 50 percent of the world's safe and vault production. Other local manufacturers of burglar-proof chests and safes are H. Belmer Company, 1101 West Sixth Street; Hall's Safe Company, 3253 Spring Grove Avenue; and Mosler Lock Company, 239 Scott Boulevard, Covington, a subsidiary of the Mosler Safe Company.

As early as 1840 surgical instruments were being manufactured here by the Max Wocher & Son Company (1837), 29 West Sixth Street, now the city's foremost producer and distributor of surgical supplies and equipment, and hospital and office equipment for physicians. The Kelly-Koett Manufacturing Company (1903), 212 West Fourth Street, Covington, the world's largest maker of X-ray equipment, was established because of findings in Roentgenology by John Robert Kelley and because of the application of technical knowledge by Albert B. Koett, co-founder of the business.

The concern's first factory, in a small shed at the rear of Koett's Covington home, was meagerly equipped. With merely a small hand lathe and drill, a monkey wrench, and a hammer, Kelly and Koett fashioned their first product, a motor-driven rocker used in developing X-ray plates. Their second product was an improved wooden tube holder, and the third a modified type of the Albers-Schoenberg plan for a simple compression diaphragm. This achievement propelled the firm towards national recognition. The most recent innovations are the devising of an X-ray generating system with a possible current output of a million volts, and the marketing of a fluoroscopic table which operators can adjust to various positions. Another local manufacturer of X-ray apparatus is Liebel-Flarsheim Company (1915), 303 West Third Street.

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The production of sheet metal articles also exercises the skill and strength of many a Cincinnati. Probably the most important sheet metal concern is the Edwards Manufacturing Company (1872), Fifth and Butler Streets, where sheet metal and steel plate garages, roofs, shingles, ceilings, theater marquees, traffic markers, burial vaults, metallic caskets, and air-conditioning units are fabricated and stamped. The company operates a branch plant at 4502 Vine Street.

Littleford Bros., 453 East Pearl Street, founded in 1874 as the Thos. S. Smith Company (1882, Littleford Bros.), fabricates steel plates and sheets into road maintenance equipment, tar heating kettles, and brewery apparatus. In 1900 the company manufactured the first highway contrivance, a tar heating kettle mounted on wheels.

Other important makers of sheet metal products are Hoeltge Brothers (1898), 1919 Gest Street, industrial and residential guards, hoppers, and pans; Kirk & Blum Manufacturing Company (1907), 2838 Spring Grove Avenue, dust collecting and air-conditioning systems, and stamped, formed, and welded parts and assemblies; Young & Bertke Company, 1040 Hulbert Avenue, dust collecting and ventilating systems, and machinery guards, hoppers, tanks, and pans; Huenefeld Company, 2701 Spring Grove Avenue, stamped, sheared, formed, and enameled products; Cincinnati Stamping Company, 28 West McMicken Avenue; and Witt Cornice Company, 2118 Winchell Avenue.

Cincinnati is the home of America's top producers of laundry and baking machinery, and paint and laboratory equipment. The J. H. Day Company (1888, incorporated 1901), 1114 Harrison Avenue, is a pioneer manufacturer of 'bakers' machinery and equipment, paint and ink mills, mixers, and blending equipment. The company does more than fabricate an article; every operation is done under its roof—from designing the article, through making the wooden or metal pattern and casting the metal, to finishing and fabricating the product. A branch factory is at 3256 Spring Grove Avenue. Normally, the company gives employment to about six hundred workers.



American Laundry Machinery Company (incorporated 1909), Ross and Section Avenues, Norwood, is the world's outstanding manufacturer of laundry equipment for hotels, hospitals, institutions, and commercial laundries. The corporation employs 2,500.

One of the nation's major manufacturers of toys is the Frank F. Taylor Co. Inc., 2801 Highland Avenue, Norwood, maker of the nationally famous "Taylor-Tot" baby walkers, tri-cycles, and toy bicycles. Production operations follow the straight line method, each part moving forward along the assembly line until it is complete.

The Philip Carey Company (Dayton, Ohio, 1873), Lockland, is one of the country's top producers of composition roofing, shingles, and wall board. During the last four years the concern has been kept busy filling orders for rock wool insulation material. More than a thousand workers are regularly employed.

On Main Avenue, Reading, stands the plant of the General Match Company, one of the country's foremost producers of household, safety, and paper pad matches.

Another industry which has grown large with the increased use of electricity is the electric appliance, pump, and motor unit. In Cincinnati there are a number of concerns specializing in this type of manufacture: Allis-Chalmers Manufacturing Company, Forest Avenue, Norwood, branch plant of a national organization with headquarters in Milwaukee; Atlas Electric & Machine Company, 2519 Cypress Way, Norwood; Barkley Electric Company Inc., 925 Clinton Street; R. H. Benney Equipment Company, 5024 Montgomery Road, Norwood; The Buckeye Equipment Company, 10 West Pearl Street; Collet Machinery Company, 420 East Pearl Street; The Glow Electric Company, 933 Harriet Street; The Wm. T. Johnston Co., 214 Vine Street; Kylindo Electric Motor Company, 626 Broadway; Modern Electrical Construction and Repair Company, 324 Longworth Street; The Ohio Machinery & Supply Company, 433 East Pearl Street; Pleasant Electric Company, 109 West Second Street; The B. A. Wesche Electric Company, 1622 Vine Street; Wheatley Electric Service, 2108 Feldman Avenue,

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Norwood; Trumbull Electric Manufacturing Company, Ludlow, Kentucky; and Willey-Wray Electric Company, 1523 Central Parkway.

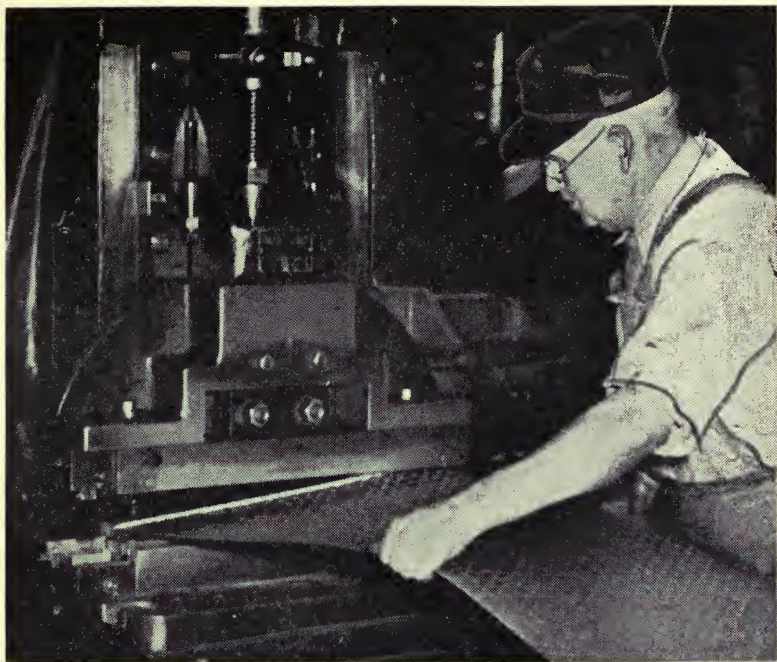
The Barriett Electric Manufacturing Company, 1628 Vine Street, and Krueger & Hudepohl, 5 East Third Street, produce electrical supplies. The George B. Klee Company, 626 Broadway, Victor Electric Products, Inc., 712 Reading Road, and Winkler Electric Company, 114 East Thirteenth Street, manufacture household and commercial fans. Completing the city's roster of machinery makers is the J. A. Fay & Eagan Company (1830), Thirty-Fourth and Robertson Avenues, Oakley, pioneer producer of woodworking machines.

### *Iron and Steel Industry*

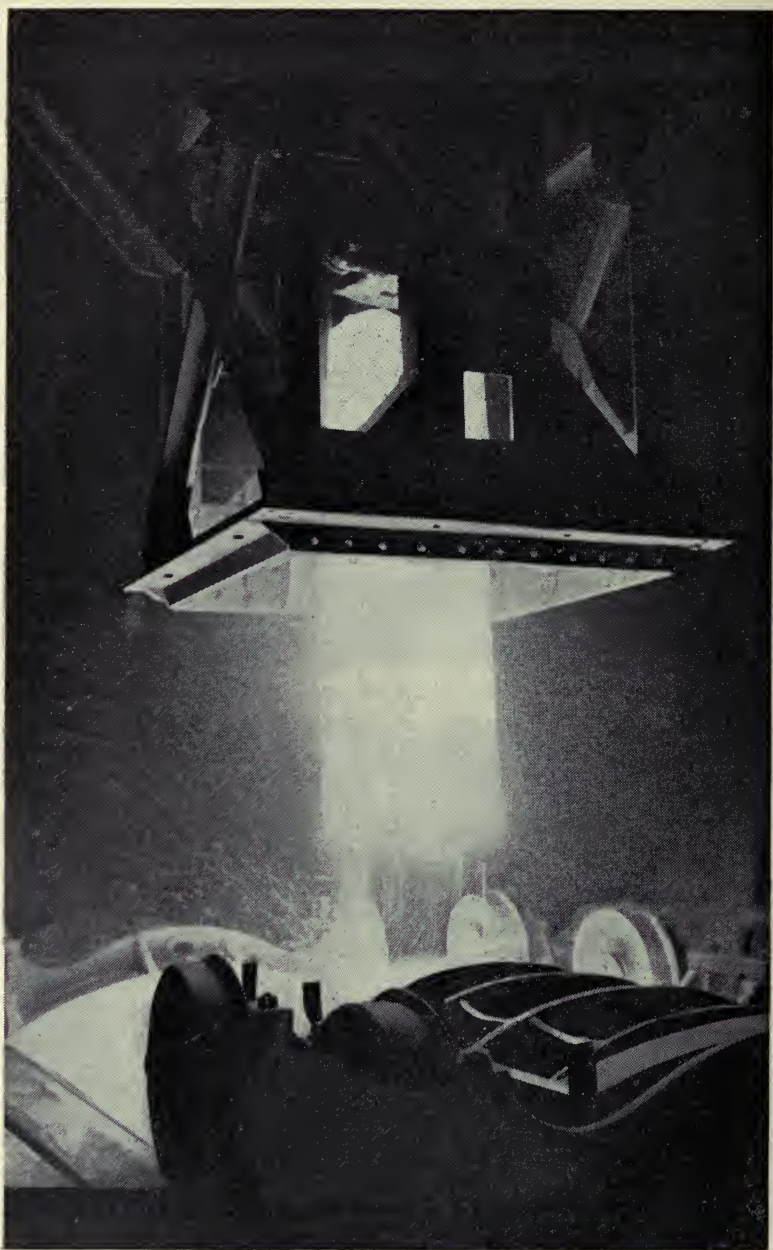
STEEL IS BASIC material for the construction of locomotives, railroad cars, airplane engines; motor cars, and giant ocean liners; it gives strength to the skyscraper and wear to the stair tread. The alloy (iron and carbon) is made in sheets, bars, plates, pipes, wire, beams, tees, and angles.

Various processes are used to make steel. First the iron ore must be converted into pig iron by reduction in a blast furnace. Although pig iron can be refined for use as wrought iron, which is used extensively, it is too ductile and soft for tools, structural work, drawn wire, and sheets. Iron is converted into steel by cementation in a Bessemer converter, an open hearth furnace, or an electric furnace. Impurities, such as silicon, phosphorus, sulphur, and manganese, are thus removed, and carbon and other substances (depending on the type of steel) added.

Steel is categorized industrially in three general divisions. The first, referring to its manufacture, consists of cement, crucible, Bessemer, open hearth, duplex, and electric steel; the second, classified according to composition, plain steels, such as ingot iron, and simple carbon, alloy-treated, and alloy steels; and the third, considering its use, structural, tool, spring, boiler, rail, pipe, and skelp or welding steel, sheets and tinplates, bars, case hardening, electrical, strip, hoop, free cutting, and cast, forged, and wrought steel.



**TRIMMING SHEETS AND SEWING DUCT ELBOWS**



SOAKING INGOTS

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Although the Bessemer method (1856) was the first practical process for converting iron into steel, it is still the simplest of the three in use. The molten pig iron is put into a barrel-shaped converter, through which a blast of cold air is forced under pressure. This furnishes oxygen to the mass and forms oxides of iron, silicon, manganese, and carbon. The residue, to which must be added carbon and other ingredients as required, is then ready for any special use to which the steel is put. Carbon is added in specific amounts by tipping the converter and injecting a high-grade carbon-iron called *Spiegeleisen*. When the mixture is complete, the molten steel is poured into a ladle, which is then emptied through a nozzle into ingot molds. After cooling, the steel ingots are ready to be shaped.

The Siemens, or open hearth, process makes steel of greater strength. Capacity of a furnace is about 75 tons, and from eight to 12 hours are needed to produce a charge of steel. Pig iron, scrap steel, and limestone are put into the furnace, and the raw materials melted by producer gas, by-product gas, or fuel oil. When the process is complete, a plug at the end of the furnace is opened and the molten metal flows into a ladle, which then pours it into the molds for casting.

Because high temperatures are controlled more easily in a neutral atmosphere, the electric furnace process (by which most alloy steels are now made) produces the best steel.

About 75 percent of American steel is made by the open hearth process. Although it is more expensive than the Bessemer method, it gives the steel maker better control of the temperature and composition of materials. Moreover, because of the lower sulphur and phosphorus content, the product is less brittle.

After steel is made and poured into ingots it has to be shaped before it can be fabricated. To prevent collapse the ingot is placed in a soaking pit, where gas flames heat it to an even temperature. Then it is set on blooming mill rollers, which operate much like the ordinary clothes wringer. The slab is rolled back and forth until it reaches the desired shape and size. From the blooming mill come rails, billets, and armor plates.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

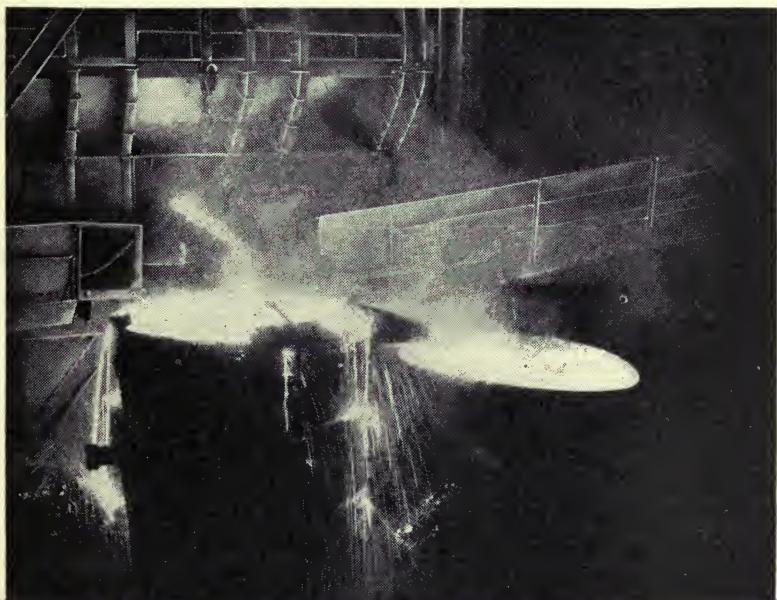
Before special fabrication takes place the finishing mill rolls short slabs, or bars, into various shapes. Angles, merchant bars, beams, rods, hoops, and tubes are some of the products made either by the hot or cold working of the steel.

The nation's iron and steel industry is first in product value. In 1935, 2,835,031 tons of steel were produced in America by the Bessemer method, 30,715,429 by the open hearth, 541,492 by the electric furnace. The country made 545,316 tons of ferro-alloys. Pig iron production totalled 20,827,195 tons and 20,484,000 tons of iron ore were mined.

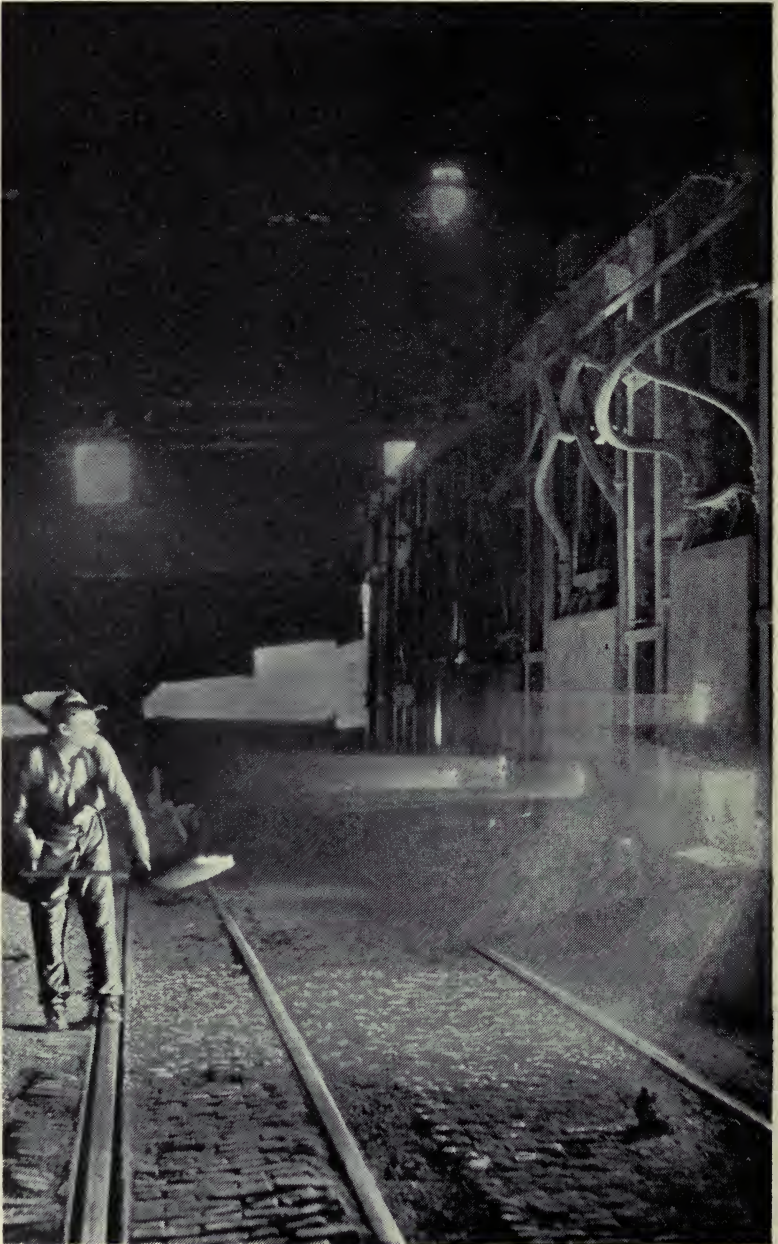
Before Bessemer's discovery Cincinnati had become a national leader for the making of cast and wrought iron products. The locale of the steel industry shifted when new sources of raw materials were found. As the Lake Superior ore region was exploited, ready transportation facilities speedily made Buffalo, Cleveland, Youngstown, Chicago, Gary, and Pittsburgh the leading centers of iron and steel manufacture.

Meanwhile, the city's cast iron and foundry operations were expanded, and the fabrication of steel products developed. The Cincinnati industrial area is now the home of two leading independent, or "little steel," producers. The oldest of these is the Andrews Steel Company-Newport Rolling Mills, founded in 1891. At the plant of the Andrews Steel Company, on Licking Pike beyond the corporate limits of Newport, stand the open hearth furnaces. The steel ingots and bars of these furnaces are taken to the Newport Rolling Mills, Ninth and Lowell Streets, Newport, where they are hot-or-cold-rolled into sheets and plates which are later galvanized or finished. Combined, the two plants give employment to about three thousand persons.

In 1899 the appointment of a Middletown Mayor's Industrial Committee, with the authority to spend a hundred thousand dollars to attract industries, brought the leading "little steel" producer to Middletown. The committee opened negotiations with the American Steel and Roofing Company, Cincinnati, and eventually caused removal of the entire plant to Middletown. A new corporation, the American Rolling Mills, now known throughout the world by its trade name,



**ROLLING SHEETS AND TAPPING FURNACES**



LIMESTONE FOR THE OPEN HEARTH



## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

ARMCO, was founded, and in March 1901 the first plant was put into operation. Today the company, with executive offices and two huge plants at Middletown, a blast furnace at New Miami, near Hamilton, and mills at Ashland, Kentucky, and Kansas City, Kansas, employs more than 12 thousand people. About four thousand of these workers are on local payrolls.

Armco steel products made at the Central plant on Curtis Street, Middletown, include strong and durable base metals needed in the manufacture of porcelain-treated products, such as refrigerators, kitchen ranges, bathroom equipment, washing machines, and materials for cooking utensils. Enamel iron is rolled into sheets from ingots by a process invented by Armco engineers. A recent achievement of Armco laboratories is the producing of steel sheets for walls, floors, and other parts of a steel house.

At the East Side plant, which covers some 40 acres, steel making ranges from the open hearth to the finishing processes. Here the iron ingots are melted and alloys added to form steel; then the sheets are rolled and galvanized before they are sent to the finishing departments.

In 1927 Armco secured a foothold in the ownership of the Hamilton Iron & Coke Company, New Miami. Later it bought the entire company, and constructed a \$1,200,000 railroad connecting New Miami and the Middletown plants. In 1937 a million dollar blast furnace—the first to be built in America since 1928—was “blown in.” For three years or longer it will remain in continuous operation, producing four hundred tons of pig iron daily. Then operations will be stopped until the furnace is relined.

Since 1935 more than four million dollars have been spent on improvements in the Middletown plant. A new research laboratory, replacing the one destroyed by an explosion in 1935, was opened early in 1938, and in March the company announced plans for the construction of four new buildings costing 620 thousand dollars.

Other local manufacturers of steel products are William Lang & Sons Company, 3280 Beekman Street, joists and structural products; L. Schreiber & Sons Company, 3863 Ivan-

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

hoe Street, Norwood, structural goods; Southern Ohio Iron Works Company, Inc., 3229 Fredonia Avenue, structural things; Mitchell Steel Company, Beekman Street and Fricke Road, stainless steel; and Acme Steel Company, 1507 Franklin Street, strip steel.

Practically all American steel companies have sales offices or warehouses in the city, while those concerns distributing steel products are Jos. T. Ryerson & Son Inc., Front Street and Freeman Avenue; Durbow & Otte, 1426 Clay Street; Al Levinson Company, 800 Broadway; and A. W. Frank Company, 950 East Court Street.

## Chapter IX

*Carriages and Wagons • The Automobile Age • Fire Engines • Saddlery • Aircraft Making • Gasoline Refining*



THE LONG STORY of the carriage and wagon manufacturing trade begins in the days before 1800 when the villagers stood around and watched with awe the imported carriage of General James Wilkinson roll into Fort Washington. It tells of the assiduous work of an ambitious young city, of her pride in her handcraft, of the retreat before the advance of an age of steel and gasoline.

The first Cincinnati-built wagon is said to have been constructed in 1793 by William McCash, of Newport, who contrived a crude watercart of two poles, with a cross-piece in the center—the upper ends for shafts, and pegs upon the lower parts to keep the barrel in place. With this apparatus he peddled to the settlers water from the Ohio River. McCash also fashioned the first wheeled vehicle, a great curiosity, even in those days. Its wooden wheels, about two and a half feet in diameter and six inches thick, were fastened to an axle which revolved in large staples.

In 1812 George C. Miller, who is credited with building the first wagons for sale in Cincinnati, reached the city from his native New Jersey. He found employment as a blacksmith, prospered, and in 1813 bought out his employer, Jacob Williams. In this shop in 1824 Miller constructed the first steel-spring jig (a light one-horse carriage with a single pair of wheels) to be seen in the city; and Cincinnati gasped. Miller's carriage business developed rapidly during the next half-century. Factories operated by his firm produced landaus with glass and leather tops, clearances, coaches, landaulettes, demilandaus, coupes, coupelettes, four- and six-seat rockaways, park

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

phaetons, both basket and panelled victorias, sulkies, and buggies galore, and also skeleton wagons and double and single-shaft patent side-bar wagons for light loads.

Miller's success lured other wagon and coach builders to Cincinnati. Before long the many carriage and wagon shops were not only supplying the local demand, but also exporting vehicles to the south and west.

In 1841, when Dan W. Sechler began making buggies and light road wagons, he founded a business which survived the change from horse-drawn to motorized vehicles, and is still operating. He built a quality product, and by 1879, when the company was incorporated as Sechler & Co., the firm had become the world's largest exporter of buggies, carts, and wagons. When the automobile superseded the wagon, Sechler & Co. immediately began experimenting with models and building bodies for motor trucks. In 1913 after several years of research the firm produced the first trailer for automobiles. It was called *Trailmobile*.

This original trailer was a crude affair consisting of a wooden body mounted on steel-flanged wheels, with an iron bar for attachment to the rear end of a motor vehicle. Constant research and improvement in design led to the manufacture of the tractor trailer. Sechler & Co. was reorganized under the name of the Trailmobile Company in 1913. In 1928 the present name, the Trailer Company of America, was adopted after Trailmobile had been merged with Lapeer Trailer Company, of Lapeer, Michigan.

In 1938 the company was the nation's second largest maker of motor truck and tractor trailers. Its production schedule for the year encompassed about four thousand units, and the valuation was more than four million dollars. The firm ships its products to every part of the United States and to 20 foreign countries. There are 650 workers regularly employed at the main plant, Thirty-fourth and Robertson Avenues, Oakley, and its subsidiary, Highland Body Company, Elmwood Place, where truck and trailer bodies are manufactured. A branch factory is at Oakland, California; sales offices are in Chicago, Cleveland, and New York.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Major departments in the main plant are a steel storeroom; a layout department, where the steel is measured and cut into shape; an assembly department; a machine shop; a tire and wheel department; an axle assembly; and a body-mounting shop. The paint shop has a daily capacity of 20 units, while in the engineering department a staff of 15 is employed to create new models.

In 1845 John Roberts opened a wagon shop on the south side of Sixth Street, west of Vine Street, the present site of the Gifts Theater. In 1850 he entered into a partnership with John Curtis, a wagon maker who had arrived here in 1845 from England, and opened a shop at 136-38 Pearl Street, where the business grew fast. But in 1862, following disagreement over design and construction methods, the partnership was dissolved. Later Curtis and his two sons set up a shop on East Sixth Street, between Main and Sycamore Streets, using the firm name of John Curtis Sons' Company. There they continued to manufacture fine light carriages. Roberts retained the Pearl Street plant and began building a heavier wagon. Curtis specialized in making racing sulkies, light road wagons, buggies, phaetons, and surreys. He devised the Curtis wheel, with a metal flange between spokes, and the patented "double perch" seat, both so distinctive in design that they were much copied in later years. In 1891, when the sons retired, the factory was closed.

In 1846 John W. Gosling opened a small wagon shop at Canal and Twelfth Streets. He continued in business until 1890, and was credited with many improvements in vehicle design. In 1891 the factory, together with Gosling's patents and trade marks, was purchased by the Smith-Eggers Company, a firm which pioneered the making of rubber-tired buggies and phaetons in the Middle West. The first buggies with solid rubber tires, introduced here in 1891, were as astonishing to the citizens as the first fine wagons of a century ago. But the rubber age had come, and Smith-Egger designers fashioned carriage and wagon models equipped with rubber tires. Ready acceptance of this type of vehicle quickly forced other producers to make rubber-tired models.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

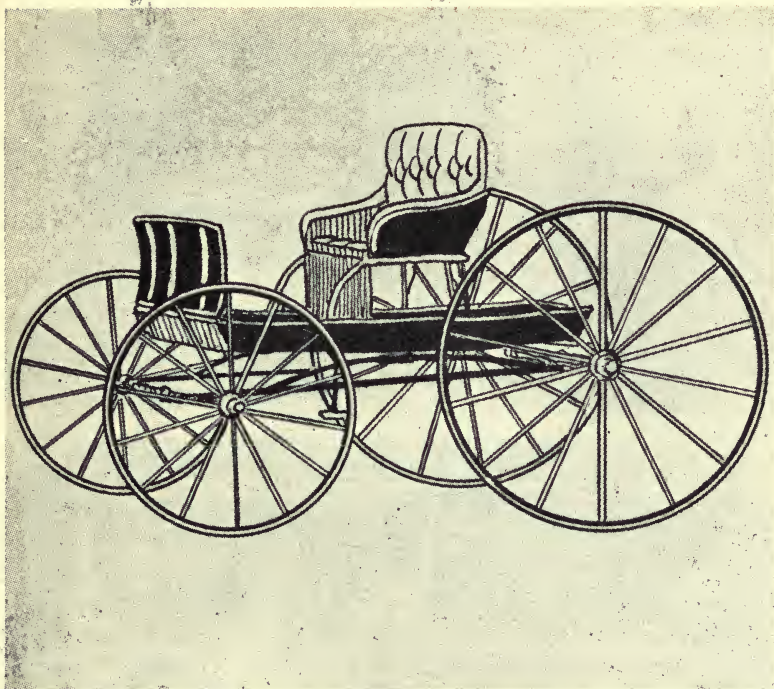
The decade from 1850 to 1860 saw a quick growth in the Cincinnati carriage and wagon industry. Competition was keen; producers made great claims regarding construction, design, and load capacity of their vehicles, and quality and workmanship were stressed by salesmen. Since practically everything was done skillfully by hand, the prospective buyer of a carriage or wagon could expect many years of service from any kind of vehicle. At that time it took only a week from the drawing of a wagon to take shape in wood, nails, and iron—a rate of production which has not been improved upon even in an age of machine methods.

In 1850 some of the prominent manufacturers of carriages and wagons were Charles Behlen, William Brickell, Moore & Albrecht (later known as Albrecht & Memer), John Everett, B. R. Stevens, John Wilts, Porter & Smith, Joseph Gooding, H. Niemeyer & Co., F. Kinker & Sasse, Michael Moore and Adam Weshtier, and Isaac and Benjamin Bruce. In 1853 the J. R. Palmer Shop was also producing omnibusses to carry people about the city. Several years later the Bruce firm received an order to build the first horse-drawn street cars. They began service here in 1859.

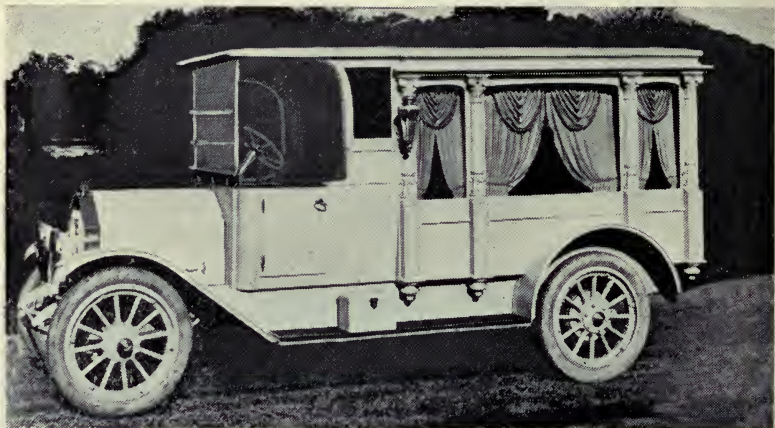
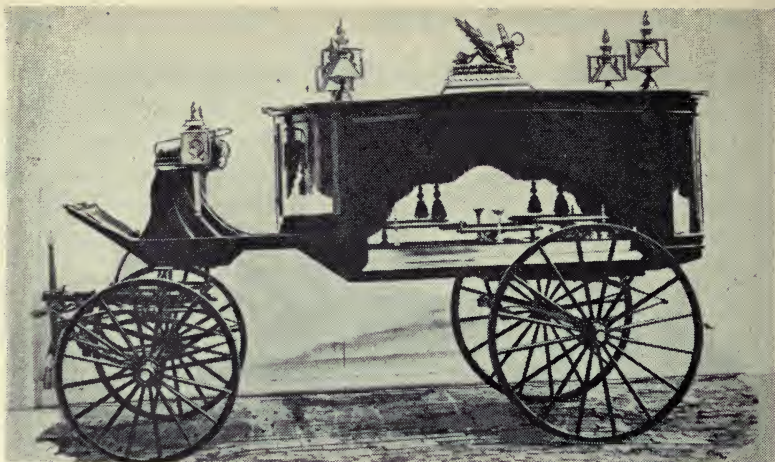
In 1853 the Crane & Breed Company, now the Crane & Breed Manufacturing Company, 1227 West Eighth Street, was established as a pioneer maker of horse-drawn hearses and carriages. The firm is credited with building the nation's first automobile hearse (about 1906), elaborately decorated and mounted upon chassis supplied by the Winton Motor Company, Cleveland. At the St. Louis World's Fair in 1904 the company won first prize with its intricately fashioned horse-drawn hearse. The prize entry later was sold to a South American undertaker for the record price of 10 thousand dollars. The firm discontinued the manufacture of hearses and carriages in 1924.

During the 1860's, when the North and the South were at loggerheads, the local wagon industry supplied the Union Army with mountings for cannon, supply and hospital wagons, ammunition carts, and several other kinds of wheeled vehicles.

About 1870 William A. Sayers, a young man from Greenfield, Ohio, in search of a job, reached Cincinnati, and became



WAGENHALS' AUTO AND ITS ANCESTOR



HEARSES THROUGH THE YEARS (1870, 1910, 1938)



## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

apprenticed as a carriage builder. When he completed his apprenticeship six years later at the J. W. Gosling shop, he opened a small factory of his own at Eighth and Sycamore Streets. The next year the firm of Sayers & Scovill, carriage builders, was established when Sayers took in as a partner A. H. Scovill, a bookkeeper, who supervised the business and financial departments while Sayers superintended shop activities.

The high-grade carriages turned out by the firm soon won the approval of carriage buyers. By 1887 the old factory was outgrown, and because of expansion a new one was built at 2247-67 Colerain Avenue, where the firm continued manufacturing operations until fire destroyed the plant in 1916. Production was resumed at once, however, for the company was busy filling World War orders. In 1917, when the present plant at 2100 Gest Street was occupied, the manufacture of buggies was discontinued. After the death of Scovill in 1908, the current name, Sayers & Scovill Company, was adopted.

In 1905 the company, which had been specializing in horse-drawn hearses and ambulances, started tackling the problem of substituting motors for horses. Two years later the Sayers & Scovill Company was the first American manufacturer to exhibit this type of motorized equipment at the Chicago Auto Show. Since then the company has introduced many improvements in hearse and ambulance design. In 1937 it marketed the first air-conditioned ambulance built in America. Since practically all vehicles are custom-built, the price of equipment varies; the lowest priced hearse or ambulance body costs about \$2,700.

Many of the 225 workers employed are craftsmen who served their apprenticeships with the company. More than 40 percent of the employees have been on the firm's payroll for from 20 to 40 years. In 1912 when Sayers died the management was turned over to a group of workers. The present officers, all of whom have been with the company for more than 40 years, are F. F. Scovill, son of one of the founders, vice-president; C. G. Schott, secretary; Emil E. Hess, general manager; C. A. Eisenhart, sales manager; and Walter Lang, in charge of purchases.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

One of the most disastrous fires of the wagon and carriage industry broke out June 7, 1881, and razed the plant of the Robinson Wagon Works, Eighth and Evans Streets, inflicting a loss of 30 thousand dollars.

In 1890, when Cincinnati was the carriage and wagon mart of the world, production totalled 150 thousand units—national production was 300,502—and the retail valuation was more than \$11,250,000. The city's 86 large wagon and carriage shops built 115,672 vehicles, while the rest were constructed in the many small shops scattered about the city and suburbs. At that time the largest plant outside of Cincinnati was the Columbia Wagon Works, Hamilton, Ohio.

Meanwhile, technical research had made practical the "horseless carriage," and beginning in the late 1890's the carriage and wagon trade underwent a decided shrinkage. In 1898 the Spanish-American War temporarily halted competition from automobile manufacturers, and local wagon makers worked long and hard to fill Government orders for army equipment.

Shortly after 1900 constant improvement in the design and performance of automobiles renewed the competition which by 1912 had become so great that activities in the local wagon trade were depressed. The World War, however, again stopped the decline in production; for Cincinnati manufacturers shared in the huge expenditures of foreign governments for all types of wheeled vehicles. With the close of the War the demand ceased, and practically every firm making wagons either has taken to producing motor trucks or gone out of business.

Contrary to general belief, however, the manufacture of horse-drawn carriages and buggies is not a lost commercial art. In the Cincinnati industrial area, at Lawrenceburg, Indiana, the Standard Vehicle Company, largest of the four American carriage manufacturing firms, continues to build these vehicles. The concern was established in Cincinnati as the Brighton Buggy Company (1893). In 1919, when the present name was adopted, the factory was moved to Lawrenceburg. In 1937 nearly nine hundred vehicles were produced and sold, the price averaging \$75. The plant has a capacity of five thousand buggies a year.

### *Automobile Era*

PRACTICAL AUTOMOBILE MAKING began in the 1890's when combustion was used to propel a vehicle on wheels. Bicyclists, who were creating a new traffic problem, laughed at newspaper stories about the invention of a horseless carriage able to do from 10 to 15 miles an hour.

The origin of the automobile dates from 1619, when two Englishmen, Ramsay and Wilgoose, obtained a patent for a carriage without a horse as motive power. Because the machine did not work, the idea of a horseless carriage was laid aside. In 1680 a more celebrated Englishman, Sir Isaac Newton, built a machine without gearing that was moved by the return-action of a jet of steam. In 1769 the first steam automobile was made by Nicholas Cugnot, a French inventor; it had a maximum speed of three miles an hour, and was used to help transport artillery. Of the many kinds of steam carriages afterwards developed in England, the most successful was one (built by W. H. James) using a tubular boiler. In 1836 automobile making in England was stopped by the 'Red Flag' Act which required all mechanically moved vehicles to be preceded by a man carrying a red flag in the daytime and a lantern at night. This added hired staff was expensive, and the law was repealed in 1896.

Meanwhile in 1886 the German inventor, Gottlieb Daimler, fitted a high-speed internal combustion engine to a bicycle, and Benz, also a German, made a mechanically operated tricycle. About the same time American inventors were trying to build a salable automobile. The most advanced models were constructed by Duryea, Haynes, Ford, Selden, Briscoe, Maxwell, Franklin, and White. Winton, of Cleveland, was one of the first American inventors to achieve commercial success.

The decade of the 1890's opened with the horseless carriage still in its experimental and controversial stage. Even if it worked, people said, it could never take the place of the horse. Most Cincinnati carriage builders believed the new invention to be a mere fad that would disappear at the next change of public whim.

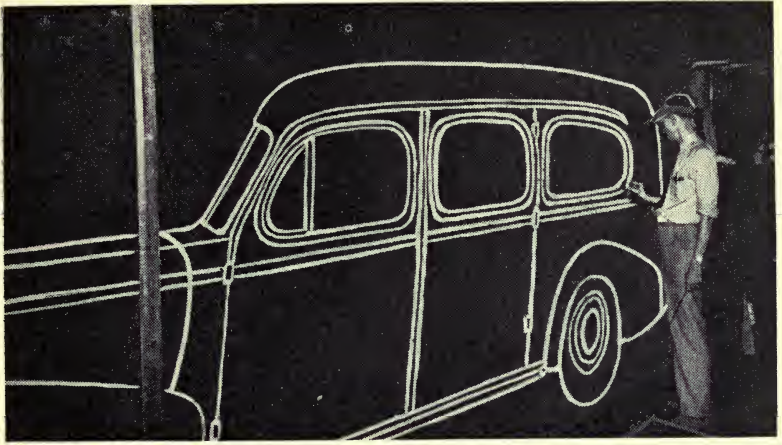
## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

But some far-sighted people thought differently. In Cincinnati several mechanics tinkered with automotive models, and in 1891, only a few weeks after it was announced from Paris that Panhard and Lavassor had demonstrated successfully a feasible motor car, Cincinnatians also heard a horseless carriage cough along city streets.

One Sunday morning in 1891 early church-goers in St. Bernard looked and stood stock-still. Horses pranced and shied as they heard approaching a loud, sinister "putt-putt," and saw, coming up Vine Street, a carriage without even the ghost of a horse. Sitting proudly erect in the driver's seat was the owner and builder, W. G. Wagenhals, receiving with a satisfied smile the homage given him by onlookers. Wagenhals, general manager of the Cincinnati Incline Plane Railway Company, had built the flivver as a hobby in his spare time at the old car barns in St. Bernard. He had taken a two-seated buggy, discarded the shaft, and inserted at the front end a one-cylinder motor. The driving mechanism was attached by a chain and sprocket to the front wheels which were steel-flanged. Since multiple-speed gears had not been developed at the time, there was only one speed—forward. The hand brake was regular equipment.

During the next few years several more horseless carriages appeared on Cincinnati streets, but because of the cost—the minimum price was two thousand dollars—few people could afford what they still considered a toy with potentialities. The Zumstein Taxicab Company (now Cincinnati Taxicabs, Inc.) became the first in the city to make commercial use of motorized equipment when in 1893 it operated an automobile cab. Not until 1912, however, was the last horse-drawn cab taken out of service.

During the last decade of the nineteenth century most automobiles produced were experimental models. Between 1903 and 1910 inventive activity brought forth many of these, some to be used for further experiments, others to be scrapped as unfeasible. Experiments were made with steering devices, transmissions, multiple gears, and number of engine cylinders ranging from one to four, six, eight, and twelve.



**HEARSE DESIGNING, WELDING, AND ASSEMBLY**

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

During this formative period public acceptance of the motor car, despite all its mechanical shortcomings, its lack of comfort, and the scarcity of paved highways, was so marked that any manufacturer making cars was almost sure of success. Since 1905 the automobile industry has grown from a new enterprise into the nation's second largest industry. As the demand for motor cars mounted, several Greater Cincinnati companies were formed to build the product; but for some reason none of the models constructed here gained public approval. Among these were the old S: & S. (Sayers & Scovill) and the Republic, made in Hamilton.

New problems arose as motor car sales increased. Municipal and State regulations which had proved successful in handling horse-drawn traffic had to be revised because of the automobile's greater speed. Motor car owners and makers demanded hard-surfaced streets and roads in place of the old cobblestone and dirt pike pavements. This demand, vigorously publicized, brought about an unparalleled era of road building costing hundreds of millions of dollars, which has made possible the present comparatively smooth city streets and the great highway systems linking city to city across the nation.

In 1911 a Cincinnati chauffeur was arrested on a charge of manslaughter after his motor car had killed a young man. According to newspaper stories, a determined, but unsuccessful, effort was made to establish a precedent that would enforce careful driving by motorists. But the traffic problems arising from the greater use of automobiles have never been entirely solved; In 1937 deaths in Cincinnati and Hamilton County caused by automobile accidents numbered 188, while in the nation there were more than 37 thousand. Only in 1934, when motor car mishaps took 105 lives, was the city's 1937 total exceeded.

Since 1910, and particularly since the War, constant improvements have been made in automobile design and performance. Included among the major mechanical advances are the self-starter; electric lights instead of the old-time carbide lamps; electric ignition replacing the magneto systems; automatic clutch control; and safer steering and braking apparatus. The use of shatterproof glass has also proved its value.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

At present much research is being carried on to develop a light-weight diesel motor adaptable to passenger cars. Since 1930 this type of motor, which burns a cheap grade of fuel oil, has been successfully used in railroad engines, trucks, tractors, busses, and motor boats. It is comparatively cheaper to operate than the gasoline motor.

Cincinnati refused its big opportunity to become an automobile manufacturing center. Both in 1901 and 1902 Henry Ford and J. W. Packard came to Cincinnati to secure capital with which to market their inventions. They realized they needed patents owned by Cincinnati carriage manufacturers for the construction of automobile bodies. Since Cincinnati was the center for this trade, they hoped to persuade executives of some of the larger plants to finance the manufacture of the engines while the carriage-makers built the bodies. After repeated efforts the two men failed to get the capital they needed.

At that time the Packard brothers, J. W. and W. D., were partners in an electrical manufacturing concern at Warren, Ohio. In 1898 J. W. Packard had purchased one of the first automobiles made in Cleveland. After tinkering for some time he invented a number of gadgets which improved motor performance. Later he began building automobiles, most of which were bought by his friends. Packard returned to Warren after he was unable to interest Cincinnati financiers in his inventions. Several months later a group of wealthy men living in Detroit organized the Packard Motor Car Company, and named J. W. Packard president. In 1903 the first Packard motor cars were produced at the Detroit plant; two hundred were sold that year.

As early as 1900 Henry Ford, after building his first car in 1893, was trying to manufacture automobiles at a price the working man could pay. Failing in Cincinnati, he interested several Detroit capitalists, among whom were the late Senator James A. Couzens and Horace Dodge, and with their aid organized the Ford Motor Car Company.

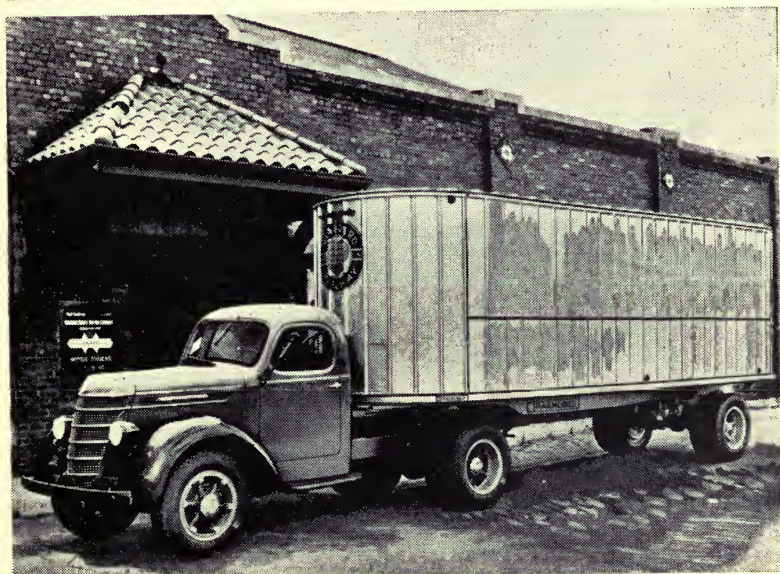
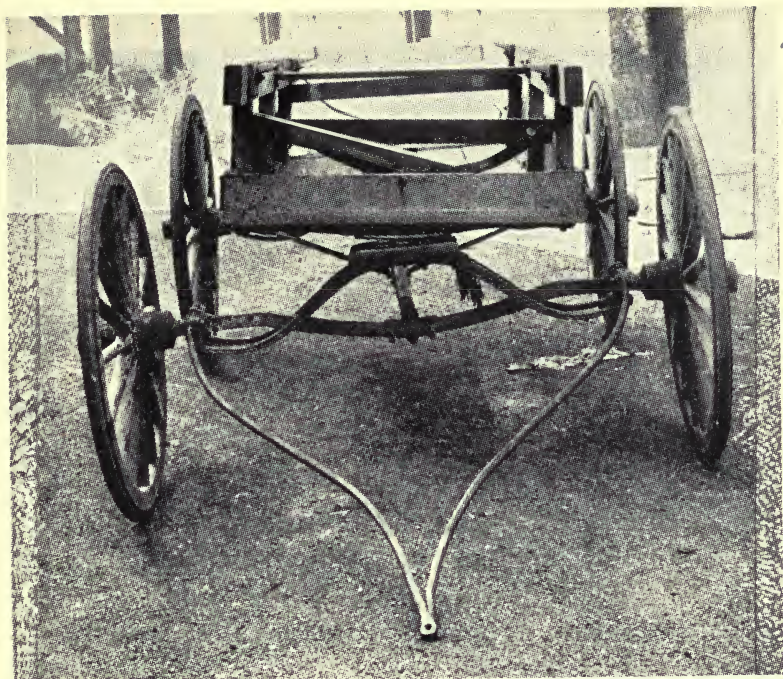
Since 1890 more than nine hundred makes of motor cars have been produced in America. Only 26 standard ones were being manufactured in 1938, and both Packard and Ford automobiles were among the leaders in their price fields.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

In January 1915 Henry Ford returned to Cincinnati and opened a branch plant for the assembly of his products. Meantime he had revolutionized American industrial practices by instituting nearly complete mechanization in production and assembly at his Detroit factories—which lowered the unit cost of an automobile so much that other manufacturers speedily adopted similar methods. Now the Ford Motor Company's River Rouge (Michigan) plant is the world's largest single industrial factory group; it has made and sold more motor cars than any other plant in the world. In 1937 the company's production was 1,314,369 units, a total exceeded only in 1930 and 1935. Of these, 1,027,701 units were made and assembled in the United States. The Cincinnati plant of the company, 660 Lincoln Avenue, when first opened (1915) was considered the ultimate development in straight-line production methods, but now, because of rapid technological advance, the building, although it is still used, has become obsolete for economical operation. The local Ford plant assembles passenger cars and trucks for distribution to dealers in southwestern Ohio, southeastern Indiana, northern Kentucky, and sections of Virginia, West Virginia, and Tennessee. Engines, bodies, wheels, and parts are shipped here to be assembled, painted, and trimmed by Cincinnati workmen. In 1937 about 485 persons, whose payroll aggregated 885 thousand dollars, were given employment.

In 1920 Ford opened a second factory in the Cincinnati industrial area. This plant, at Hamilton, originally made Fordson tractor parts. In 1921, when the company discontinued the manufacture of tractors, new machinery was installed for the making of steel wheels and automotive parts, such as radius rods, door locks, and stampings. During 1937 the factory gave employment to about 1,400 persons, who received an estimated two million dollars in wages. The plant is still typical of the Ford producing system. All manufacturing operations are conducted on the straight line method of assembly in which an article moves constantly forward on an endless conveyor and after passing through hundreds of hands takes final shape, and is ready for shipment.





**TRAILMOBILE: FIRST AND LATEST**



TRUCK ASSEMBLY

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Packard, the other automobile inventor who could not raise capital in Cincinnati, also is represented locally through the Packard Motor Car Company by the Citizens Motor Car Company (1904), Seventh and Main Streets, distributor in the Greater Cincinnati area.

In 1923 the Chevrolet division of the vast General Motors Corporation, realizing the advantages of Cincinnati as a distribution center, constructed an assembly plant on Smith Road, Norwood. That same year the Fisher Body Corporation, another GMC unit, opened a body factory adjoining the Chevrolet plant. Now there are about 2,100 highly skilled workers employed by the two firms in Cincinnati, with an estimated annual payroll of \$3,380,000. The Norwood plants have a production capacity of more than three hundred units daily. Dealers in southern Ohio, Kentucky, West Virginia, Indiana, and Tennessee are supplied with passenger cars and trucks assembled here.

All other American motor car manufacturers are represented locally by dealers and distributors, while several major producers also have factory or divisional sales offices here. Most of these sales agencies are on upper Gilbert Avenue, the city's "automobile row."

For about a decade after the automobile became a major cog in the wheels of national industry, only a slight recession disturbed carriage making in Cincinnati. At that time most of the earlier automobiles were simply carriages driven by engines. The wagon maker did not fear competition, for the early motor truck manufacturer supplied only the engine and chassis. Local wagon artisans were kept busy making the bodies.

The first bodies were patterned after the single-seat buggy, which seated two persons. Next came the surrey model, which had neither door nor top and carried three passengers and the driver. Faster motors brought more dust and wind, and in 1904 the first glass-enclosed bodies, made of molded wood, rolled from the shops. Then collapsible tops of a waterproofed material were set on the frame, and presto, here was the touring car. Until about 1925 Cincinnati factories worked hard to

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

supply these tops. Later sheet metal replaced wood, and now bodies, stamped in one operation, are usually built wholly of steel. The body currently popular is streamlined in the shape of a long ellipse tapering to a point.

Although the Republic Motor Car Company, Hamilton, produced fairly successful automobiles for three years, Greater Cincinnati manufacturers very early decided to give up the passenger car business and make trucks. From 1900 to 1915, therefore, Cincinnati produced trucks as well as bodies. During the World War Greater Cincinnati motor truck manufacturers had more orders than they could possibly fill, and firms such as Armleder, Schacht, and the United States Motor Truck Company, Covington, adopted a 24-hour-day working schedule. At that time the Armleder plant, occupying the old Smith-Eggers Carriage and Wagon Company factories at Canal (now Central Parkway) and Twelfth Streets, was the city's largest motor truck builder, the United States Motor Truck Company was second, and the George Schacht Motor Truck Company was third.

The Armleder plant reached its production peak in the early 1920's, but thereafter the sales of trucks declined and about 1925 the concern finally went out of business. Much of this loss in trade could be traced to rising competition in the industry, for almost every automotive manufacturer was marketing trucks as well as passenger cars.

After the War the Schacht firm continued to make heavy-duty trucks, and later produced busses. The concern's future seemed bright when the principal motor car makers started quantity truck production. In the early 1930's this policy resulted in acute price competition, which soon worried the local producer. Fresh capital, however, was supplied by the LeBlond interests, and the company now known as the LeBlond Schacht Motor Truck Company, in a plant at 800 Evans Street, still makes custom heavy-duty trucks and chassis.

In 1920 another local truck concern was formed. Incorporated as the Biederman Motors Corporation, it opened a factory at Spring Grove Avenue and Bernard Street. In 1937 the production schedule called for more than a hundred trucks and busses. An order from the United States Government for

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

several large 10-wheeled army trucks of new design also was completed during the year.

In 1938 sales offices and repair and distribution facilities were maintained in Cincinnati by all major truck concerns. Among these are the White and Indiana Companies, producers of trucks and busses, 2230 Gilbert Avenue; Reo trucks and busses, 916 Sycamore Street; Autocar and Studebaker trucks and busses, 243 West McMicken Avenue; Diamond T Motor Truck Company, 2642 Spring Grove Avenue; Twin Truck Company, 1116 Jackson Street; Federal Trucks, 3126 Spring Grove Avenue; General Motors Corporation (trucks and busses), retail store 1930 Central Parkway, wholesale plant and storage, 4526-34 Chickering Avenue; International trucks and busses, 2336 Iowa Street; Mack International Motor Truck Corporation trucks, busses, and fire-fighting apparatus, 1223 West Eighth Street; and Stewart trucks, 1524 John Street. Lighter trucks and busses produced by the Ford, Chevrolet, and Dodge motor car companies on a quantity schedule can be bought from the many agencies of these firms in Greater Cincinnati.

In 1937 about seven hundred people made, sold, repaired, and distributed motor trucks in the Cincinnati area. The payroll was estimated at about \$1,150,000.

In Cincinnati the transition from the wagon to auto body was slow; even in 1938 several local firms built horse-drawn vehicles on special order. Included among these were American Wagon and Truck Company, 725 Sycamore Street; Amann & Linser, 1766 Central Avenue; Freeman Avenue Wagon Shop, 530 Freeman Avenue; and Graue Auto Body Company, 3258-64 Spring Grove Avenue. These concerns also build and repair motor truck bodies.

Other Cincinnati firms manufacturing truck bodies are Bode-Finn Inc., established (1868, incorporated as Bode-Finn Equipment Company, Inc., 1938), 1650 Central Avenue, manufacturers of wood, steel, aluminum, and insulated refrigerator bodies; Lawrence Bruder, 211-13 West Second Street, maker of steel dump bodies; Davis Welding and Manufacturing Company, 1110 Richmond Street, producers of truck, trailer, and

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

welded tank bodies; Haberer & Co., 609 Summer Street; Kelly Auto Body Company, Richmond and Harriet Streets, manufacturer of custom-built truck and trailer bodies, delivery and stake bodies, moving and horse vans, and insulated and refrigerator bodies; Jas. Kidney Company, 433 East Second Street, fabricator of school and passenger busses, refrigerator, hoist, and dump bodies; Lenser Company, 1509 Barton Street; Lienesch & Heisel, 635 West Fifth Street; Martin Senft Sons, 5032 Spring Grove Avenue; and Finn Auto Body Shop, 15 West Charlton Street. In addition, the Freuhauf Company, Detroit, the nation's largest manufacturer of tractor trailers, maintains a Cincinnati sales, repair, and distribution plant on Richmond Street. Many Cincinnati shops specialize in repair work, giving employment to about two hundred workers, whose annual pay is estimated at 325 thousand dollars.

Several firms now making truck bodies were among the pioneer Cincinnati wagon producers. Among these are American Wagon and Truck Company, formerly American Wagon Works; Amann & Linser; Bode-Finn, Inc., formerly Bode Wagon Works; Haberer & Co., Inc., and Kelly Auto Body Company, formerly Kelly Wagon Company. In 1937 the number of workers regularly employed at these plants and at the Trailer Company of America and the Highland Body Company was about 1,400. The estimated annual payroll was two million dollars.

Cincinnati likewise has many concerns which produce parts for automobile and truck manufacturers. Among these are Corcoran-Brown Lamp Company, 4890 Spring Grove Avenue, and the K. D. Lamp Co., 610 West Court Street, makers of auto and truck reflecting lamps; Aluminum Industries, Inc., Beekman Street, aluminum pistons and other automotive and airplane parts; American Oak Leather Company, makers of leather for seat covers; Conway Clutch Company, Queen City Avenue, clutches; Formica Company (1913), insulation and electrical equipment; Recto Molded Products Inc., Appleton Street and B. & O. Railroad, accessories; Randall Company (1858, incorporated 1905), 5000 Spring Grove Avenue, automobile body trim specialties; Biltmore Manufacturing Com-

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

pany, 1501 Freeman Avenue, automobile seat covers; Cincinnati Gear Company, 1825 Reading Road; and Metal Specialty Company, B. & O. Railroad and Este Avenue, parts. In 1937 the number of workers employed in the plants of the parts industries was about three thousand, while the estimated annual payroll amounted to \$5,200,000.

In less than 40 years the automotive group of trades in Cincinnati has grown from a mere idea into one of the city's major industries. Besides the manufacturing plants, hundreds of small garages and repair shops are scattered about the city, filling stations supply gasoline and oil, while tire and tube stores and repair shops, all employing several thousand workers, add to the wealth—in 1937 estimated at more than 50 million dollars—which the automotive trade has brought to Cincinnati.

### *Manufacture of Fire Engines*

ALLIED WITH WAGON MAKING is the industry begun in Cincinnati by Alexander Bonner Latta, inventor and builder of the world's first successful steam fire engine. From the small business he founded has come the Ahrens-Fox Fire Engine Company, one of the country's uppermost producers of motorized fire-fighting engines and apparatus.

Although hand-pump fire-fighting machines had been manufactured in Cincinnati since 1815, Latta was the pioneer builder of the steam-operated equipment. In January 1853 he successfully tested his steam fire-fighting engine before awed city officials and a large gathering of citizens watching the demonstration at the Public Landing. The apparatus, called the *Joe Ross*, was instantly bought by the city and an order was given Latta for a second machine, called *Citizen's Gift* because the money for its purchase was raised by popular subscription. By 1857 the Cincinnati Fire Department was using seven of Latta's machines. The original steam fire engines were quaintly mounted upon three wheels and drawn by four horses.

Latta retired from business in 1862 after transferring his patents to the Lane & Bodley Company, at the time one of the largest machine shops in Cincinnati. Following the transfer,

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Chris Ahrens, who had started his career as an apprentice for Latta, became superintendent of fire-engine construction for Lane & Bodley. In 1868 Ahrens acquired the patents from the firm and established a factory on Webster Street. Construction innovations soon followed; without lessening efficiency the improved designs afforded lighter engines in new bodies. Four wheels were used instead of three, cylindrical boilers replaced the old rectangular type, two horses stood in the place of four, and the driver sat upon the machine instead of straddling one of the horses.

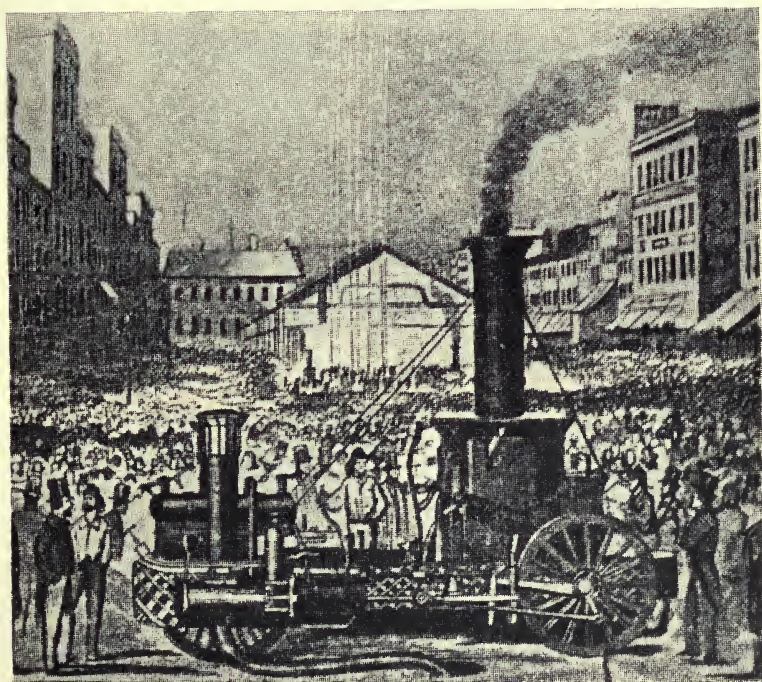
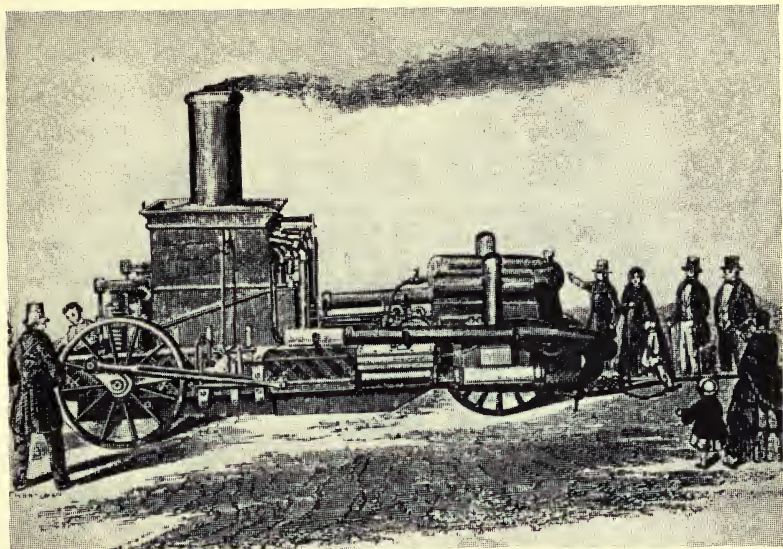
The progress made in engine design and performance by Ahrens brought orders for Ahrens' improved apparatus from many a city, and the Ahrens' Fire Engine Company went along successfully until 1901, when the firm was merged with three Eastern concerns. The resulting New York corporation was called the American Fire Engine Company. Although executive headquarters were in Seneca Falls, New York, the Cincinnati plant on Webster Street was kept open.

In 1901, also, Charles H. Fox, then an assistant chief of the Cincinnati Fire Department, resigned to become a supervisor of the Ahrens plant. Fox invented a new kind of boiler, which became the basis of the Ahrens-Fox Fire Engine Company, incorporated in 1905. The company immediately started making the *Metropolitan*, considered the best steam fire-fighting machine of its day.

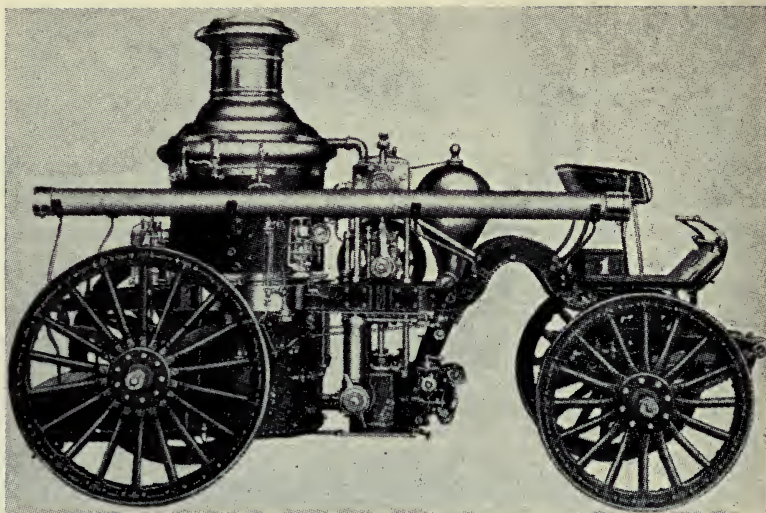
The firm introduced its first motor-driven pumper in 1912, several years after manufacturing facilities had been transferred from Webster Street to a plant at Colerain Avenue and Alfred Street. The first motorized apparatus was sold to the City of Rockford, Illinois, where it is still in service.

New motor design and augmented water pressure capacity of the pumpers came with the years, and the company carried its head high until 1929 when the stock market crash and the ensuing economic depression slackened production. In 1936 the trade name, patents, and good-will of the Ahrens-Fox Fire Engine Company were bought by the LeBlond Schacht Motor Truck Company, and the plant moved to 800 Evans Street. New ownership revived the business, and the firm is again





*OLD JOE ROSS AND CITIZEN'S GIFT*



STEAM, FIRST MOTOR, MODERN PUMPER

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

shipping motorized pumpers, ladder trucks, and life-saving trucks to all parts of the world.

### *Harness and Saddle Trade*

CINCINNATI IN 1890 was one of America's best harness producing centers; it had 89 firms manufacturing articles valued at about \$3,500,000. At that time some of the plants were making from 20 thousand to 52 thousand sets of harness, from 10 thousand to 30 thousand riding saddles, and from a hundred thousand to 180 thousand horse collars annually. The largest firm was Graf, Morsbach & Company.

Beginning as early as 1810, the city's harness trade grew up with the wagon industry. Sales began to lapse about 1910. Because of large army orders production turned upward slightly during the World War, but by 1920 sales again started slipping. In 1938 only a few small shops made harness and saddles. Among these were Kurzynski Manufacturing Company, 1608 Central Avenue, founded in 1880, now the city's largest producer; Langenbrunner Leather Good Company, 137 East Pearl Street; J. B. Schaaf, 2175 Spring Grove Avenue; John V. Seiler, 7207 Vine Street, and David Strom, 1578 Central Avenue.

When the harness and saddle business was at its peak in 1890 hundreds of hands were employed, with their total wages about a million dollars. About 50 workers, earning an estimated 60 thousand dollars yearly, are now employed.

### *Manufacture of Aircraft*

MANUFACTURE OF AIRCRAFT in Cincinnati dates from 1910, seven years after the Wright Brothers of Dayton, Ohio, had built and operated the world's first successful heavier-than-air machine. In 1910 the Jungclass Automobile Company, the first concern of its kind between New York City and St. Louis, began fashioning an airplane called the *Cincinnati Monoplane*. The firm assembled flying machines and sold parts and accessories. That same year the Lanier & Driesbach Manufac-

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

turing Company, acting as sales agents, imported an airplane from France. During the ensuing years several other small plants for the building of airplanes have come to the city.

In a factory at the municipal Lunken Airport the Aeronautical Corporation of America (1928) today manufactures the *Aeronca*, a sporting and training monoplane popular with flyers. Two hundred planes were produced in 1936, and about three hundred in 1937. Every operation, from the making of the engine to final assembly, is done at the factory. The firm regularly employs about 75 people; the annual payroll is more than 120 thousand dollars.

### *Refining of Gasoline*

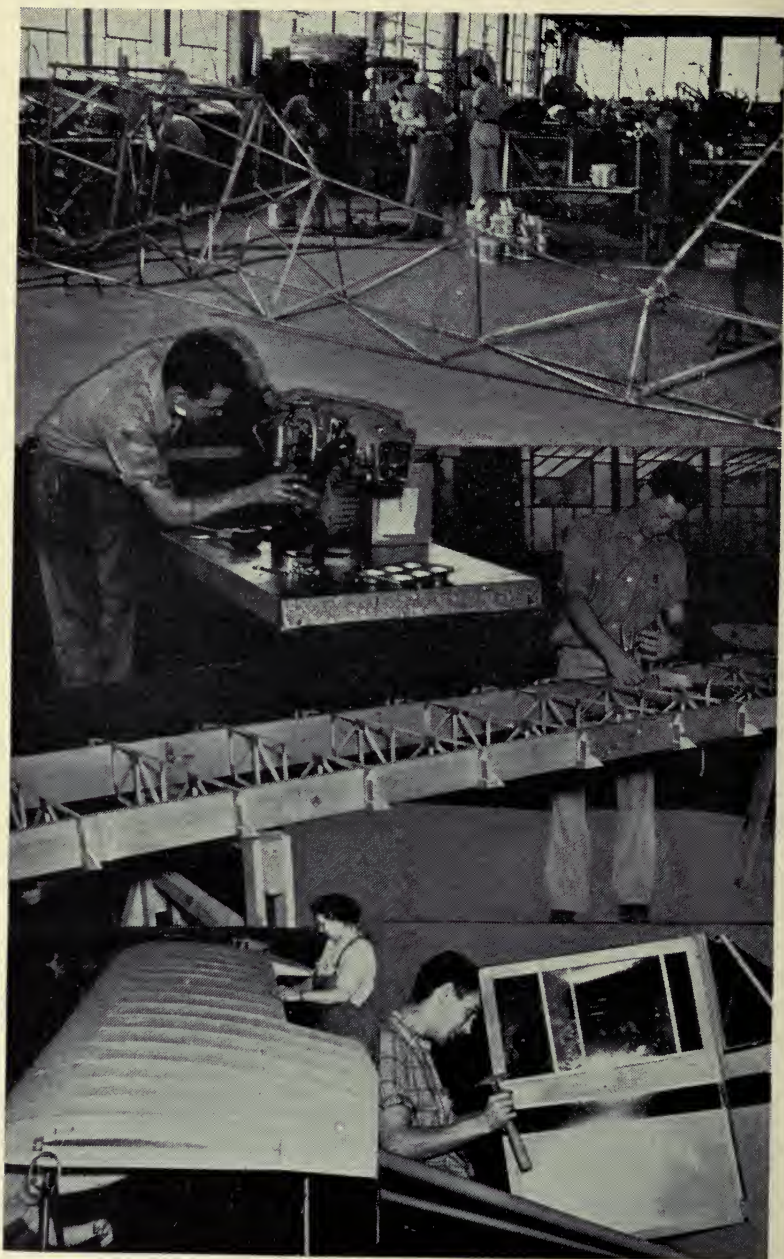
ANOTHER INDUSTRY, dating from the latter part of the 1890's, is the refining of gasoline. During the early days of the petroleum industry before research scientists had discovered that a by-product of crude oil could turn combustion engines, millions of gallons of the semi-distilled liquid were thrown away as waste. At that time (1870) fractional distillation of petroleum yielded such volatile products as kerosene, lubricating oils, and paraffin. Near the turn of the century it was discovered that additional refining processes could evolve a liquid for use as a carburetant. The principal products distilled from petroleum today include cymogene, a gaseous liquid; rhigolene; petroleum ether; gasoline; naptha; ligroine; and benzine.

There are now two general methods used in making gasoline, distilling and refining, or by "cracking" crude oil. In fractional distillation gasoline is derived from petroleum by a process of boiling off various substances of crude oil at different temperatures. The "cracking" process breaks down the heavier hydrocarbons by means of pressure and heat until the fluid gasoline is obtained. Another process, called hydrogenation, is used to convert coal into oil, which is then processed into gasoline.

About 1900 the city's first refinery for the processing of gasoline was operated by the Moore Oil Company, York Street, now part of the Union Terminal development. The firm later



**BOMBER, *AERONCA*, AND PURSUIT PLANE**



MAKING AIRPLANES

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

became one of the links in the chain of the vast Pure Oil Company, a national corporation with headquarters in Chicago. Stock of the Pure Oil Company is still traded on the Cincinnati Stock Exchange. A number of other small refineries established here during the early days of the industry were later merged with larger organizations having national sales outlets.

In 1930 the Gulf Refining Company, Pittsburgh, constructed a large refinery in Hooven, just west of Cincinnati. This plant receives by pipeline, river barge, and railroad tank car, the crude oil which is to be processed into gasoline. After refining, the finished products of gasoline and lubricating oils are supplied to retail dealers in the Greater Cincinnati area. In 1937 the payroll of the plant amounted to nearly a million dollars.

Standard Oil Company of Kentucky operates a refinery at Latonia (Covington), Kentucky, while the Standard Oil Company of Ohio (1865) in 1937 constructed a refinery and wholesale storage plant at Bridgetown, just west of Cincinnati. Pipelines connect the Bridgetown plant with the one in Northern Kentucky. The old Cincinnati storage tanks and plant of the Standard Oil Company of Ohio, on Spring Grove Avenue, were destroyed by fire on January 25, 1937, during the great flood.

Other gasoline refiners with storage tanks and distribution in the Greater Cincinnati region are Boswell Oil Company, Traction Building, Fifth and Walnut Streets, carload lots only; Cincinnati Oil Works Company, 535 Eggleston Avenue; Cincinnati Vulcan Ohio Company, 5353 Spring Grove Avenue; Dana Oil Company, Dana Avenue and Duck Creek Road; Eureka Oil Company, Amity Road, Reading; The Hall-Ratterman Oil Company, Carew Tower, Fifth and Vine Streets; Parkway Oils, Inc., 5750 Carthage Avenue, Norwood; Keenan Oil & Fuel Company, 1753 Eastern Avenue; Merchants Oil Company, 1600 Reading Road; United Petroleum Company, Reading Road and Tennessee Avenue; Ohio Refining & Terminal Company, 4201 Liston Avenue; Powerful Petroleum Company, Dane Street and Chase Avenue; Shell Petroleum Corporation, Tennessee Avenue; Gold Medal Oil Company, 1089 Gilbert Avenue; Re-Go Gasoline & Oil

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Corporation, 5566 Vine Street; Verkamp-Withrow Oil Company (1931), Spring Grove and Este Avenue; and Valvoline Oil Company (Leonard & Ellis, Brooklyn, 1866), 527 East Fifth Street. The Valvoline Company, having capital of 10 million dollars, is controlled by Cincinnatians; it has refineries in Butler and Warren, Pennsylvania, a grease compounding plant in Franklin, Pennsylvania, warehouses in 275 American cities, and sales outlets in 44 foreign countries.



## Chapter X

### *Graphic Arts • Daily and Weekly Newspapers • The Great Press Associations • Newsmen Who Made News*



ONLY FIVE YEARS after the first settlers reached Cincinnati in 1788 a New Jersey printer decided that both he and the Northwest Territory would profit if he were to start a newspaper. Overland to Pittsburgh he brought a supply of paper, a small hand press, ink, and some type. A flatboat carried him and his equipment to Losantiville. On the second floor windows of a shack on the river front he painted "The Centinel of the North-Western Territory. Open to all parties—but influenced by none"—the birth notice of the first newspaper north of the Ohio River. Maxwell's weekly publication faithfully recorded village, Territorial, and national events, and his shop also supplied merchants and tradesmen with printed matter.

So began the graphic arts in Cincinnati. In almost a century and a half the business has grown from a one-man shop into an important trade employing about six thousand workers, whose annual wages are more than \$11,100,000. In 1937 its products were valued at more than 30 million dollars.

Cincinnati printing and publishing have at some time or other reached the life of practically every American. From the city's printing and publishing plants have come text and religious books, playing cards, periodicals, bibles; envelopes, stationery, filing cards, and accounting systems; labels; sheet music; wrappers, boxes; catalogues, advertising brochures, folders, and multigraphed sales letters. Many magazine and newspaper advertisements have been printed from local copy and electrotypes manufactured here; and multi-colored posters on billboards and in store windows have been lithographed in the

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

city. Even the blind have been given light by Braille books embossed in the Queen City.

In 1938 Cincinnati was represented in every phase of the graphic arts industry except one, rotogravure printing. The printing plants of the United States Playing Card Company and of *The Billboard*, theatrical trade publication, are among the largest on the globe, while the Rapid Electrotype Company is the world's leading producer of electrotypes.

### *Cincinnati's Newspapers*

FROM THE TIME William Maxwell, on November 9, 1793, printed the first edition of the *Centinel of the North-Western Territory* local newspapers have been the mirror of the passing world. The garretlike offices, the hand lever presses, the hand-set type—all have been superseded. Now ultra-modern buildings house hundreds of workers, who use many mechanical devices in speedily preparing the modern newspaper.

The *Centinel* differed little from its contemporaries. Each of its four pages was as big as that of America's first newspaper, the Boston *Present State of the New-English Affairs* (1689)—the size of a man's handkerchief. The first issue of the paper had no local news and only a few advertisements; its foreign stories were about six months old. The copy dated April 12, 1794 carried news stories from Marietta (eight days old), New York (56 days), and London (about five months). The newsprint, difficult to obtain, was very light brown in color, and most of the type had been carved from wood.

In 1794 Maxwell hired an assistant to help publish the *Centinel* and the early Territorial laws. In July he became the town's second postmaster, succeeding Abner Dunn. In 1796, he became so embroiled in politics that journalism seemed tame. That year Maxwell sold the newspaper to Edmund Freeman, who immediately renamed it *Freeman's Journal*. The *Journal* was published here regularly until 1800 when the plant was removed by Freeman to Chillicothe, then the capital of the Northwest Territory. The name of the weekly was called the *Chillicothe Gazette*.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Meanwhile, the first edition of the more important *Western Spy* was issued by Joseph Carpenter on May 28, 1799. The paper was irregularly published as a weekly until 1809 when the plant was purchased by Carney and Morgan and the paper renamed the *Whig*. About a year later it was resold, and as the *Advertiser* was published until 1811. From the cockloft of a log cabin on Sycamore Street Looker and Wallace sent forth the *Liberty Hall and Cincinnati Mercury* (1804) until it was absorbed in 1815 by the *Cincinnati Gazette*. John W. Brown was editor. Brown was an ambitious poohbah who also preached the gospel, sold patent medicines, kept the town records, and played hide and seek with citizens angered by his editorials. In 1814 the publishers printed on the front page a stern warning that subscribers "one year in arrear, must soon pay wheat or money." At the same time the owners were trying to induce someone, preferably an editor, to purchase the little four-page weekly. Their advertisements specified that the new owner must be a man "whose sentiments are decidedly Republican and who is in favor of a vigorous prosecution of the war against the modern Goths."

Thereafter a variety of serial publications came to life, sparkled for a time, and went into oblivion—papers such as the *Literary Cadet*, *The Olio*, *The Spirit of the West*, *The Western Tiller*. All these earlier newspapers seem dull enough today, but to readers of a simpler day they were marvels.

Cincinnati's first daily newspaper, the first to be published west of Philadelphia, was the *Commercial-Register*. After a troublous six months the paper suspended in 1826. Eleven years later, merchants of the city who had learned the value of daily advertising during the life of the *Commercial-Register* prevailed upon the *Gazette* publishers to start a daily issue, the first of which was read by 125—some say 167—subscribers. The paper, 19 by 26 inches, carried a few inches of advertising, and was printed on a small hand press. Charles Hammond was editor and William Dodd, who clipped exchanges, gathered and wrote news, made up the forms, and read proof, was his only assistant. In 1840 the *Gazette* plant was moved from its original location on Main Street, above Fifth Street, to the new

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

L'Hommedieu Building on Main Street, between Third and Fourth Streets.

On April 25, 1840 Wilmerton, Starbuck & Brown published the first edition of the weekly *Spirit of the Times*, which became the *Daily Times*, with Edwin R. Campbell as editor, on January 8, 1841. On April 10, 1841 the *Daily Cincinnati Enquirer* appeared, with John Brough as editor, and his brother, Charles, as co-publisher. The two had bought the plant and assets of Dawson & Fisher's *Advertiser & Journal*. At that time the paper was an evening daily, but seven years later, in an effort to take advantage of mailing schedules, it became a morning newspaper. A prospectus of the *Enquirer*, appearing in the first edition, read:

. . . we do not design to enter into a lengthy dissertation upon politics or general questions, but merely in a few words as practicable, to lay down the general principles which will govern our Editorial course.

In politics, the *Enquirer* will, in a firm and unflinching, yet ever dignified and courteous manner, sustain the principles and policy of the great Democratic party of the country; those principles and that policy which have marked the administration of the government (with the exception of a single presidential term) for the period of forty years . . . in sustaining these great principles, and laboring to ensure their permanent triumphs. . . . Commercial intelligence and other valuable information will receive due attention. . . . With this brief outline . . . we throw ourselves upon a community to whom we are measurably strangers; content, in the integrity of our motives, to be judged by our future course.

In 1842 Curtis & Hastings, printers, established the Cincinnati *Daily Commercial*, the first issue of which appeared on October 2. The editors broke with precedent by using bright stories, many paragraphs, some fiction, and well-selected odds and ends, including articles about animals—which delighted children.

Coming from the weekly *Columbian*, where he had been associate editor, Murat Halstead (1829-1908) joined the *Commercial* staff in 1853. The firm of M. Halstead & Co. was formed May 16, 1866 to take over the publication from

T H E  
CENTINEL of the North-Western TERRITORY.

Open to all parties—but influenced by none.

(Vol. I.)

SATURDAY, November 9, 1793.

(Num. 1.)

The Printer of the CENTINEL of the North-Western TERRITORY, to the Public.

HAVING arrived at Cincinnati, he has applied himself so that which has been the principal object of his re-avail to this country, the Publication of a *Newspaper*.

This country is in its infancy, and the inhabitants are daily exposed to an enemy who, not content with taking away the lives of men in the field, have swept away whole families, and burnt their habitations. We are well aware that the want of a regular and certain trade down the Mississippi, deprives this country in a great measure, of snappy at the present time. There are discouragements, nevertheless, I am led to believe the people of this country are disposed to promote science, and have the fullest assurance that the *Press* from its known utility will receive proper encouragement. And on my part an content with small gains, at the present, datering myself that from attention to business, I shall preserve the good wishes of those who have already countenanced me in this undertaking, and secure the friendship of subsequent population.

It is to be hoped that the CENTINEL will prove of great utility to the people of this Country, nor only to inform them of what is going on on the coast of the Atlantic in arms, and in arts of peace—but what most particularly concerns us, the different transactions of the states in the union, and especially of our own Territory, as to great a distance from the seat of general government—is in particular grievances, that the people have not been acquainted with the proceedings of the legislature of the nation, in which they are so much interested, as any part of the United States.—It is expected the CENTINEL will be a great measure remedy this misfortune.

There are substantial advantages, which will result from the publication of this *paper*; but it must be an agreeable satisfaction to know a thousand particulars which make up the intelligence, though not so immediately interesting to the property & persons of men, whether they be of a philosophical, political, historical or moral nature.

The EDITOR therefore rests his success on the merits of the publication, but as an inducement to the people of this country, to make exertions to support the *Press*, he must observe that they will have an opportunity, by means of this *paper* to make themselves and their virtuous known abroad; if they have valuable leads to dispose of, it can be made known; if they have grievances to lay before the public it can be done. I hope therefore, all

men of public spirit will consider the undertaking as a proper object of attention, and not consult merely their own personal interest, but the interest of the public and the coming time.

The MONK.  
CALAIS.

A POOR monk of the order of St. Francis came into the room to beg something for his convent. No man cares to have his virtues the sport of contingencies— or one man may be generous, as another man is pusillanimous, *quo ad hoc*—or be as it may—for there is no regular reasoning upon the ebbs and flows of our humours; they may depend upon the same cause, for ought I know, which influence the tides themselves—'twould oft be no discredit in us suppose it was so: I'm sure I cast my eyes upon him, that in many a case I should be more highly satisfied, to have it said by the world, 'I had an affair with the moon, in which there was neither sin nor shame,' than have it pass altogether as my own odd deed, wherein there was so much of both.

—But be this as it may. The moment I cast my eyes upon him, I was predetermined not to give him a single sou, and accordingly I put my purse into my pocket—but tooed it up—set myself a little more upon my center, and advanced up gravely to him; there was something I fear forbidding in my look: I have his figure this moment before my eyes, and think there was that in it which deserved better.

The monk, as I judged from the break in his tunic, a few feathers'd white hairs upon his temples being all that remained of it, might be about seventy—but from his eyes, and that sort of fire which was in them, which seemed more tempered'd by courtesy than years, could be no more than sixty.—Truth might lie between—He was certainly sixty-five: and the general air of his countenance, notwithstanding something seemed to have been piating wrinkles in it before their time, agreed to the account.

It was one of those heads, which Guido has often painted—mid, pale—penetrating, free from all common place ideas of fat-contented ignorance, looking downwards upon the earth—it look'd forwards; but look'd as if look'd at something beyond this world. How one of his order came by it, heaven above, who let it fall upon a monk's shoulders, he knows; but it would have suited a Bramin, and had I met it upon the plains of Indostan, I had revenged it.

The rest of his outline may be given in a few strokes; one might put it into the hands of any one to design, for 'twas neither elegant nor otherwise, but as character and expression made it so: it was a thin, spare something above the common size, if it lost not the distinction by a bend forwards in the figure—but it was the attitude of entreaty; and as it now stands presented to my imagination, it gained more than it lost by it.

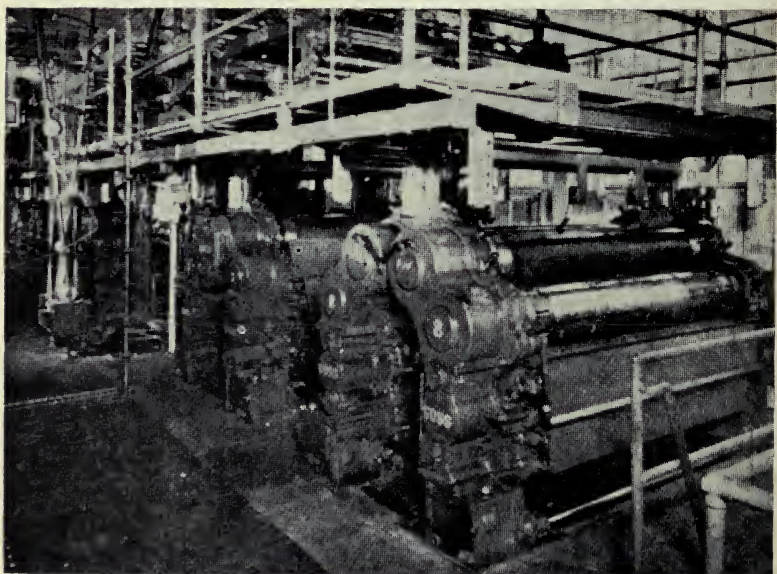
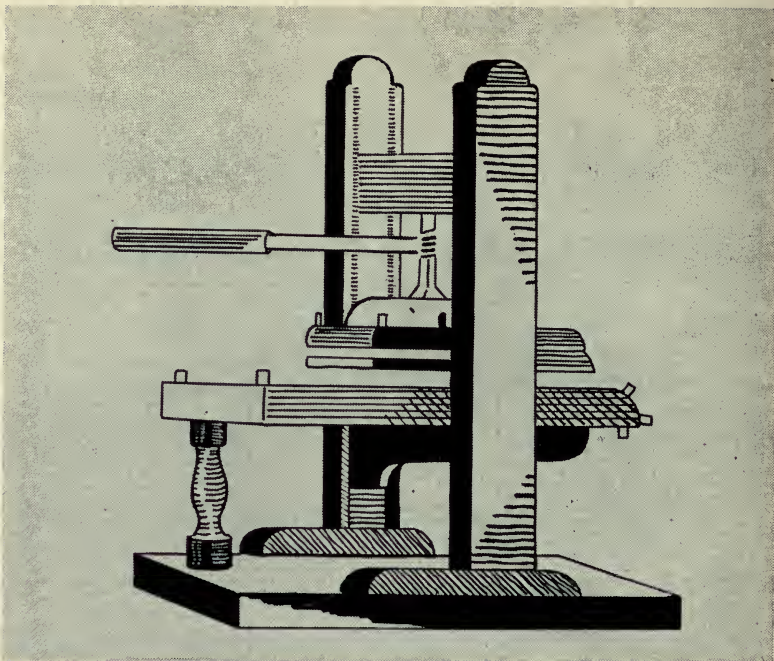
When he had entered the room three paces, he stood still; and having his left hand upon his breast, (a slender white staff which he journey'd being in his right)—when I had got close up to him, he introduced himself with the little story of the wants of his convent, and the poverty of his order—and did it with so simple a grace—and such an air of deprecation was there in the whole cast of his look and figure—I was lewicked not to have seen struck with it—

—A better reason was, I had predetermined not to give him a single sou.

—'Tis very true, said I, replying to a cast upwards with his eyes, with which he concluded his address.—'tis very true—and heaven be their resource who have no other but the charity of the world, the flock of which, I fear, is no way sufficient for the many great claims which are hourly made upon it.

As I pronounced the words *great claims*, he gave a slight glance with his eye downwards upon the floor of his tonic—I felt the full force of the appeal—I acknowledge it, said I—a coarse habit, and that but once in three years, with meagre diet—are no great matters; and the true point of pity is, as they can be earn'd in the world with so little industry, that your order should wish to procure them by pressing upon a fund which is the property of the lame, the blind, the aged, and the infirm—the captive who lies down counting over and over again the days of his afflictions, languishes also for his share of it; and had you been of the order of *Mercy*, instead of the order of St. Francis, poor as I am, continued I, pointing my argument, full cheerfully should it have been open'd to you, for the ransom of the unfortunate.—The monk made me a bow—but of all others, returned I, the unfortunate of our own country, surely, have the first right; and I have left thousands in distress upon our own shore.—The monk gave a cordial wave with his head—as much as to say, No doubt there is misery enough in every corner of the world, as well as within our convent.—But we distinguish, said I, laying my hand upon the floor of his tunic, to return for his appeal—we distinguish, my good father! betwixt those who

FIRST NEWSPAPER



HAND PRESS TO ROTARY

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

M. A. Potter & Company, which had purchased the property in 1854. Halstead paid eight thousand dollars for the paper; 12 years later the concern was incorporated with capital stock of 235 thousand dollars. During the 1880's the *Gazette* was merged with the *Commercial* under the combined title of the *Commercial-Gazette*. The newspaper helped mold public opinion and Republican party opinion until Halstead became editor of the Brooklyn (New York) *Union* in 1890. With his passing went the editorial brilliance but as the *Commercial-Tribune* the paper continued to operate until it was bought by the *Enquirer* in 1930.

Charles and John Karr, a Captain LaMar, and L. A. Leonard founded the *Cincinnati Star* in 1872. Much money was spent for mechanical devices, and the plant at Third and Vine Streets was said to be one of the best-equipped in the nation. In June 1880 David Sinton, Charles P. Taft, and H. P. Boyden, who had purchased the *Times* in 1879 from Eggleston, Sands & Thomas, also bought the *Star*, and merged the two evening dailies as the *Cincinnati Times-Star*, which has become one of the bulwarks of local journalism.

The *Times-Star* has never vacillated in its stand for staunch Republicanism in politics. Louis Alexander Leonard, in his *Life of Alphonso Taft* (1920), neatly sums up *Times-Star* ethical policies:

When Charles P. Taft found himself at the head of the *Times-Star* . . . journalism throughout the country was at a low ebb. To say that much of it was yellow would be to use a light tint to indicate the recklessness and sensationalism that prevailed in many quarters. Taft laid down principles of fairness and decency that were to be followed in all cases . . . Crime was exposed but not exploited; and the *Times-Star* became a clean, highgrade newspaper; and it remained so and prospered on these lines.

Political issues in the early 1830's brought forth the first local newspaper to be printed in a foreign language when *Die Ohio Chronik*, printed in German, was organized. The venture was not successful financially, however, and it was not until October 7, 1834 that another foreign weekly, *Die*

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*Weltbürger*, anti-Democratic in politics, risked publication. The following year the daily *Volksblatt* appeared and ably served the large German population of Cincinnati until 1920 when it was absorbed by the *Freie Presse* (1868), another German-language daily.

With the setting up of America's first daily newspaper, the *Philadelphia American Daily Advertiser* (1784), had come an era of personal journalism. Cincinnati editors followed the vituperative pattern for more than a hundred years. Each editor considered himself disgraced and his readers unenlightened if he did not give them a full page of editorial comment. He could always glean enough topics from the virtues of his political party and the vices of the opposition; and he was forever finding excuse to use a special vocabulary in his feuds with rival editors.

It was a period of great editors rather than of great newspapers, of sharp pen rather than of shrewd management. America had a press of opinion rather than a press of service. Among the prominent local editors of the time were John W. Brown, Charles Hammond, S. L'Hommedieu, John Brough, Murat Halstead, Isaac C. Burnet, Moses Dawson, Washington McLean, W. D. Potter, Charles P. Taft, and H. P. Boyden.

On several occasions rabid editorial policy put a match to the latent gunpowder in public opinion. In 1838, for example, the offices of the Abolitionist weekly, *The Philanthropist*, were destroyed by a fierce mob enraged because of Editor Birney's stories about slavery.

The *Gazette* of May 31, 1849 has a pungent article which shows the news trends of the day and what some editors thought of rival papers catering to community taste:

What an item in the journalism of this goodly town has "city literature" gotten to be. A year or two since, unless on "great occasions" draughts were made upon the genius of some assistant or associate editor "local items" were a species of paragraphs unheard of. Now-a-days the gossip loving citizens look into the local column of their paper for the marketable items with as much eagerness as the maiden seeks to set her laughing eyes upon the marriage notices. He, who with the wit and fancy of a lively poet that has a subjective mind, can "dress up"



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pilferings, larcenies, elopements, burglaries, runaways, robberies, pugilistic demonstrations, "moving accidents by flood and field," etc. is a genius whose "column" is devoured much more eagerly by the mass, than figures which tell of a rise in stocks, a fall in the rates of exchange or an upward tendency to pork . . .

About 1880 personal journalism waned; for several New York and Chicago editors were giving readers a taste of objective reporting, or "spot news." In Cincinnati Edward Wyllis Scripps (1854-1926), a firm believer in this sort of story, started the *Penny Post* (1881), the second paper of what is now the largest chain of newspapers in the United States. Like the *Penny Press* (Cleveland, 1878), which Scripps started on a 10 thousand dollar loan, the *Post* expressed its policy in an editorial:

We have no politics in the sense of the word as commonly used. We are not Republicans, not Democrats, not Greenback and not Prohibitionist. We simply intend to support good men and condemn bad ones, no matter what party they belong to. We shall tell no lies about persons or politics for love, malice or money. It is no part of a newspaper's business to array itself on the side of this or that party, or fight, lie or wrangle for it.

Public response to this new kind of daily paper astonished the old-style editors. Scanning the circulation figures of the *Post*—which had increased from a few hundreds in 1881 to more than 55 thousand in 1887—and its lively, newsy, and well-written stories, they realized that personal journalism, with its frequently covert designs, was not only out-of-date but also unprofitable. The newspaper business, they discovered, could be highly lucrative as well as exciting and influential.

The old school, however, was dyed fast in old wool, and the transition from journals of opinion to those of service was gradual. But newspaper readers showed their approval of the new policies by stepping up circulation figures, and merchandisers made more use of the papers in advertising their wares. Those publishers inclined to consider the "good old days" better than the new were quickly won over. In 1884, when the new-style journalism was still young, the 971 daily news-

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papers in the country had a circulation of about four million and combined revenue of slightly less than 135 million dollars. Income from subscriptions, at an average of five cents a copy, was equal to that garnered by advertising. Today nearly two thousand newspapers sell to 30 million American families more than 41 million copies daily, at an average price of three cents. Gross revenues each year exceed a billion dollars, with the receipts from subscriptions amounting to about two-fifths of the total. Cincinnati's three English-language dailies amassed more than \$10,500,000 revenue in 1937.

Locally the changing newspaper methods in the 1880's increased editorial staffs, brought about greater coverage of community news, and gave rise to the practice of flaring big headlines in order to get quick, heavy circulation. Joseph Pulitzer had started the mode in his *New York World*, which in 1895 attracted William Randolph Hearst's *New York Journal*. Although more conservative publishers resisted the change to "yellow" or sensational journalism, a series of news events readily lent themselves to the lurid splashing of printers' ink. Because the style yielded "mass" circulation the 30 years from 1885 to 1915 were to see practically every American newspaper colored a la Pulitzer.

Among the happenings that the press reported to a startled public were in 1884 the Grover Cleveland-James G. Blaine presidential campaign; in 1886 the nationwide general strikes; the Chicago Haymarket riots, and the anarchist scares; in 1889 the assassination of the Austrian Crown Prince and his wife, the Johnstown flood, and the introduction of the electric chair at Auburn Prison (New York); in 1894 the Sino-Japanese war, the march of Coxey's army, the disgrace of Captain Albert Dreyfuss, and the Pullman strike. Then came exposes of Spanish cruelty in Cuba. On February 15, 1898 the American warship *Maine* was sunk in the harbor at Havana, and in a few weeks the nation was at war; when the war ended, two Spanish fleets had been destroyed and the enemy routed on land, while Colonel Theodore Roosevelt (1858-1919) had come back to the States as a national hero ready to move into the White House.

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During the same period Cincinnati was in the national news spotlight because of several sensational events: in 1884 the burning of the courthouse and the riots in which more than 50 persons were killed and hundreds wounded, and the damaging Ohio River flood; in 1886 the general strike called by the Knights of Labor; in 1888 the centennial exposition, the inauguration of electric trolley service, and the election to the Presidency of an adopted local son, Benjamin Harrison (1833-1901); in 1896 the Pearl Bryan murder; and at the turn of the century the city's active participation in the Spanish-American War.

America's quarrel with Spain wrought new changes in the newspaper. All local editors sent staff correspondents to Cuba to supplement the coverage of news agencies. The lessons learned by the editors during the conflict helped make "spot news" coverage a science, while the formation of the present Associated Press in 1900 stimulated the growth of nationwide news services.

Meanwhile, as advertisers contracted for more newspaper space, publishers could afford to add more news and features—a tendency crystallized in the sports, finance, women's, and society pages of the present-day newspaper.

In 1884 Samuel S. McClure resigned as editor of the Century Company's *The Wheelman* to organize the nation's first newspaper feature syndicate. He hired many prominent fiction writers and arranged to publish their stories serially in the newspapers. When the service was started on November 15, only 13 publications, among them the Cincinnati *Commercial-Gazette*, had purchased the rights. But soon the syndication plan was such a success that it quickly attracted other men, who founded the many syndicates that now give editors news, feature, and background material.

Until the last few decades of the nineteenth century, the cartooning pioneered by Thomas Nast was a special function of the weekly magazine. Then it crept into the newspapers. Although the *New York World* was America's first newspaper to use cartoons as regular features (1884), the Cincinnati *Gazette* and several other publications as early as the 1870's

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had inserted wood-cut drawings to illustrate political stories. On October 10, 1872 the *Gazette* printed its first political cartoon, "Bolts for the Bolters," showing a Democratic platform laid on carpenters' horses and men fleeing and falling under several lightning flashes, the wood-cut representing the Republicans' state victory in the Presidential campaign.

In 1894 the first colored comic supplement embellished the Sunday New York *World*. A few years later the *Enquirer* also began printing Sunday supplements in color, and Cincinnatians flocked to the publication office to see the new presses in operation. The *Enquirer* was likewise the first Cincinnati newspaper to publish a photographic illustration, which came to the newspaper page during the 1890's—after photo-engraving processes had been made practical. In the first few years of the present century local publishers made much use of the political cartoon. Several artists who later became nationally famous for their work—H. T. Webster, A. E. Bushnell, and others—worked in Cincinnati. Their trenchant pen observations brightened an otherwise drab era of political corruption and "trust-busting" editorialism.

Editors fully exploited news breaks through 1914. Among the big happenings were in 1904 the 70 million dollar Baltimore fire; in 1906 the San Francisco earthquake and fire; in 1908 the earthquakes in Italy; in 1912 the sinking of the *Titanic*; in 1914 the assassination of Archduke Francis Ferdinand, heir to the throne of Austria, and his wife, and the greater slaughter that followed. While the War lasted, super-exaggeration in the treatment of news was at its peak; since then the tendency toward accuracy (with or without embellishment) has gained ground.

Twentieth century events in Cincinnati also appropriated headlines. The most important front-page stories were in 1905 the Drake Committee State Legislative investigation of local political corruption; in 1908 the election of a Cincinnati, William Howard Taft (1857-1930), to the Presidency; in 1913 the Ohio River flood and the strikes of street car operators and ice-wagon drivers; and in 1917-18 the city's enlistment in the World War.

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Cincinnati editors and publishers have long been in the heat of the fight for the Constitutional right of a free press. Some people with delegated authority have never stopped trying to throttle, or in some way to control, this freedom of expression. The first test of the issue was made on November 17, 1734 when Peter Zenger, editor of the *New York Journal*, was tried on a charge of criminal libel. Alexander Hamilton, defense counsel, put up a spirited argument for truth as justification, and won an acquittal. In the 1840's local editors joined with James Gordon Bennett, fighting editor of the *New York Herald*, in his successful battle to open Congressional sessions to accredited newspapermen. Prior to 1848 only a few representatives of Washington papers were permitted to "take notes" during legislative proceedings. The arrangement led to charges of favoritism and monopoly. After a *Herald* reporter had been barred from the Senate chambers, Bennett began his crusade. With help from other editors he waged his war for seven years before legislators allowed free action in reporting what happens in Congress.

Immediately after this victory American newspapers began sending staff correspondents to the nation's capital. The Cincinnati *Enquirer* sent A. D. Banks; the *Gazette* representatives were H. H. Pangborn and a Mr. Mussey.

Cincinnati judges and other public officials have sometimes tried to bar press representatives from trials and hearings on measures affecting the public. Usually such action has exploded in their faces, for newspaper readers immediately believe "star chamber" sessions to be deliberate attempts at dire collusion, or worse.

The rise of dictators in Europe since 1918 has so throttled the foreign press that American newspapers have strengthened their efforts to retain free expression. By unanimous vote, the American Society of Newspaper Editors has pledged itself to "carry on a constant campaign for popular support of a free press." The resolution adopted at the 1938 annual convention in Washington, D. C., is brief and to the point:

Unfortunately, all citizens do not think through the meaning of a free press. Too many regard it as merely

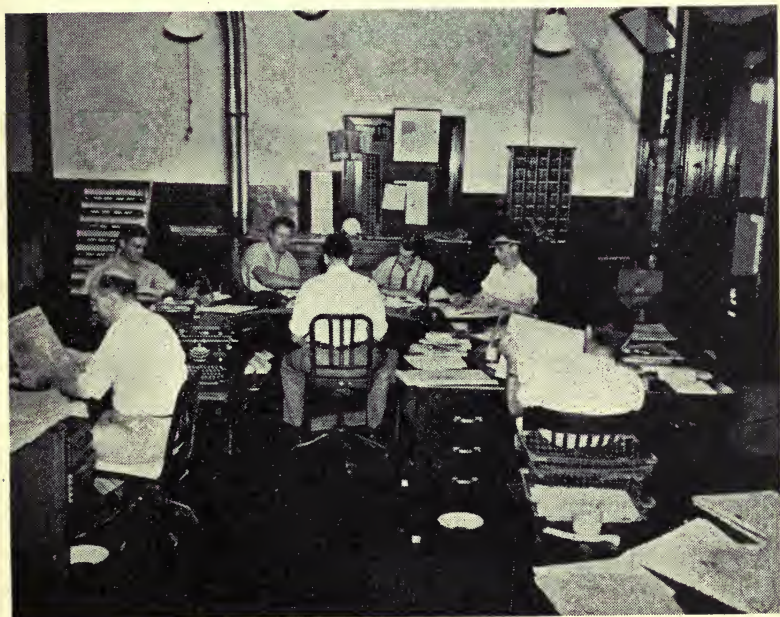
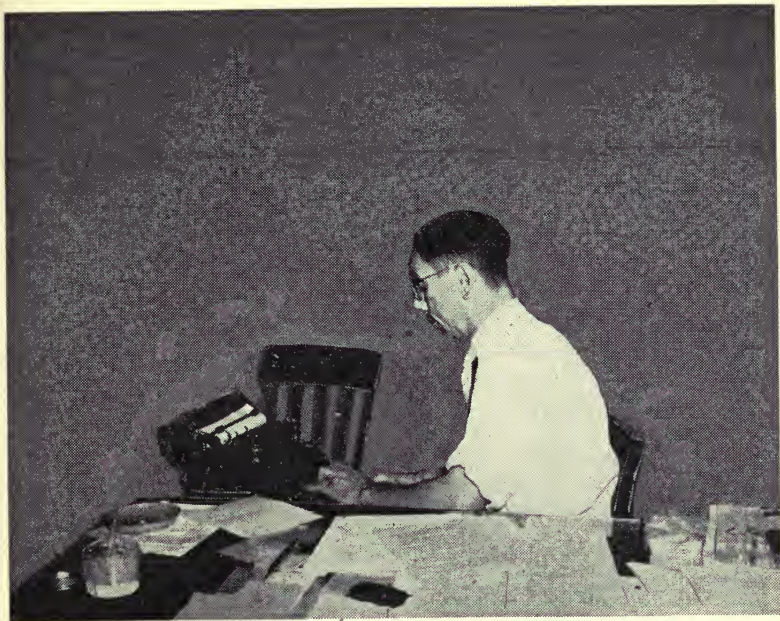
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the profitable privilege of publishers, instead of the right of all the people and the chief institution of representative government . . . When editors fight for the liberty to speak and to write, they fight for the greatest of all human rights under government. He is not thoughtful who cannot see that democracy cannot exist except through the maintenance of a channel through which information can flow freely from the center of government to all the people and through which praise and criticism can flow freely from the people to the center.

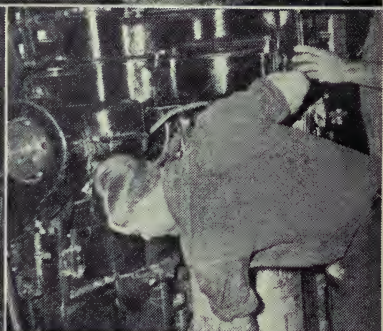
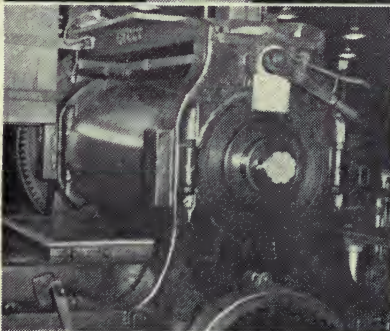
The modern newspaper differs in many ways from the news sheet of the past. Until the 1880's editorial staffs were small, and because editions seldom exceeded eight pages a mechanical department of 50 or fewer employees could handle composing and printing operations. Today each of the city's three English dailies employ about five hundred workers.

Advances in the technical end of publication began about 1832 when newspapers first used wood-cut engravings; in 1835 the first steam-operated press was invented by Richard Hoe. Although it was a major improvement over the hand-operated apparatus then in use, the semi-tubular device was only partly automatic. Paper sheets were fed by hand, and because the sheets could be printed only on one side double impressions were necessary. It was not until 1884, coincidental with the marketing of rolled pulp newsprint, that the first flatbed perfecting press was built. In 1885 Mergenthaler constructed the first typesetting machine; in 1887 stereotyping became practical with the installation, by the *New York World*, of the first cylindrical quadruple press; in 1886 standard point type measuring was adopted by the American Type Founders' Association; and in 1890 photo-engraving was put to commercial use. Since Cincinnati newspaper publishers have always hurried to install the latest proved mechanical equipment, local newspaper plants are modern and efficient.

Although the operations for the making of a daily newspaper differ in individual offices, they are alike in certain fundamental particulars. The gathering and presenting of all news and features is controlled by the editorial department, under the direction of an editor. This executive co-operates with the business department, usually composed of the mechan-



**REPORTER TO COPY DESK**



FROM COMPOSING ROOM TO STREET



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ical, advertising (local and national display, and classified), and circulation departments, charged with the sale and distribution of the newspaper.

The managing editor co-ordinates the activities of the entire editorial staff. Working under him are the news, telegraph, sports, financial, women's, state, and city editors, as well as various columnists and other special writers. The city editor directs the staff of reporters who gather and write local happenings.

The Cincinnati reporter often merely gathers the facts. Then he telephones the city editor, who assigns a man to write the story. When finished, the copy is edited by the city desk before it is sent to the copy desk, a large table shaped like a horseshoe, where the story is re-edited and the headline written. The final copy then goes to a desk in the composing room, where it is cut into "takes," or sections, before being passed out to linotype operators. The various type sections are next put together, and a galley proof is made and held until corrections are noted. Then the type goes to the make-up stone, under the supervision of the make-up editor, who works from "dummies" prepared by both the editorial and advertising departments. The type is then placed in forms mounted on chasses. The forms are locked and taken to the stereotyping department, which makes mats, impressions on layers of paper. The mats go to the foundry, where the half-cylindrical plates are cast in lead and mounted on the giant presses.

From these modern mechanical units, able to print up to 60 thousand cut, folded, and counted copies an hour, flows the complete newspaper to the mailing and distribution, or circulation department. By mail, truck, and carrier, and sometimes by airplane, the newspaper is quickly delivered to subscribers.

Copy from the advertising departments sent to the composing room runs through the same general procedure.

The *Enquirer*, *Post*, and *Times-Star* daily distribute an average of 430 thousand copies, or 125,590,000 newspapers a year. The Sunday *Enquirer* editions come to about 9,350,000 copies and the German-language *Freie Presse* sells about

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4,380,000, making the combined annual circulation of the four Cincinnati dailies more than 136,330,000 copies.

Since the World War technological advancement has been rapid, and the speed in production has helped editors to capitalize on the many big news breaks of the past two decades. Included among these have been in 1927 Charles A. Lindbergh's solo flight from New York to Paris; in 1929 the Cleveland Clinic disaster and the national stock market crash; in 1933, the national bank holiday and the beginning of President Franklin D. Roosevelt's "New Deal;" and during the past five years the constant European and Asiatic upheavals, such as Japan's undeclared war in China, the Spanish revolution, Italy's conquest of Ethiopia, and the bloodless absorption of Austria by Nazi Germany. Meanwhile, the popularity of pictorial illustrations has increased the use of wire or radio-photo pictures. Since 1930 advertisers have constantly augmented their newspaper space, and publishers now use features and interpretative articles in connection with spot news stories.

Future innovations in the newspaper printing and publication may comprise news events photographed and printed in color; a greater use of color by advertisers; better-written news and feature stories; greater speed in production and distribution systems; and perhaps some entirely new policies. Another possibility is the talking newspaper. After obtaining a patent for his talking newspaper processes in March 1938, an American inventor said the device, which works like the motion picture film sound track, can now be adapted for use by daily newspapers.

### *Present Daily Newspapers*

The Cincinnati *Enquirer* (1841), 617 Vine Street, is published weekday mornings and Sunday. Although it was established as an evening publication, it has been a morning daily since 1848. The *Enquirer's* Sunday edition, established in 1854, now is the oldest in America. The *Kentucky Enquirer*, printed in and distributed from the Cincinnati plant, was started in 1923. The newspaper is independently Democratic in political affairs.

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The Cincinnati *Times-Star* (1840), 800 Broadway, published weekday evenings, is Cincinnati's leading advertising medium. The paper is a combination of several weekly and several daily publications, the first of which was the *Spirit of the Times* (1841). It prints and distributes a Kentucky edition (1903) from the local plant, completed in 1933 at a cost of three million dollars. The *Times-Star* is Republican in politics.

The Cincinnati *Post* (1881), Post Square and Elm Street, is also published weekday evenings. It is the second unit of the Scripps-Howard Newspapers (1878), comprising 22 daily newspapers in 21 cities. The Kentucky *Post* (1890) is printed and distributed from the Cincinnati plant. The *Post* is politically independent. Three of the 22 papers are in Ohio, Cincinnati, Cleveland, and Columbus.

The Cincinnati *Freie Presse* (1835), 907 Vine Street, one of the two German-language dailies in Ohio, is published weekday evenings and Sunday morning. The newspaper is a combination of *Volksblatt* (1835), *Courier* (1868), and the *Freie Presse* (1875). *Volksblatt* was absorbed in 1920. The paper's political leanings are Republican.

Besides the daily newspapers of general circulation, Cincinnati has several particularized publications which carry news about sports, markets, and the courts. The largest is the Cincinnati *Court Index* (1892), 534 Sycamore Street, published weekday mornings (except Sunday and holidays) as the official newspaper for the Hamilton County courts and for the publication of legal notices under the Federal Bankruptcy Act. Financial, commercial, and trade stories from Cincinnati and vicinity are also featured. Other daily papers are Cincinnati *Livestock Record* (1897), Cincinnati Union Stockyards Inc., Spring Grove Avenue; Cincinnati *Daily Market Reporter* (1925), 127 East Third Street, founded in 1887 as the *Daily Bulletin*, the official publication for Mercantile Exchange price quotations; *Advance Daily Construction Reports* (1928), 626 Broadway, and *American Racing Record* (1917), 320 East Third Street, a tabloid carrying horse racing information, charts, and results, and news about American and Canadian race tracks.

### *News Gathering Agencies*

CINCINNATI NEWSPAPER EDITORS and publishers, helped shape American news gathering agencies from the first scattered telegrapher-writers and free-lance reporters of 1848 to the huge world-wide organizations of the present day. Modern press associations, having more than 500 thousand miles of leased wires in the United States alone, are the nerve centers of a newspaper. Day and night thousands of men and women alertly watch the world for news, and quickly report significant happenings in politics, government, finance, business, labor, education, science, trade, sports, and amusements. During wars, labor upheavals, riots, fires, accidents, murders, or trial proceedings they are on the scene, graphically recording events for the more than 41 million American readers of daily newspapers.

An insatiable public demand for news quickly gathered and interestingly and accurately written gave rise to these news services. Today, by the use of telegraph, telephone, cable, radio, motor car and airplane, the report of an event of sufficient importance happening, say, in China can be transmitted to New York or Cincinnati in less than 15 minutes. For this service American newspapers paid press associations more than 30 million dollars in 1937.

Prior to 1847 the semaphore, the carrier pigeon, the pony express, and the mails were used for the gathering and transmission of news. Then came the telegraph, and news gathering methods were revolutionized overnight. Strands of wire pulled city close to city; speed was the order of the day. As the daily newspapers rushed helter-skelter to present news, a co-operative agency was formed by six New York newspapers for ". . . the purpose of collecting and receiving telegraphic and other intelligence."

This arrangement benefitted New York publishers, but newspapers elsewhere still had to depend upon exchanges, free-lance correspondents, and slim telegraphic reports.

Cincinnati's newspapers were aggressive and powerful; readers demanded the same news releases accorded New York. Local publishers, however, could not reach an agreement with the

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New York agency, and a feud, which still lingers, was stirred up between news gathering agencies. Publishers later formed the Western Associated Press (1866), a membership organization, to compete with the Eastern co-operative, then called the New York, or Eastern Associated Press. The two agencies battled back and forth, but did little actual work in building a satisfactory national news gathering body.

Meanwhile the *Daily Enquirer* got a scoop by transmitting the complete message of President James Knox Polk (1795-1849) to Congress in 1848. Because of "atmospheric" interruptions, it took more than 36 hours to bring the Presidential message. It had to be repeated at Philadelphia and Pittsburgh. Witty and weary J. D. Reid, Pittsburgh superintendent of the Pittsburgh, Cincinnati & Louisville Telegraph Company, added "God and Liberty" to the message before Polk's signature; and newspapers carried the phrase. When it was discovered that Polk had not been quite so original, tempestuous John Brough, *Enquirer* editor, vowed he would

. . . never again attempt to print a president's message that came by telegraph, because of the damn butchery perpetrated by the telegraphic company.

Although Reid's phrase slipped into popular usage, Brough never calmed down.

About 1850 the telegraph companies inaugurated what they called the "press" wire, which carried press messages on daily schedule. About that time the *Commercial* and the *Gazette* became members of the Eastern Associated Press, and Richard Smith, of the *Gazette*, was named local agent. All other newspapers had to rely on independent sources for telegraphic news dispatches.

More kindling was dropped on the fire raging over the press association question in 1859 when the *Gazette* monopolized the only wire from Cincinnati to Baltimore and transmitted the story of the execution of John Brown (1800-1859). This adopted Ohioan had been sentenced to death for plotting to free slaves in Virginia and for attacking and capturing the United States Government arsenal at Harper's Ferry on October 16.

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Since the wire divided at Harper's Ferry, Eastern papers were able to get 2,500 words of copy; but the *Gazette* had the Western end. On December 3 it printed almost 12 columns, the most complete and graphic account of the hanging presented in American newspapers. The Associated Press could transmit less than five hundred words, while Murat Halstead, of the *Cincinnati Commercial*, one of the witnesses at the execution, could wire only 250 words.

For a time the Associated Press deprived the *Gazette* of its report; yet the newspaper published special telegraphic dispatches every morning. The secret was this: Ben Snyder, an expert telegrapher, was hired by the publishers to copy the press report. Standing on the sidewalk at the corner of Third and Walnut Streets, where he could hear the instrument, Snyder jotted down notes of the most important dispatches sent over the wire.

During the 20 years from 1860 to 1880 the number of privately operated news bureaus increased hugely. In 1881 when Edward Wyllis Scripps (1854-1926) established the local *Penny Post* he was dissatisfied with the news reports furnished by the independent Publishers Press. Several years later he formed the Scripps-McRae Service, predecessor of the present United Press Associations.

In 1884 the *Times-Star* was the first local newspaper to lease and install a telegraph wire (from New York to Cincinnati) in its editorial rooms. The wire was operated six hours daily. Later it was extended to Indianapolis, Chicago, and St. Louis, and over it the *Indianapolis News*, the *Chicago News*, and the *St. Louis Dispatch* exchanged Western news with the local newspaper. The success of this system led to formation of the first leased wire service by the old Western Associated Press (1884).

By 1900 publishers were dissatisfied with the costly and slow telegraphic service being supplied by the agencies. That year a group of publishers representing some of the most powerful American newspapers met in New York, and merged the Western and the Eastern Associated Press. In September America's first nationwide leased wire service was inaugurated by

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the Associated Press. There were 612 newspaper members, each assessed pro-rata for the service it received. The 24-hour report totalled about 15 thousand words, and it was transmitted over a system of leased wires aggregating 15 thousand miles. Under terms of the franchise each member newspaper was bound to furnish the Associated Press with a copy of all local news gathered by its staff.

This exclusive arrangement made an AP franchise valuable, and embittered publishers who, because they operated in competitive fields, were excluded from membership. Morning publications had little trouble getting franchises, but competing afternoon newspapers could not enter the charmed circle.

In Cincinnati the *Commercial-Gazette*, *Enquirer*, and *Times-Star* were AP members; the *Post*, *Volksblatt*, and *Freie Presse* tapped other news sources. The Scripps-McRae News Service, with the Scripps Pacific Coast wire and an exchange agreement with the Publishers Press in the East, ably served the *Post* and other Scripps publications. But other independent publishers were not so fortunate; their unsuccessful efforts to meet news competition from AP papers prepared the way for a competing nationwide news service.

From his home near Cincinnati, Scripps in 1906 purchased the Publishers Press. Combining it with his Scripps-McRae Service and the Scripps Pacific Coast wire, he organized the United Press Associations, with headquarters in New York. By transferring workers from various papers he staffed the service. From the Cincinnati *Post* John Vandercook and Roy W. Howard (1883) were chosen. Vandercook was named UP president, while Howard wrote and edited copy, filed a wire, sold the service, and later became general news manager. Immediately Howard launched an expansion program, which continues to this day.

In 1906 the UP had 21 news bureaus and 267 clients. In 1912 Howard was made president—a post he held until 1922 when he became executive director and a partner in the vast Scripps publishing enterprises. Howard organized a compact UP European news service, staffed by American-trained reporters, and refused an alliance with official foreign services. In

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1916 the UP began serving Central and South American newspapers; in 1919 a night wire for morning papers was started; and by 1924 the association was the first world-wide independent news gathering agency. Subsidiary corporations, such as the British United Press and the United Press of Mexico, were later organized to supplement UP service.

Today the association has 64 news bureaus, and serves a thousand daily newspapers and 235 radio stations in the United States. In addition, a daily news report is supplied to about three hundred papers in 43 other countries. In America its network of leased wires totals more than 200 thousand miles, while the report comprises as many words. The UP has more than two thousand full-time employees, and about four thousand regular and several thousand part-time correspondents. In Cincinnati the *Post*, *Enquirer*, *Freie Presse*, and *Court Index*, and stations WKRC, WCPO, and WLW-WSAI are United Press clients.

Meanwhile the Associated Press was likewise being enlarged. In 1906 it made an agreement for an exchange of news with the principal subsidized European services. In 1910 AP was serving 817 newspapers, which received an average daily news report of 35 thousand words. By 1915 the member newspapers had increased to 1,263, the leased wires totalled 70 thousand miles, and the report was more than 60 thousand words long. Now the Associated Press has more than 80 American bureaus, 1,350 member newspapers, 250 thousand miles of leased wires, and a daily report of more than 200 thousand words. It employs about two thousand workers. Offices are also maintained in the principal cities of Europe, South America, and the Orient. In 1937 the AP began supplying a daily report to South American papers by short-wave radio. The *Enquirer* and the *Times-Star* are local AP members.

Refinements in telegraphy have stepped up the efficiency of the news agencies. In 1900 the typewriter increased the speed of operators to an average of about 25 words a minute. By 1914 this average was 30 words, principally through the use of abbreviations in transmitting. That year the first pair of teletypes (sending and receiving), which work like a type-





**SPEEDING NEWS BY TELETYPE**

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writer, was installed by the AP in New York. In 20 years these printer circuits superseded the former Morse wire system. By substituting the printed word for the dot and dash, the press services increased their transmission average from 30 to 40 and then to 60 or more words a minute. In 1917 the UP installed its first teletypes; its last Morse trunk wire was converted into a high-speed printer circuit in March 1938.

Since the 1880's foreign copy has been transmitted by the news agencies through the cable. As wireless telegraphy and radio were developed, they supplemented the cable service. Today the cost of transmission is the major financial problem of the news services. It is almost impossible to budget the annual outlay, for catastrophe such as war in some remote part of the world adds thousands of dollars to the ordinary transmission expenditures. To the reader of a newspaper, news columns may look alike, but a story from Paris, France, may represent an outlay of about \$50, an adjoining story from the Orient about \$250 to \$300. From China the urgent cable rate is \$2.42 a word; full rate, 80 cents; and regular press rate, 24 cents. The urgent and the full rates are often used to speed transmission.

America's other principal news gathering agency is the International News Service, Inc. (INS), founded in 1909 by William Randolph Hearst when he was unable to get Associated Press franchises for several new publications he was starting. Later the news reports were sold to other newspapers. By 1915 INS and Universal Service, supplying news reports to morning newspapers, had about four hundred clients. At that time annual expenditures for news totalled about two million dollars. Since 1937, when Universal Service was absorbed, INS reports go to about six hundred newspapers and a hundred radio stations. In addition to its New York headquarters the service has 43 bureaus, and nearly a hundred thousand miles of leased wires in the country. Besides its more than five hundred staff writers, about five thousand correspondents are employed. The *Enquirer*, the *Times-Star*, and stations WLW-WSAI are INS clients.

Besides the three major services many of the larger American newspapers have developed their own special news agencies, whose reports are also sold to other publications.

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The present-day services of the AP, UP, and INS include (in addition to the main news printer circuits) special state, financial, and sport wires; fast mail news and features; and photo and matrix departments.

### *Weekly Newspapers*

UNTIL THE FIRST daily newspaper was published here (1827), the weekly paper was the only printed news source for the up-and-coming little city on the Ohio River. Thereafter the publishers of weeklies struggled to meet the keener competition of the dailies. Until 1850, when telegraphic facilities first were used for transmitting news, they succeeded. Then the weekly publishers retreated, became absorbed in interpreting news and conditions, and regained considerable popularity. After the World War came the suburban journals, many of which depend upon advertising for revenue and are distributed free. Each has its own small geographic range of influence, religious, political, labor, community, or social in nature.

Today some 25 weekly newspapers published in the Greater Cincinnati area have an annual gross income exceeding \$1,500,000.

The Catholic *Telegraph-Register*, 423 Commercial Square, oldest Catholic weekly in the country, is the official paper of the Archbishop of the Cincinnati Archdiocese. It was founded by Rev. Edward D. Fenwick, the city's first Roman Catholic bishop in 1831 and edited by the laity until 1937 when it became a member of the *Register* (Denver) group of newspapers. Its title was then changed, and priests became the editors.

The *American Israelite*, 534 Sycamore Street, the nation's oldest Anglo-Jewish weekly, was founded in 1854 by Isaac Mayer Wise, "father of Reform Judaism." The paper has an international circulation.

The *Chronicle* (1893), Court and Vine Streets, official gazette of organized labor in the city, is published weekly by the Cincinnati Central Labor Council. Other weekly labor publications are *The Brewery Worker* (1895), 2347 Vine Street, and *Stationery Engineer*, 1015 Vine Street.

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*Radio Dial* (1931), 22 East Twelfth Street, is a tabloid publication which lists radio programs and news of station personnel and performers. It is distributed within a radius of about three hundred miles of Cincinnati.

Among other weeklies published in Cincinnati are *The City Bulletin* (1928), City Hall, official newspaper for the publication of legal notices by the City of Cincinnati; *Cincinnati Packer*, 217 Front Street; *Cincinnati Shopping News* (1928), Carew Tower, Fifth and Vine Streets, owned by a group of large downtown retail stores; *Building Witness*, 622 Broadway; *Advocate* (1935), 217 East Eighth Street, official organ of the Knights of Columbus in Greater Cincinnati, Cleveland, and Northern Kentucky; *Every Friday* (1927), American Building, Walnut Street and Central Parkway, a non-political journal serving the community interests of Cincinnati Jews; and a number of college, high school, and commercial publications, primarily for students and employees.

The principal community weeklies are *Avenue Record*, 1641 Vandalia Avenue; *Bellevue and Dayton News*, 605 Fairfield Avenue, Bellevue; *Calendar*, 4710 Vine Street; *College Hill News*, 7421 Hamilton Avenue; *Community News*, 4174 Hamilton Avenue; *Kentuckian*, 3167 Clifford Avenue, Latonia; *Mariemont Messenger* (1928), 6871 Wooster Pike; *Milford Record*, 215 Main Street, Milford; *Norwood Enterprise* (1894) and *News and Suburban Guide*, 4415 Montgomery Road; *Price Hill News*, (1928), 3640 Warsaw Avenue; *Reporter* (1932), 5931 Ridge Avenue; *St. Bernard Journal*, 4732 Vine Street; *Suburban News*, 2506 Melrose Avenue; *Valley Journal*, North Bend Road; *Valley Shopper* and *Millcreek Valley News*, 117 Williams Street, Lockland; *Western Hills Press* (1924), 3800 Glenmore Avenue, Cheviot; *Madisonville Bulletin* (1909), Mathias and Prentice Streets; *North Cincinnati News* (1935), 2511 Auburn Avenue; *Union* (Negro, 1907); *Eastern Hills Journal*, 6016 Madison Road; *Kenton and Campbell County Courier*, Independence, Kentucky; and *Cincinnati Sunday News* (September 1938), 234 Sycamore Street, a new tabloid paper issuing a colored comic supplement.

## *Newspaper Personalities*

CINCINNATI NEWSPAPERS HAVE always attracted men and women who later grew to national stature in journalism, literature, politics, and business. The first of these was Charles Hammond, editor of the *Gazette*, who attracted nationwide attention during the 1830's and risked his life in defending, editorially, the right of Editor James G. Birney, of *The Philanthropist*, to uphold in print his abolitionist sympathies. Hammond always advocated free speech and a free press; he was hailed by Daniel Webster as the "greatest genius who ever wielded the political pen," and he became the first Cincinnatian to achieve election to the Ohio Journalism Hall of Fame (Ohio State University, 1928). (Murat Halstead, of the *Commercial*, and Charles Phelps Taft, of the *Times-Star*, have also earned this distinction).

Thereafter hundreds of writers paraded their talents before local newspaper readers. Some failed to build a career here, but became prominent after leaving the city. Among these were Lafcadio Hearn, Irwin S. Cobb, O. O. McIntyre, and many others. In 1871 Hearn, half-Irish, half-Greek, with a dash of Moorish blood, began his career on the *Enquirer* as an eccentric but obscure space writer. On November 9, 1874, however, Hearn wrote a horror story about a brutal West End murder committed the day before. Although readers were shocked by the realism, *Enquirer* editors broke with precedent and printed Hearn's account as an anonymous front page story. For the first time a Cincinnati newspaper used wood-cut illustrations of the suspects, a diagram and sketch of the tannery where the murder occurred, and a sketch of the *corpus delicti*. Hearn later became a staff member of the *Commercial*, and in 1879 wandered to Memphis, and then to New Orleans, where he began writing his exquisite Japanese pieces.

Washington McLean jumped into prominence through his fiery editorials in the *Enquirer*. From 1852 until 1882 he propounded his faith in Democratic Party principles through the columns of the paper. His son John, who succeeded him, trod the same path, became a power in the party, and was nominated

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for the Presidency in 1896. At the turn of the century he served as editor of both the *Enquirer* and the *Washington* (D. C.) *Post*.

Among other Cincinnati newspaper men who have found a secure niche in the newspaper, political, and business world are Earle Martin, Philip Simms, Ed. L. Keen, Roy Howard, William C. Culkins, Ren Mulford, Jr., Milton Bronner, and Russell Wilson of the *Post*; Ben Lucien Burman, Andreu Berding, Gus Karger, Herbert Corey, originator of "New York, Day by Day," Hal Reid, playwright and actor, and Olive Logan, of the *Times-Star*; and George Randolph Chester, of the "Get Rich Quick Wallingford" series of fiction, James Hastings ("Luke McGlucke"), James Faulkner, political writer, and James M. Cox, Ohio publisher and 1920 Democratic Presidential candidate, of the *Enquirer*.

## Chapter XI

### *The Story of Advertising • Magazine and Book Publishers • Commercial Printers • Lithographers • Engraving and Electrotyping*



THE FIRST ADVERTISING man probably advertised a personage, not a product. The fulsome titles of ancient potentates are no doubt the work of a series of excellent publicity men, each one a Bruce Barton of his own day. For many centuries advertisers simply painted their notices in red or black on the walls of a city. (Traces of such notices have been found by archaeologists in the ruins of Pompeii). In the Middle Ages merchandisers hired the town crier to walk about the streets, ringing a bell and crying the wares of his employer.

The forerunner of modern advertising methods came into use in London in 1648 when *The Impartial Intelligencer* carried the first printed announcement. In 1780 the Boston *Massachusetts Spy* printed the first newspaper advertisement in the United States. That small item was the beginning of an American business which since 1780 has grown to an annual dollar volume in excess of \$1,500,000,000. Today merchandisers advertise through newspapers, magazines, radio, billboards, street signs, streetcar cards, circulars, form letters, sky writing, and house-to-house canvassing. Modern advertising campaigns are usually handled by agencies maintaining special corps of research and layout men, copywriters, artists, and salesmen, all co-ordinated to plan and execute schedules for merchandisers.

Commercial advertising in Cincinnati goes back to 1793. In its first issue William Maxwell's *Centinel* printed only three notices, each about an inch long. All were on the back page of

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the four-sheet edition. On January 18, 1794, the *Centinel* published five advertisements, including two which would appear today among the classified ads:

Lost some time in November last (in Cincinnati) out of the subscriber's pocket, a promissary note upon Capt. John Armstrong, of one hundred pounds Pennsylvania currency, one bank note of 50 dollars, one of 25 and six of 3 dollars each. Whoever will deliver the above mentioned notes to Isaac Martin or to the subscriber, will be handsomely rewarded.

CASPER SHEETS

Greenville. Dec. 4, 1793

### PUBLIC NOTICE

The subscriber has for sale upon reasonable terms, the dwelling house and part of the lot wherein he now liveth. All persons indebted to him are hereby desired to come and settle their respective accounts, as he is determined to leave this place on the fifteenth inst. and no longer notice can be given.

JAMES FERGUSON

Cincinnati, January 3, 1794.

Most of Cincinnati's early newspaper advertisements were in the same stilted vein. Later, when lotteries became a popular diversion the press printed abundant paid copy promoting them. With the establishment of the first daily newspaper came the first display advertising—merely unillustrated price announcements set in small type.

From 1805 to 1825 local newspapers carried many advertisements offering rewards for the return of runaway apprentices, slaves, and lost, strayed, or stolen livestock. One advertiser in the *Liberty Hall* offered six cents reward for the return of two runaway apprentices; another prized his lost sorrel mare to the tune of five dollars; while a Frankfort (Kentucky) plantation owner was willing to pay \$50 for the return of a runaway slave, to be identified, in part, by a whip scar on his breast.

About 1835 a few wood-cut advertising illustrations began to appear locally, but because this kind of engraving took much time and money, wood-cuts were used only sparingly. By 1840 proprietary medicine ads were being published regularly,



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and dry goods stores occasionally inserted two-column announcements to help sell their merchandise. Although daily newspaper advertising rates varied, in 1841 the quoted price was 75 cents a column inch of 12 lines or less. If the same ad, without change of copy, was used for three months, the charge was \$10, and for six months \$15. Weekly newspaper rates were about one-third higher, the minimum charge being a dollar per column inch.

Such was the advertising world of 1841, ripe for exploitation, awaiting someone to probe its possibilities. Then there arose a man who later said, "Advertising made me." But Phineas T. Barnum also made advertising. In 1841 he was a poor "puff writer" for a New York paper. Later that year he took over Scurred's Museum, bought Joice Heth, an aged Negress, and announced in print that the museum would exhibit a woman 160 years old. The copy claimed that

She was the first person to put clothes on the unconscious infant (George Washington) who was destined in after days to lead our heroic fathers to glory, to victory, to freedom.

Printed in several New York dailies, the ad played on the curiosity of readers, who rushed to the museum to see Washington's nurse. Finicky editors who questioned Barnum's claims only helped swell the crowds, and convinced the museum owner that he had struck pay dirt.

Enlightened Phineas T. Barnum increased his advertising space, multiplied superlatives, and built a fortune. As he calmly heard the controversies that raged over his tricks, and watched the crowds that battled to see his freaks, he bit off the end of his cigar and spit it out. "There's one born every minute," he said. On a trip to Cincinnati during the 1850's the showman bought a freak horse, feature-advertised as follows:

Captured by Col. Fremont, near the Gila River, a most extraordinary animal, maneless, hairless of tail, but with a body covered with thick wool—of the size of a horse, with the haunches of a deer, the tail of an elephant, a fine curled wool of camel's hair color.

With the help of advertising Barnum travelled fast on his short cut to fame. He always wrote his own copy, even though

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at the time he was spending 700 thousand dollars a year for space. Other advertisers eagerly copied the Barnum style; they could see the point of some modern doggerel:

The man who has some goods to sell  
And goes and shouts it down a well,  
Is not so apt to reap the dollars  
As he who climbs a tree and hollers.

As they increased space and appropriations, newspaper and magazine editors grudgingly began to accept paid advertising. A change in practice came in the late 1860's when local publishers, anxious to secure advertising contracts from firms doing a nationwide business, began sending solicitors to New York and other Eastern cities to get space contracts. One of these solicitors was L. H. Crall, of the *Commercial*, generally credited with having been the first special advertising representative. From time to time Crall compared notes with two other local solicitors, E. B. Mack and F. T. MacFadden. From these friendly meetings popped a scheme destined to bring new ideas about advertising space and to develop the modern advertising agency.

For several years Crall gathered accurate market data and statistics on the circulation of various media in several Middle Western cities. In 1875 he opened a New York office and started selling space for the Cincinnati *Times* and *Enquirer*, the St. Louis *Globe-Democrat*, the Chicago *Inter-Ocean*, and the Milwaukee *Sentinel*. Mack and MacFadden later joined Crall in New York. Mack represented the Cincinnati *Gazette* and three other publications, while MacFadden had the *Commercial* and the Chicago *Tribune* on his list.

The plan was successful. It soon put an end to the business of space brokers who had played newspapers and magazines against one another, regardless of quality, in order to make big profits by buying low-priced space and selling it at high rates. As the new system grew, the brokers no longer emphasized space at bargain rates; in preparing copy and planning sales strategy they stressed service to the advertiser. Thus developed the agency plan, with its copy, art, research, and survey facilities.

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In the last quarter of the nineteenth century patent medicine manufacturers were the largest buyers of advertising space in newspapers and magazines. Other merchandisers followed the lead of the nostrum vendors. By 1900 promotional and price advertising had both proved their value.

Meanwhile local advertising was growing away from the Barnum style. Copy began to sell merchandise or services, by telling a story. During the 1880's furniture store advertisers prepared their first "cash or credit" copy, while the "free gift and entertainment" appeal to buyers had also been tried and found successful.

Fechheimer Bros. & Co., 102-08 West Fifth Street, clothing manufacturer, was the first local firm to use the gift and entertainment style of advertising. On April 13, 1888 the firm's ad in the *Post* read as follows:

### FREE FUN FOR THE BOYS

With every boy's or child's suit, no matter what the price, we shall give the choice of a complete Base-ball outfit (bat, ball, belt and cap), patent roller skates, or elegant checker board and checkers. Tommorrow night there will be

### MUSIC IN THE AIR

2 grand concerts—from 7 until 10 p.m.  
Open air concert by full reed band and a delightful concert by our superb string orchestra.

Comparative price copy appeared about the same time. Advertising abuses of the 1880's eventually caused the founding of better business bureaus and other regulatory organizations to protect the legitimate advertiser. Even in 1888 local stores were trying to stamp out the advertising chiseler. Copy in the *Post* of January 3, for instance, reads:

We don't select a few hundred suits or overcoats composed chiefly of odds and ends, broken sizes, etc., and ask you in to take choice of such old mossy chestnuts for—say \$25, worth \$35. No, that isn't our way.

MABLEY & CAREW invite the public to inspect the finest and grandest assortment of men's and young men's tailor-made suits in every style, and elegant satin-lined overgarments in all shapes and say take your pick of ANY IN THE HOUSE.

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In the 1890's the development of automatized typesetting, press, and photo-engraving techniques brought new opportunities for the ingenuity of advertisers. Newspapers could now set large display ads and magazines could print plates in color. Advertising layout benefitted. About the same time the "personal" columns dwindled away, to be superseded by the classified advertising of today.

About 1900 the electric street sign first blazoned forth the merits of a medley of products. The need for billboard posters sped improvement of lithographic processes, and Cincinnati, pioneer in the development of American lithography, quickly became one of the nation's topnotch lithographing centers.

Meanwhile the sales value of advertising brought forward the Audit Bureau of Circulation, survey compilers, and similar bodies organized to help the advertiser confused by the multitude of competing papers and magazines. Agencies began to supersede office and factory departments in the planning and preparation of copy.

By 1915 the nation's daily newspapers alone sold 50 million dollars worth of space to national advertisers. The scarcity of newsprint and coated papers during the World War period limited the spread of advertising temporarily. When the War was over, a new race began, and by 1926 the advertising industry for the first time topped the billion-dollar mark in expenditures. That year the *Detroit News* set a modern newspaper lineage record when it published 36 million lines of paid advertising during a 12-month period.

In 1925 the first nationwide radio advertising time had been offered to merchandisers. Instant public response to commercial blandishments brought the new medium to an important place in advertising technique. Radio speedily replaced billboards as the third most important advertising medium. And soon airplanes streamed advertising copy in smoke and on banners.

In 1937 national advertising appropriations were divided as follows: 49 percent to newspapers, 35 to magazines, about 11 to radio, and the rest scattered among other mediums. That year the Procter & Gamble Company was probably the world's

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largest individual advertiser; it spent an estimated five million dollars for radio time and talent, four million for newspaper and magazine space, and about three million for contests, premiums, and sample advertising. Other Cincinnati companies which laid out huge amounts for national advertising space and radio time were The Andrew Jergens Company, The Kroger Grocery and Baking Company, United States Shoe Corporation, the Crosley Radio Corporation, and the Hudepohl and Red Top Brewing Companies.

Although most of the city's large advertisers maintain separate departments to write copy, design layouts, and buy space, the placing of practically all national advertising (copy for Cincinnati companies appearing outside the local area) is handled by agencies.

Cincinnati agencies, as elsewhere, operate on a commission or fee basis, usually 15 percent of the total advertising appropriation. For example, an agency which places a full-page ad in black and white in a national weekly magazine is billed at 16 thousand dollars less 15 percent, or \$2,400—the agency's service charge. The same procedure is followed in newspaper, radio, streetcar, and billboard advertising. Advertising rates depend upon the circulation of a publication or the power of a radio station. At WLW, the nation's most powerful station, the rate for an hour of broadcasting time is \$1,200, while a single full-page insertion in the *Post*, *Times-Star*, or *Sunday Enquirer* costs about eight hundred dollars. Daily *Enquirer* rates are slightly lower.

Although local agencies generally place all types of advertising, some specialize in newspaper, magazine, or radio copy. One of the country's pioneers in arranging radio schedules is William F. Holland, 439 Race Street, who has been specializing in this type of service since 1923. Other Cincinnati agencies are Robert Acomb Inc. (1901, incorporated 1937), 311 Sycamore Street; Allen Douglass & Leland Davis Inc., *Enquirer* Building; William Tracy Armstrong, Union Central Building; S. C. Baer Company (1922, incorporated 1930), 800 Broadway; Julian J. Behr Company, Dixie Terminal Building; John Bunker Inc., Schmidt Building; Frederick L. Cavally, 514

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Main Street; Compton Advertising Inc., Gwynne Building; Forney-Seale Advertising Service, 11½ East Eighth Street; Walter Haehnle Advertising Agency, 123 East Sixth Street; Highlands & Highlands, 534 Vine Street; Jaap-Orr Company (1934), American Building; Ralph H. Jones Company (1916), Carew Tower; Jesse M. Joseph Advertising Agency (1909), 1801 Reading Road; Keelor & Stites Company (1920, incorporated 1922), Carew Tower; Key Advertising Company, 505 Walnut Street; Lawrence Madden Features, 7 West Sixth Street; Midland Advertising Agency, 111 East Fourth Street; a branch of Harry M. Miller Inc. (Columbus, 1926), Enquirer Building; Merrill Advertising Co. Inc., 317 Sycamore Street; L. F. McCarthy & Associates, 704 Race Street; Mottern, Healy, Woolfolk, Ltd., 134 West Fourth Street; Perry-Brown Inc. (1922), 15 East Eighth Street; Chester C. Moreland Company, 800 Broadway; Mahlon B. Sheridan, 18 East Fourth Street; Leonard M. Sive & Associates, 519 Main Street; Strauchen Advertising, 439 Race Street; Frederick W. Ziv Inc. (1930, incorporated 1931), 2435 Reading Road; Venable-Brown Co. Inc. (1927, incorporated 1936), 211 East Fourth Street; and Thompson Koch Co., 32 West Sixth Street.

### *Direct-Mail Advertising*

DIRECT-MAIL ADVERTISING has called into existence a number of Cincinnati firms prepared to make up lists of select prospects for any sales campaign, and to turn out form letters or postcards for this service. The principal direct-mail advertising concerns are A. B. C. Direct Advertising Company, 521 Broadway; Crawford Advertising Company, 528 Walnut Street; Frank J. Crow Direct Mail Advertising Company, Traction Building; A. J. Eggers Company, 119 West Fourth Street; Floyd-Schneider & Company, 610 Broadway; Gibson & Perin Company, 121 West Fourth Street; Mail-Way Advertising Company, 209 East Sixth Street; Modern Letter Service, 1008 Walnut Street; Sidney Printing Works, 317 West Seventh Street; and Wiesen-Hart Press, 2211 May Street.

## *Billboard and Sign Advertising*

CINCINNATI BUSINESS HOUSES used billboards and painted signs to advertise their wares for more than a century, but they have employed electrical displays only since the late 1890's. As an advertising medium the billboard probably reached its zenith shortly after the World War. Then, because of the rapid rise of advertising by radio and the efforts of city planning commissions to remove billboards from streets and highways, the industry was forced into a last-ditch fight which still continues.

Since 1886 Ph. Morton, 2018 Elm Street, using both painted and lithographed displays, has been the leading local billboard concern. Another prominent firm is Central Outdoor Advertising Inc., York Street and Western Avenue.

Cincinnati's largest designer and manufacturer of electrical signs is the Lackner Company (1914). The Lackner plant, 1113 York Street, produces all kinds and sizes of electric signs for indoor and outside use. Since 1930, when neon tubes began to replace incandescent lamps for display, the company has grown so fast that it is now one of the nation's foremost neon sign makers. The company also operates a painted and printed sign department.

Other leading manufacturers of electric signs are Quehl Sign Company, 316 Main Street; American Sign Company, 1940 Riverside Drive; Central Neon Sign Company, 1716 Central; Hartman Sign Company (1920), 1037 Woodrow Street; Queen City Sign Company (1883), electric, painted, and showcard displays, and office lettering, 612 Main Street; and Federal Electric Company, Inc., 224 East Seventh Street.

Among the important local showcard and painted sign concerns are Dietrich Signs (1899), 22 West Court Street; Ed Gelke, 1011 Walnut Street; E. W. Schoneberger & Co. (1886), 610 Walnut Street; Wade Sign Company, 717 Sycamore Street; Acme Sign Company, 30 Opera Place; and Jos. D. Engelbert & Company, 1217 Clay Street.

Another advertising service is the designing and fashioning of displays used in windows and on store counters. Local

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lithographing plants have developed a prosperous business in the design and production of window and counter displays. Among the most important companies manufacturing displays are Co-operative Displays Inc. (1935, incorporated 1936), 327 East Eighth Street; Gohman Display Company (1937), 2011 Florence Avenue; Walter Hassman Company, 717 Main Street; Standard Displays & Signs, 529 Walnut Street; Stanfield-Lewis Company, 134 Opera Place; Advertising Displays Inc., originators of the diorama display, 1129 Banklick Street, Covington; Henry Bamberger, 406 Elm Street; Nu-Art Window Display Service, 413 Race Street; L. C. Rittmeyer, 626 Broadway; Ludlow Manufacturing Company, 457 East Sixth Street; and Nivison-Weiskopf Company, Reading.

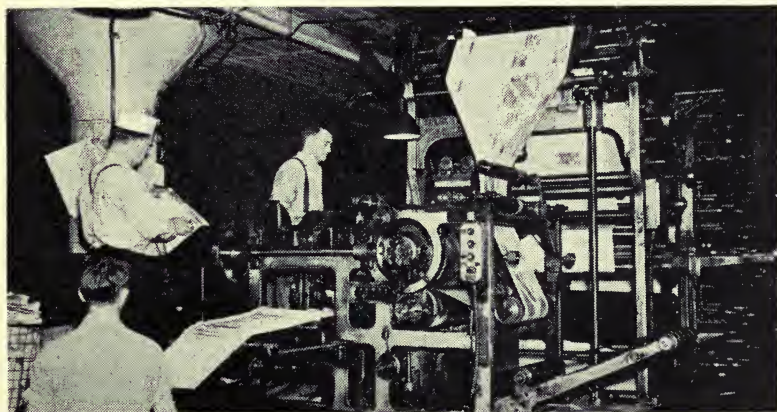
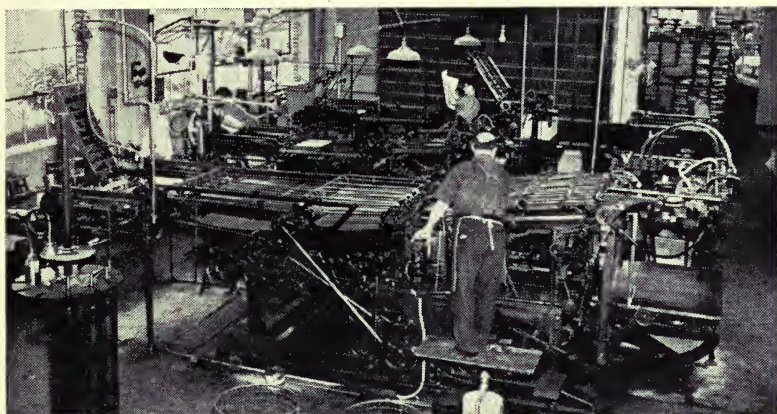
### *Cincinnati Magazines*

THE MAGAZINE DATES from the seventeenth century when French and English publishers began issuing catalogues of books. In 1665 the *Journal des Scavans* was issued in France and the Royal Academy of London printed its *Philosophical Transactions*. The first magazine in America was Benjamin Franklin's *The Universal Instructor in all the Arts and Sciences and the Pennsylvania Gazette* (1728), predecessor of the *Saturday Evening Post*, which adopted its present title in 1821. The first American magazine for children, *Young Misses' Magazine*, began publication in 1806, while in 1830 came *Godey's Lady's Book*, forerunner of the present-day women's magazines.

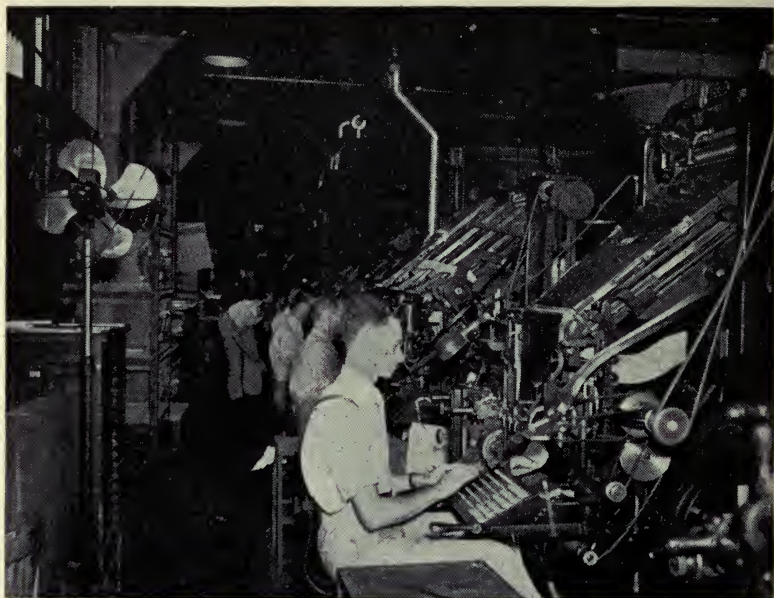
Thousands of American periodicals came during the nineteenth century, but none was able to reach the million mark in circulation until 1886 when the *Ladies' Home Journal* sold more than a million copies. By 1920 American magazines had attained a circulation of about 160 million, considerably more than the nation's population.

In Cincinnati magazine publication began with A. N. Deming's *Literary Gazette* (1824). Since then, many similar periodicals have come to life, endured for a time, and finally given up. The first venture to live through to the present came in





GOING TO PRESS



ON THE LINOTYPE AND MONOTYPE

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

1834 when the western edition of the *Christian Advocate* (1826) was issued by the Methodist Book Concern (New York 1789, Cincinnati 1820). This national religious weekly is one of America's oldest magazines; about half of the 320 thousand weekly circulation is printed and distributed from the Cincinnati plant. Other religious periodicals printed by the local Methodist Book Concern are the *Classmate*, the *Target*, the *Portal*, the *Junior Weekly*, and the *Picture Story Paper*.

One of the oldest trade magazines published in Cincinnati is the *Spokesman and Harness World*, first issued in 1854 as *The Spokesman*, in 1884 merged with *Harness World*. *Spokesman and Harness World* and *Auto Body, Painter and Trimmer* (1921) are published by the Spokesman Publishing Company, 15 East Eighth Street.

One of the city's largest religious periodical publishers is the Standard Publishing Company, 640 West Eighth Street, founded at Cleveland in 1865 as the Christian Publishing Association. In 1867 the plant was transferred to Cincinnati, and in 1870 the present name was adopted. Beginning with the *Christian Standard* (1865), a national religious weekly, the corporation prospered, and added new publications. The magazines edited and printed here include *The Lookout* (1888), *Girlhood Days*, *Junior Life* (1878), *Boy Life*, *The Little Beginner*, *The Primary Child*, and *Primary Bible Story*, all weeklies; and *The Baby's Mother* (1910), the *Primary Teachers' Quarterly*, the *Junior Teacher*, the *Standard Cut Out Quarterly* (1920), the *Junior Class*, the *Intermediate Teacher*, *The Intermediate Class* (1875), the *Senior Teacher*, the *Senior Class*, the *Home Department*, the *Bible Class* (1875), the *Bible Teacher*, the *Senior Pupils Graded Quarterly*, the *Pupils' Graded Quarterly* (1938), the *Teachers' Graded Quarterly* (1938), the *Junior Teachers' Textbook* (1938), the *Primary Teachers' Textbook*, the *Beginners' Teachers' Textbook*, the *Young Peoples' Graded Studies* (two issues for teachers and students), the *Senior Teachers' Graded Quarterly*, the *Christian Endeavor Quarterly*, and the *Junior Pupils' Workshop*, all quarterlies. The corporation also prints on contract several other magazines published in other cities.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Cincinnati's biggest plant devoted to publishing a single magazine is that of *The Billboard* (1894), 25 Opera Place, a national amusement weekly which has come to be the bible of those employed in outdoor entertainment. Branch offices are in New York, Chicago, St. Louis, Kansas City, Los Angeles, and also in London, England. The Peerless Printing Company, 1209 Sycamore Street, operates a plant where the *Signs of the Times* (1906), and *Display World* (1922), national trade periodicals, are printed. Both magazines, circulating among those engaged in display and advertising work, had their peak year in 1930.

Cincinnati's largest magazine publisher, S. Rosenthal and Company, 22 East Twelfth Street, issues eight monthly trade and technical journals, the oldest being the *American Building Association News*, founded in 1880. *Automobile Digest* (1915) is the company's most influential technical organ, while *Writers' Digest* (1919), together with the *Writers' Year Book* (1931), is its leading trade magazine. Other Rosenthal publications are *Sportsmen's Review* (1891), *Independent Salesman* (1922), *Progressive Salesman* (1934), *Minicam* (1937), and *American Camera Trade* (1938). Besides the company-owned magazines the Rosenthal Company prints on contract a number of periodicals published in Cincinnati. In 1926 the company tried pulp fiction with its *Wild Game Stories*, but after six issues the magazine was suspended.

Another Cincinnati publisher issuing more than one periodical is Gardner Publications, Inc. (1928), Schmidt Building, Fifth and Main Streets, which has two monthly trade magazines—*Modern Machine Shop* (1928) and *Products Finishing* (1937).

Other magazines published in Cincinnati include *The Building Witness*, a weekly founded in 1883 as the *Western Architect and Builder*, and *Highway News* (1938), 622 Broadway; *Dog News* (1922), 105 East Third Street; *Coal Times* (1936), 15 East Eighth Street; *Advertiser*, established in 1930 as the *Artist and Advertiser*, 3557 Bogart Avenue; *Motour* (1924), begun in 1906 as *Honk-Honk*, Cincinnati Automobile Club, Central Parkway and Walnut Street; *Fine*

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

*Arts Journal*, Schmidt Building, Fifth and Main Streets; *St. Anthony Messenger* (1892) and *Sendbote*, 1615 Republic Street; *Odd Fellow* (1917), 1015 Vine Street; *Classified Journal* (1920), Elm Street and Post Square; *Dairyman's Monthly Review*, 622 Broadway; *Ohio Law Reporter*, 534 Sycamore Street; *Education, Law and Administration*, 9 West Fourth Street; and *Western Tobacco Journal*, 236 Broadway.

Besides the trade and religious periodicals and magazines of general circulation, there are several particularized publications which are distributed free: *Hy-Pure Magazine* (1931), 706 Plum Street, distributed by neighborhood drug stores; *Nielen News*, published by the A. Nielen Company, West Fourth Street; and the *O-K News*, employee magazine of the Cincinnati Gas & Electric Company.

In all, Cincinnati publishes some 75 major periodicals, which have a combined yearly circulation of about 150 million copies, or about one-twentieth of the more than two billion annual circulation of the country's more than three thousand magazines. In addition, there are about 50 local factory, church, and school publications.

### *Manufacture of Books*

THE MODERN BOOK has a long genealogy. The form of book that we know today came into use during the fourth century of the Christian era when Roman jurists first folded and fashioned parchment sheets into a *codex*. Until about 1460 books were inscribed by hand, but thereafter the printing press quickly replaced the scribe. The first book in English is generally believed to have been William Caxton's *Recuyell of the Hystories of Troye*, a folio of 351 pages printed some time between 1474 and 1476. The earliest book printed in the New World of which we have definite record was Juan Pablos' *Breve y mas compendiosa doctrina christiana*, Mexico, 1539. Book printing came to Britain's American Colonies with the issuing of the *Bay Psalm Book* (1640) at the press set up in Cambridge by Stephen Daye, locksmith, and his two sons.

The printing of books in America has kept alongside printing methods. Until 1885, because only expensive rag-processed

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

paper was available, the publication of books for general circulation was a gamble. Most volumes issued were therefore of an educational or religious nature. Beginning with the use of pulp paper, the publication of fiction books sprang up so rapidly that today volumes of fiction are about twice as popular as non-fiction books.

Although the most popular book size is the octavo, about  $5\frac{1}{2}$  by  $8\frac{3}{4}$  inches, books range in size from the *Thumb Bible*, not much larger than a postage stamp, to church tomes measuring six by four feet.

In 1801, when Cincinnati still was a backwoods village, the printing firm of Carpenter & Findley issued the 25-cent *Little Book*, the first to come from local presses. In 1805 William McFarland published *The Almanac*, so well received that Carney and Morgan also put out an almanac (1809).

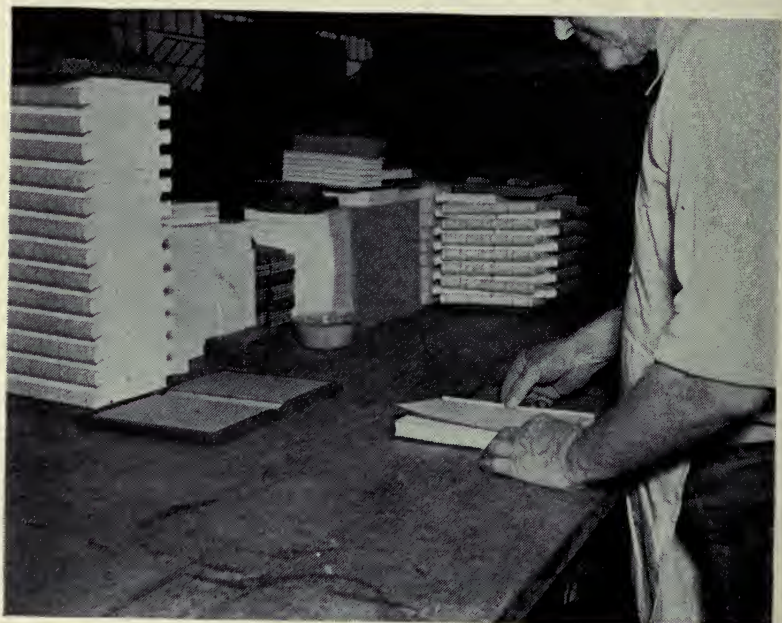
In 1834 the Cincinnati book publishing trade received its greatest stimulus from Truman & Smith, who became interested in a textbook written by William Holmes McGuffey, then a professor at Miami University, Oxford. In 1829 McGuffey's first book, *Methods of Teaching Reading*, was published in London. In 1836 Truman & Smith issued the first edition of *Eclectic Readers*, while in 1901 the last printing of *McGuffey Readers* was done here. During the interval the textbooks were revised five times to meet new needs of American schools.

In the preparation of the upper grade books and in later revisions, William Holmes McGuffey was aided by his brother, Alexander Hamilton McGuffey, and by Dr. Timothy Pinneo, author of a high school reader and a series of grammars.

Early publishers often gambled on the work of unknown authors and in beginning new and revolutionary production methods. One of the major changes in publishing methods was inaugurated by Truman & Smith about 1840, when it entered into its McGuffey Readers illustrations drawn and engraved in America. Prior to that time all wood-cuts in local books had been engraved in England. During the Civil War Truman & Smith's successors, W. B. Smith & Co., instituted another innovation by printing from chalk plates the first textbook illustrations in color.



INSERTING AND STITCHING



**FOLDING AND BINDING**



## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

The astonishing approval given the McGuffey Readers was the star to which the publishers hitched their wagonload of business success. As sales grew bulkier, the firm continued to grow in size, meantime undergoing several changes in name and personnel. The transition from the original firm of Truman & Smith to the present publisher, the American Book Company, Third and Pike Streets, is as follows: from 1843 to 1852, W. B. Smith; From 1852 to 1863, W. B. Smith & Co.; from 1863 to 1868, Sargent, Wilson and Hinkle; from 1868 to 1877, Wilson, Hinkle & Co.; from 1877 to 1890, Van Antwerp, Bragg & Co.; and finally, in 1890, the present American Book Company, one of the nation's two largest publishers of textbooks. In this Cincinnati plant, which has a daily capacity of 25 thousand books, 450 persons are employed; and as many more are on the payroll at the company's branch plant in New York City.

Another large local publisher of commercial textbooks is the Southwestern Publishing Company (1904), Fourth and Elm Streets. Operating branches in San Francisco, Chicago, and New York, the firm issues textbooks whose subjects range from Walter W. Jennings' *A History of the Economic and Social Progress of the American People* to *20th Century Bookkeeping and Accounting*, now in its seventeenth edition.

Since 1817 the growth of population and the ups and downs of business in Cincinnati has been traced in the annual city directories, now published by the Williams Directory Company (1849, incorporated 1900), Walsh Building, Third and Vine Streets. In addition to the Metropolitan Cincinnati book, the company also issues the Dayton, Hamilton, Middletown, Norwood, Sandusky, Springfield, Muncie (Indiana), and Covington (Kentucky) directories. About 50 persons are regularly employed.

American Attorneys Directory Company, Carew Tower, which issues an annual containing a list of commercial lawyers in America, is a consolidation (1916) of *Davey's Legal Directory* (1895), and *American Adjusters Directory* (1916). Other directories published here are *Black's Directory* (1931), compilation of coal producing companies, 15 East Eighth

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Street; and the *Annual Trades Union Directory* (1896), compiled and issued by the Ames Printing Company, East Court Street.

Many religious titles have been published by the Methodist Book Concern under the imprint of the Abingdon Press, and also by the Standard Publishing Company.

Important local publishers of general books are S. Rosenthal & Company, Westerman Print Company, Wiesen-Hart Press, Nielen Publishing Company, and United States Printing & Lithograph Company, which since 1884 has been publishing *Official Rules for the Game of Cards*, a volume whose circulation has passed the five million mark. In addition, there are several firms which market accounting and record systems, ledgers, blank, and bank books.

### *Binding*

THE EARLIEST KNOWN bound book, an ivory-covered copy of Vergil in the Vatican Library, dates from the reign of Septimius Severus (146-211 A. D.), but bookbinding did not become a specialized commercial art until long after Gutenberg's invention of movable type (about 1474). Cincinnati has always been a leader in this art from the days of hand-binding (about 1810) to the modern era of machine work. The finest binding and designing today is still done by craftsmen who refuse to use machines. About 20 binderies in the Cincinnati area give employment to nearly three hundred workers, whose annual wage is estimated at 400 thousand dollars. The annual product valuation is approximately a million dollars.

Folding, the first operation in a modern bindery, is done either by hand or by machine. After folding, the sheets or sections known as signatures are then stacked in sequence on a table, and gathered by an operator taking one section from each stack in proper order. By the time the operator reaches the end, the book is complete. Then the folded sections are pressed.

Next comes the most important operation, binding together the sections. The best method is "flexible sewing," originated

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by monks in the Middle Ages. The sections are placed face downward in an upright frame; then they are sewn through the back by a continuous thread running to and from cords fastened at regular intervals in the frame.

The book is now ready for rounding, backing, lacing in the boards, and cutting edges—a process called forwarding. First the back is covered with a coating of glue, used to fill in the spaces between sections and thus hold together the back for rounding. In the rounding process the book is placed between wedge-shaped boards, which are then pressed. The back is next hammered from the center outward. Then the edges are cut and the head bands sewed.

Now comes the final important operation, preparation of the cover and finishing (placing the decorative design). In fine binding leather is always used, but durable paper covers of simulated leather are now also becoming usual for binding good books. For more than 50 years the best binders have favored morocco leather because of its flexibility. Selection of lettering for covers usually is a matter of choice, but a combination of blind tooling, the impression of warm tools on wet leather, or gold tooling, in which the impression of the tool is left in gold on the leather, produces the most pleasing effect.

The book is now ready for the final operation, polishing, a process in which heated-irons press the cover. When the desired polish is secured, the book is pressed for several days between nickel plates, and is then ready for packing and shipping.

Cincinnati bookbinders are equipped to manufacture any kind of book, from the cheapest machine-stitched signatures having a paper cover to the fine, hand-sewn sections bound in leather and elaborately tooled and designed.

The American Book Company and the Methodist Book Concern operate the city's largest binderies. Other binders are the Cincinnati Ruling & Binding Company, 143 East Third Street; George A. Flohr & Company, 528 Walnut Street; Johnson & Hardin Company, 528 Walnut Street; Mountel Press, 1006 Sycamore Street; C. A. Macke, 15 West Sixth Street; Macke Bros., 217 East Eighth Street; Progress Book

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Bindery, 717 Sycamore Street; S. Rosenthal & Company, 22 East Twelfth Street; Reichel & Company, 514 Main Street; George H. Sand Company, 1902 Colerain Avenue; Charles F. Sternberg, Third and Plum Streets; Emil Steinman, 308 East Third Street; Martin Young & Sons, 809 Walnut Street; Weise Binding Company, 610 West Court Street; Wagner Brothers, 26 East 13th Street; Winckler Binding, 133 West Central Parkway; Wiesen-Hart Press, May Street; and C. J. Krehbiel Company, 1030 Broadway.

### *Commercial Printers*

THE PRINTING ARTS are generally believed to have originated with Chinese of the twelfth century who began printing their books from wooden blocks at a time when the graphic arts in Europe had not progressed beyond the hand-written vellum or parchment book. The first advance in the printing process came about 1449, when Johannes Gutenberg (1400-1468), Mainz, Germany, invented movable type and a wooden press operated by a hand lever. Printing then conquered Europe, and by 1500 more than 11 thousand plants in some two hundred cities had printed about 35 thousand editions and a total of 12 million volumes. In America, the first press was set up in the early sixteenth century by Tonio de Mendoza, viceroy of Mexico. In 1639 at Cambridge, Massachusetts Stephen Daye opened the first printery in the United States.

Throughout the early days of printing all printers set type by hand and used the same kind of wooden, hand-operated presses designed by Gutenberg. In the nineteenth century, however, printing methods were revolutionized. In 1814 Frederich Koenig, of Saxony, invented a cylindrical press; in 1818 Karl Klietsch, a Bohemian, devised the first practical intaglio process; and in 1886 the New York *Tribune* installed the first automatic typesetting machine, later named the Linotype by Editor Whitelaw Reid. Developed by Otmar Mergenthaler (1854-1899), a Baltimore machinist, this device casts type from five to 144 point—from one-fortieth of an inch to two inches.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

There are three distinct types of modern printing. The most popular is letter press, or relief, printing, by which impressions are made from raised type letters, half-tone engravings, zinc etchings, wood cuts, or any other material with a relief surface. (This book was printed by the letter press method). In lithographic printing impressions are made with greasy ink from a smooth-surfaced stone or plate. Intaglio, or photo and roto-gravure printing, is an impression made from sunken, or deep-etched, letters or plates.

Cincinnati printing houses have kept step with the times. The city's first printery, owned by William Maxwell, was a combination newspaper and commercial office. At first the *Centinel of the North-Western Territory* was the only publication issued, but Maxwell later printed and published the codified territorial laws, a work continued by Edmund Freeman, his successor. As Cincinnati grew, the commercial printer became an important asset to trade. Shops sprang up overnight, and a vigorous industry was born.

Among the pioneer printers was Achilles Pugh (1805-1876), a Pennsylvania Quaker who was descended from Ellis Pugh, religious writer who emigrated to America with William Penn. In 1830 Achilles Pugh set up a small shop here. In 1836 he began printing a paper called *The Philanthropist* for the Ohio Anti-Slavery Society, headed by James G. Birney.

Cincinnati had profitable trade relations with the South, and many citizens were afraid that Birney's humanitarianism would cut this bond. They flared up in opposition, marched to a public meeting, presided over by Mayor Samuel W. Davies, and declared that "no abolition paper should be published or distributed in the town."

But Pugh was a fighting Quaker; he defiantly upheld his rights of free speech and a free press. A stout principle, however, has not always stood up well before a stout mob. On July 14, 1836, a crowd jammed its way into Pugh's shop, broke the press, and scattered the type.

The next week, however, Pugh's press again put out *The Philanthropist*. On Saturday night, July 30, tireless vigilantes gathered the wildest mob in the annals of early Cincinnati,

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again crashed into Pugh's shop at Seventh and Main Streets, showered the type into the streets, tore down the press, and sacked the office. Parts of the press were later dragged down Main Street and tossed into the Ohio River.

The righteous mob had made all provisions to uphold the best traditions of getting rid of independent men upholding private principles. It had brought along tar and feathers. But there was something about Achilles Pugh that disdained tar and feathers, and he was simply ordered to leave town.

For a time Pugh published the paper at Springboro, Warren County, bringing the "abominable sheet" down the canal to Cincinnati. Soon afterward he re-established his shop here. In 1879 the firm of Pugh Printers was incorporated as the A. H. Pugh Printing Company. Now the corporation, under direction of Achilles H. Pugh III, grandson of the founder, has a modern plant at 400 Pike Street (1905), where nearly 150 workers are employed, and labels and commercial printing of all kinds produced.

In 1868 Samuel Rosenthal, a German immigrant, set up a small print shop in a second-floor room at Vine Street and Opera Place. The oak of this acorn is the S. Rosenthal & Company, the city's leading commercial, book, magazine, and newspaper printer. Since 1923 the company has occupied its own six-story modern building at 22 East Twelfth Street. Henry Rosenthal, son of the founder, is chairman of the board, while George Rosenthal, son of Henry Rosenthal, is president. More than 36 million copies of various publications are annually issued from the plant.

Among the other large Cincinnati commercial printers are Acme Printing Service, 540 Main Street; The Acorn Press, 235 Scott Boulevard, Covington; American Art Printing Company, 2646 Spring Grove Avenue; Arrow Press, 106 East Court Street; Bachmeyer-Lutmer Press Company, 430 Commercial Square; The Jos. Berning Printing Company, 217 East Eighth Street; The Bohnett Company, Third and Vine Street; Bramkamp Printing Company, 800 Sycamore Street; Central Printing Company, 15 West Sixth Street; Colortype Printing Company, 308 East Third Street; Craftsmen Printing Company,

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714 Sycamore Street; The Feicke Printing Company, 436 Commercial Square; Flueron Press, 400 Pike Street, Hirschfield Printing Company, 410 West Court Street; Jaeger Printing Company, 2364 Harris Avenue, Norwood; The C. J. Krehbiel Company, 1030 Broadway; General Printing Company, 434 Elm Street; Globe Printing Company, 505 Elm Street; The Grossman Press, 622 Broadway; The Koenig Printing Company, 225 Race Street; McDonald Printing Company, Arbor Place, Norwood; The Miami Printing Company, 217 East Eighth Street; Mountel Press Company, 1006 Sycamore Street; The Multi Color Type Company, 4575 Eastern Avenue; The Ohio Press Printing Company, 817 Main Street; Parkway Press, 1100 Sycamore Street; Premier Press Company, 217 East Eighth Street; Roesler Bros., 528 Walnut Street; Schulte & Cappel, 809 Walnut Street; Seyler-Nau Company Inc., 325 West Third Street; Sullivan Printing Works Company, 1054 Gilbert Avenue; Frank Vehr Printers Inc., 139 Opera Place; Westerman Print Company, Colerain Avenue; Wolf Publishing Company, 4415 Montgomery Road; Wolff's Standard Printings Works, 110 East 4th Street, Covington; American Printing & Label Company, 314 East Twelfth Street; and Woodrow-Weil-Stanage Company, 726 Main Street.

Altogether Cincinnati has more than three hundred commercial printing plants, where some 4,200 workers, earning about seven million dollars in annual wages, produce all kinds of printed, lithographed, and gravured matter.

Besides the printers there are several firms specializing in furnishing machine composition to small print shops. J. W. Ford Company, 108 West Central Parkway, is the largest. Others are The Cincinnati Typesetting Company, 436 Commercial Square; Bachmeyer-Lutmer Press Company, 430 Commercial Square; Brinkman Typesetting Service, 217 East Eighth Street; and Sattler Linotyping Company, 717 Sycamore Street.

For many years Cincinnati was a leading center for the printing of sheet and church music. But early in 1937 the city's last exclusive printer of music closed shop. Several printers, how-

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ever, still set and print sheet music. The process generally used is to punch the notes into soft lead slugs, which are placed in forms, from which the sheets of music are printed.

Other particularized printers are those producing continuous forms, such as sales slips: Miami Systems Corporation, 2735 Colerain Avenue; H. W. Nichols Salesbook Co., 229 Race Street; and Hamilton Autographic Register Co., 7 West Sixth Street.

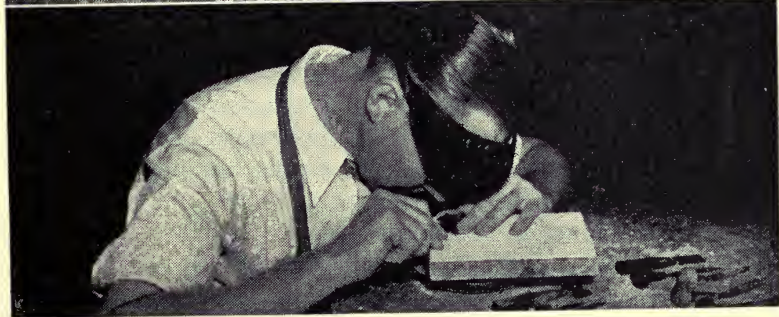
### *Lithographers*

TRYING TO MAKE music sheets cheaply, Aloys Senefelder (1771-1834), of Prague, Bohemia, accidentally came upon the idea of writing the notes on stone and making the impressions from the stone. Thus was discovered the process of lithography, now one of the important printing trades in Cincinnati. In 1818 Senefelder published a handbook on lithography in which he mentioned the possibility of using zinc plates instead of stone. But nearly a century was to pass before this method (offset lithography) was developed.

The city's oldest lithographing concern is Strobridge Lithographing Company (1854), 4530 Montgomery Road, Norwood. Every known method, from the first hand press, to the steam, electric, and offset processes, has been used by the firm. The largest Cincinnati lithographer is the United States Printing & Lithograph Company, a subsidiary of the United States Playing Card Company (1880), Robertson and Beech Avenues, Norwood. This company, the world's largest manufacturer of playing cards, has developed many of the advanced methods in lithography.

The Hennegan Company, 311 Genessee Street, is the Cincinnati pioneer in offset lithography. Plant facilities have been doubled in the past five years. Other local lithographers are Calvi-Tone Color Plate Corp., 659 East Sixth Street; Cinti Lithographic Co., 313 Findlay Street; De Luxe Offset Company, 714 Sycamore Street; Doering Bros., 3301 Colerain Avenue; Donaldson Lithographing Division of United States Printing & Lithograph Company, Robertson and Beech Ave-





ENGRAVING PROCESSES

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

nues; Eagle Lithographing Company, 1672 Providence Street; The Gibson & Perin Co., 121 West Fourth Street; The Korb Lithographing Company, 2144 Reading Road; Lincoln Lithographing Company, 121 Opera Place; Nivison-Weiskopf Company, Main Street, Reading; Rainbow Lithographing Company, 4142 Davis Lane; Wieball Bros., 143 East Third Street; Otto Zimmerman & Son Co. Inc., 120 East 3rd Street, Newport; Capitol Printing Co., 224 Post Square; Foto-Lith, Inc., 222 West Fourth Street; and Enquirer Job Printing Company, 412 East Sixth Street.

### *Engraving Processes*

PHOTO-ENGRAVING CONVERTS tone values of photographs, paintings, and drawings into relief printing surfaces. Although experiments in engraving were conducted as early as 1852, it was not until 1890 that photo-engraving processes were developed for commercial use.

In modern engraving all pictures consist of lights and shades. Continuous tones are transformed into separate printing surfaces by a process which involves the use of a half-tone screen. The screen, parallel and vertical lines or dots, is placed in the camera directly in front of the photographic plate, which causes the light reflected from the "copy" (photograph) to pass through the open spaces onto the photographic plate. The resulting dot formation represents a minute portion of the picture. The fineness of the screen is judged by the number of parallel lines to each inch. For example, a hundred-line screen consists of 10 thousand dots to the square inch.

The half-tone negative is then transferred photographically to a sensitized copper plate, which is developed and then etched with acid before each plate is mounted on wood blocks.

The 19 Cincinnati photo-engraving shops are equipped to produce every type of work, from simple line plates and half and middle tones, to ingenious color separations for color printing. Local engravers are Acme Engraving Co., 128 Opera Place; Art Crafts Engraving Company, 705 Sycamore Street; The Art Reproduction Co., 124 East Eighth Street; The Cen-

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

tral Engraving Company, 15 West Sixth Street; Chapman & Rapp, 128 Opera Place; Cincinnati Process Engraving Company, 1006 Sycamore Street; The De Luxe Engraving Company, 714 Sycamore Street; Graphic Arts Engraving Company (1936), 222 West Fourth Street; Meyer Engraving Company, 808 Sycamore Street; Modern Engraving Company, 817 Main Street; National Engraving Company, Inc., 325 West Third Street; the Octograf, Clegg-McFee Engraving Company, 310 East Court Street; The Photo-Type Engraving Company, 210 East Ninth Street; The Quality Engraving & Electrotype Company, 436 Commercial Square; Repro Engraving Company, 505 Elm Street; The Schultz Goziger Company, 534 Sycamore Street; the Standard Photo Engraving Company, 532 Walnut Street; and Threlkeld-Jones Company, 22 East Twelfth Street.

Cincinnati has the world's largest plant for the making of electrotypes—the Rapid Electrotype Company, 126 West McMicken Avenue. Other local concerns are Cincinnati Electrotype Company, 528 Walnut Street; Employing Printers Electrotype Company, 904 Sycamore Street; Quality Engraving and Electrotype Company, 436 Commercial Square; and Service Electrotype Company, a subsidiary of Rapid Electrotype Company, 126 West McMicken Avenue.

### *Paper*

MAKING OF PAPER, one of the oldest crafts, probably originated in China. For centuries before the Christian era the Chinese manufactured paper by dissolving a vegetable compound into pulp and placing the resulting sheet in a body of water, where the floating fibres formed a film. Much of the paper used in China is still manufactured in this primitive way. At least as early as six thousand years ago the Egyptians made paper from the fibres of the papyrus, a tall reed which grew wild along the banks of the Nile. Not until about 1150 A. D., though, was paper made in western Europe. In 1690 the first paper mill in this country was set up in Philadelphia by William Rittenhouse, who could put out 2,500 sheets per day.

Just as the Chinese relied on the bark of the mulberry tree for their raw material, so today trees furnish by far the greatest

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part of the material which goes into paper making. The basic process in paper manufacture is boiling a raw, fibrous material—wood pulp (cellulose), or cotton, linen, or other cloth fibre—until it is reduced to a thin pulp. The pulp is placed on a fine mesh, to which the fibres adhere. When dried and pressed, the “felt” thus obtained is the coarse paper.

When William Maxwell set up his printing press at Cincinnati in 1793, he had to worry about getting his supply of paper. The river was sometimes too high or too frozen to float boats. By 1825 two local mills, the Phoenix Paper Mill and the Cincinnati Steam Paper Mill, both situated on the Ohio a short distance below Cincinnati, were in operation, and the publishers' paper problems were solved.

Very soon thereafter, with the opening of the Miami and Erie Canal (1827), the paper mills, which needed large quantities of water, began migrating north along the Mill Creek Valley to use the surplus water of the canal. Soon paper mills were strung all along the waterways in the Miami Valley. Today half the 58 paper plants in Ohio are in the region.

The largest Ohio mill, and one of the largest in the world, is The Champion Paper and Fibre Company, Hamilton, incorporated in 1895. The company suffered complete destruction of its plant by fire in 1901. Rebuilt today on a 60-acre tract, with 51 buildings, it employs 4,700 workers, and has a capacity of five hundred tons of finished paper per day. Three eight-hour shifts of employees work at turning out 1,500,000 pounds of paper products each year. The corporation also owns 69 thousand acres of timber land in North Carolina, South Carolina, and Tennessee.

Since the World War the Beckett Paper Company (1848), Hamilton, with about 230 employees, has become known for its fine offset papers and special finishes, both by plating and roll-embossing processes. The W. B. Oglesby Paper Company, Middletown, and the Gardner-Richardson Company, with plants at Lockland and Middletown, are other large local mills.

## Chapter XII

### *Food for Cincinnati • The Chains • Wholesaling • Department Stores, Spe- cialty Shops, Chain Drug Stores*



THROUGHOUT 150 YEARS Cincinnati has been specially interested in the growth, manufacture, distribution, and sale of food for its own citizens and those in the vast trading area which it serves. The industry has grown from the time when nearly every man raised most of his own food to the present complex and highly specialized system of divided production and distribution. This complicated process now accounts in Cincinnati for the greatest number of employees, the largest payrolls, and the leading valuation of any trade classification. In 1935 some 3,786 retail food stores, giving jobs to about seven thousand persons, had gross sales of 75 million dollars. That year the 163 wholesale units, including staples, manufacturers, agents, brokers, and distributors, with about two thousand employees, had gross sales of \$69,667,000. The wholesale and retail units combined paid more than 14 million dollars in wages, with the retail group accounting for about 11 million dollars.

From 1788 to 1820 the Cincinnati who did not raise his own produce got it from nearby farmers by bartering his services or manufactured articles. Until 1800 barter was the only method of trade. Peltries, the standards of value, ranged from a rabbit skin worth  $6\frac{1}{2}$  cents to a deer skin valued at 50 cents. Gradually a variety of currency brought by traders, soldiers, and new settlers was spilled into the city, and although money was still scarce business men devised a system of trade.

Home-grown foodstuffs were so plentiful that they brought remarkably low prices on the market. Prime beef was  $6\frac{1}{4}$  cents a pound; pork, in quarters from the wagon, three cents a

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pound; eggs, five cents a dozen; chickens and wild turkey, four cents apiece; corn, from eight to 10 cents a bushel. Wheat averaged from 30 to 40 cents a bushel. Staples such as coffee and sugar, which had to be imported, were extremely high and hence used sparingly. The cheapest blend of coffee cost 75 cents a pound. Ingenious and thrifty housewives coated rye with sugar, and brewed a substitute for coffee.

The Ohio country was just being opened and its trade was still small. The Ohio River, however, quickly became a great commercial highway, and as sales outlets were found for the surplus corn, wheat, barley, and other produce, the farmer was able to live independently in a simple, but comfortable, way. But the average Cincinnati was able to eke out little more than a livelihood, and he did not usually dissipate his sparse income on luxuries.

Meanwhile retail business suffered heavily because of the 1820-25 financial crisis, and barter was again the principal method of exchange. As banks reopened, monetary conditions improved; and immediately the local food industry tried to perfect a system of supply and demand comprehensive enough to take care of future population growth.

The aim was good, but the system came slowly. At first most retail sales took place between producer and consumer; the exchange was made either from the wagon or at the many public market places. Thus the butcher made daily trips, cutting his steaks and chops on the tail-gate of his wagon; and the whisky salesman came twice weekly. Tea and spice salesmen tried to put a library in every home: with each purchase they gave coupons redeemable for books. (The general store carried only staples in stock). Afterwards traders took the surplus farm products on a commission basis, loaded them on boats, and started down the Ohio River. Often they had to go to New Orleans before they could make a profitable exchange. Gradually the general store was superseded by the merchant dealing in particularized commodities, and residents made general food purchases at grocery stores, bought meat—they liked especially hung beef “‘chipped up’ raw”—at the butcher shop, and got bread, rolls, and cakes from the baker.

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At first all sales were made in bulk. Meantime several manufacturers of teas, coffee, and spices began to package their products. Consumers liked the idea, and soon practically all distributors were putting up their stuffs in packages.

In the 1880's the success of the first chain grocery systems, using low cash prices, extensive advertising programs, and attractive interiors and merchandise displays to bring in customers, revolutionized retail trade practices. For a time the independent merchant stuck to the old methods of slipshod book-keeping, easy credit, double prices, and unattractive merchandise displays, usually represented by open cracker, flour, molasses, and sugar barrels. But as good customers passed by the neighborhood store and made purchases at the "chain," the independent merchant had to do something to avert ruin. By adopting chain methods he systematized the business; and by joining co-operative purchasing organizations he was able to reduce prices and regain much of the lost trade. Today, of the nearly four thousand local food markets more than three thousand are independently owned and operated.

Cincinnati merchants were leaders in the co-operative buying movement which swept the country during the nineteenth century. In 1897 several retail grocers pooled their money and organized the Cincinnati Wholesale Grocery Company. Soon the profits derived by members attracted other merchants. Although the original Cincinnati Wholesale Grocery Company (since 1924 White Villa Grocers Inc.) has become the nation's largest retail grocer co-operative, with more than a thousand members in Greater Cincinnati, the requirements for membership have never changed. Today, as in 1897, each grocer-member must own at least one share of stock and abide by certain credit and merchandising rules. Advertising and promotion programs also are undertaken co-operatively. White Villa Grocers Inc. operates its main warehouse and offices at Pearl and Pike Streets and a branch in Dayton, Ohio. Merchandise is retailed under the White Villa label, and coffee is roasted at the Cincinnati warehouse.

Several other grocery wholesalers operate a semi-co-operative purchasing plan. The larger ones are Janszen Company

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(1875), 62 Walnut Street, sponsor of the Dot Food Store system, coffee importer, and wholesaler and distributor of grocery sundries; Henry Helmers Grocery Company, 525 West Court Street, of the "Plee-zing plan;" and Arthur Baehr Company, 21 West Front Street, Cincinnati distributor for Regal Stores.

The Colter Company (1838), Water and Vine Streets, Cincinnati's oldest wholesale grocery organization, specializes in supplying hotels, restaurants, and institutions. Other wholesalers are Bell Grocery Company, 210 East Second Street; Diehl Wholesale Grocery Company (1925), Second and Main Streets; Dixie Wholesale Grocery Inc., 31 West Eighth Street, Covington; Flach Bros. Grocery Company, 2 East Second Street; Lewis Bros., 113 East Pearl Street; Cincinnati Food Products Company, 44 Vine Street, supplying hotels, restaurants, and institutions; O. K. Wholesale Grocery Company, 206 East Walnut Street; Thiemann Bros. Inc., 218 Central Avenue; and Jacob Vossler Company, 423 West Court Street.

Completing Cincinnati's wholesale food distribution system are the local sales organizations and warehouse facilities maintained by manufacturers engaged in interstate trade. Combined, these concerns account for more than 50 percent of the foodstuffs bought in the city.

### *Farm and Dairy Products*

THE FERTILE LAND in the vicinity of Cincinnati was a prime reason for the heavy influx of the early settlers to the Miami country. Through 150 years the good earth has been bountiful; to the tillers of soil it has given corn, wheat, potatoes, beans, tomatoes, apples, pears, peaches, and a variety of berries. Today the agricultural industry in the neighborhood of Cincinnati is still large—but not productive enough to fill the city's market basket. Some crop surpluses, however, are shipped from the city.

Because the climate does not permit more than one crop a year, many farmers have constructed hothouses for the raising of produce during the winter. Within 25 miles of the city are



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more than a hundred of these plants. In 1937 nearly 200 thousand baskets of hothouse tomatoes grown in the vicinity were exported from Cincinnati.

The city is also noted for its manufacturers and processors of food products. Heading the list are the bakers. Of the more than two hundred baking firms in the city, one, the Strietmann Biscuit Company (1860), Twelfth Street and Central Parkway, maker of crackers and cakes, now markets its products nationally. Three of the largest chain grocery systems, Kroger Grocery & Baking Company, Great Atlantic & Pacific Tea Company, and Albers Super Markets, operate their own bakeries.

Next in importance are the dairies. More than 70 dairy firms have plants in the Cincinnati area. The modern local dairy dates from Thomas French's milk venture in 1840. In 1842 the firm name was changed to French Bros.-Bauer. Today the successor to this pioneer dairy, French-Bauer, Inc., Plum Street and Central Parkway, is the city's leading distributor of milk and allied products. Other large dairies are Townsend-West Dairy (1860), Plum Street and Central Parkway, and Matthews-Frechtling Dairy, 2363 St. James Avenue. The Cincinnati Milk Products Company, 49 Central Avenue, and Consolidated Products Company, 945 Barr Street, produce and market condensed and evaporated milk.

### *The Chain Store*

A COUNTRY BUMPKIN transplanted to a business world in 1881 dreamed about a revolution which could be sprung in the retail grocery trade. As he made deliveries of tea, coffee, and spices for the Imperial Tea Company, the young Cincinnati planned what he would do if the opportunity every came his way. Bernard H. Kroger (1860-1938) further decided that meanwhile he would learn all there was to know about the business.

His chance finally came. Kroger's employers, busy nursing a wholesale river trade and ready to close out their retail business, offered him the job of managing the store for \$12 a week

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and 10 percent of the profits. Kroger eagerly accepted, and immediately put into practice some of his merchandising ideas. Although the retail store had been using red ink on its books for several years, Kroger showed a profit of \$3,100 the first year. The success of the new methods convinced the young man of the practicability of his plan, and he asked for a third interest in exchange for his share of the earnings. When this was indignantly refused Kroger resigned.

With a partner Kroger organized the Great Western Tea Company, opening a retail grocery store at 66 East Pearl Street (the No. 1 store of the Kroger chain). All merchandise was clearly marked and artfully displayed, premiums were given with coffee and tea sales, and both the store front and interior were brightly painted. Public response to this new type of merchandising was immediate. Although a horse was killed and a wagon and merchandise destroyed, and flood ruined most of the store stock, Great Western Tea Company earned a small profit during its first year. More ambitious than ever, Kroger was eager to open a "chain of stores," so that it would be possible to get the best merchandise through mass buying. Mass buying meant cutting costs; by cutting costs Kroger could undersell competitors. Since Kroger's partner did not believe the chain plan practical, he retired, selling his interest in the business to Kroger for \$1,500 in 1883. A few weeks later, a second store was opened, and the firm name changed to the Kroger Grocery Company.

So began the first grocery store chain. Kroger's idea was a sensation in the retail trade world. The "chain" method spread quickly to other units of trade, and today nearly 35 percent of the nation's retail sales are made by chain organizations.

Kroger continued to make his business grow. By 1893, when the company was operating 17 retail stores, the net profits had reached 112 thousand dollars. At the turn of the century the firm had 30 stores. Until 1902, when the Kroger Grocery & Baking Company was incorporated, all merchandise had been bought in the open market. Then Kroger established a warehouse, and made plans to package merchandise under a company label. At the same time, realizing that he could expand

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into the meat business Kroger persuaded Adam Nagel, owner of 14 meat markets and a packing plant on Bank Street, to become a member of the Kroger organization. The plan of combining meat and grocery departments under one roof was another revolutionary move by Kroger; when it proved successful, competitors quickly followed his example.

By 1912 the company owned 157 stores, four warehouses, and a Cincinnati factory producing candy, cakes, bread, and package goods, such as coffee, tea, and spices. That year activities were extended to another state; stores, offices, and a warehouse were opened in St. Louis, Missouri.

In 1928 Kroger, after seeing his single store grow into a chain of more than three thousand, sold to a syndicate a portion of his stock for a sum between 26 and 28 million dollars, but remained in the organization as chairman of the board.

Today, in addition to a complete bakery, the Cincinnati factories at 1240 State Avenue include a meat distributing and processing plant, a coffee roasting plant, a complete dairy, departments for the making of candy and other food items, and a packaging department for olives, teas, spices, mustard, and salads. A poultry and rabbit processing department is on Florence Avenue. The company also operates, outside of Cincinnati, beverage plants, a printing plant, and laundries. A factory producing store fixtures and equipment at Jackson, Tennessee, is run by the Piggly Wiggly Corporation, a Kroger subsidiary.

Besides having stock control of Piggly Wiggly, the Kroger concern owns the Wesco Food Company, which deals in produce, perishable food, and canned goods; the Colter Company, a wholesaling organization, with which is affiliated Pay-N-Take-it Inc. (1934), operating more than 10 local super-grocery and meat markets; and the Kroger Food Foundation, a research organization where foods are tested and merchandising problems studied. In addition, the company has its own fleet of trucks and a private police department.

In 1938 the Kroger Grocery & Baking Company was the nation's second largest retail food organization, operating more than four thousand stores in some 1,550 towns and cities

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situated in 19 states, and having annual sales of more than 240 million dollars. There are factories and warehouses in 16 cities, and about 21 thousand employees. Executive offices are at 35 East Seventh Street.

Chain store merchandising methods and sales were affected by the struggle independent grocers made to recapture lost trade. About 1930, after 40 years of uninterrupted progress, the era of rapid chain expansion came to an end. Companies started to close stores which did not show a profit; and many of the larger corporations operating in more than one state were forced into expensive legal battles when some legislatures approved acts increasing chain store taxes.

Until 1933 efforts to combat the "soak the chains" influences seemed wasted. But in November of that year William H. Albers, former president of the Kroger Grocery & Baking Company, opened in Norwood the first Albers Super Market. He adapted the old chain-store methods to changing conditions; instead of having two, three, or four stores in a neighborhood, he concentrated complete marketing facilities in one huge, centrally situated store. All merchandise was neatly marked, and buyers served themselves. The low cash prices, made possible by low overhead, and the free parking attracted buyers by the thousands. The sensational success of the super-market saved the grocery chains. Other grocery organizations aped Albers' example, and whenever possible combined two or three stores into a super-market.

The Albers Super Markets, Inc. now operates 17 of these vast stores in Greater Cincinnati and in Dayton, and is planning to extend activities to Columbus and other cities. In 1933 the corporation employed 30 persons; in 1937 seven hundred employees earned 400 thousand dollars in wages. Gross sales that year totalled \$4,500,000. Offices and warehouses are at Mitchell Avenue and the B. & O. Railroad, while a complete bakery is operated at 601 East Fifth Street.

Other local chain grocery store organizations are Schneider Grocery Company (incorporated 1907), with offices and warehouses at 640 Carr Street; Burke Grocery Company (1929), 14 East Front Street; and Voss Grocery Company (1873,

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incorporated 1913), 62 Main Street. The Schneider organization dates from 1890 when two brothers, P. and G. Schneider, opened a retail store on Freeman Avenue, near Eighth Street. Today the corporation operates 67 stores in Hamilton County, employs 310, and pays 340 thousand dollars annually in wages. Although seven stores were in the 1937 flood district and losses from the rambling waters totalled 15 thousand dollars, three million dollars in sales that year represented the best annual mark in the company's history.

The Burke Grocery Company, operating 36 retail stores in Greater Cincinnati, employs 76, and in 1937 had gross sales of about a million dollars. In 1937 the company lost 58 thousand dollars when merchandise and fixtures in nine stores and the warehouse were destroyed or spoiled by flood waters. Meat departments are leased to independent butchers.

The Voss Grocery Company, with 25 retail stores in Greater Cincinnati, has about a hundred employees and a payroll of a hundred thousand dollars. The organization is planning to build several super-markets.

The nation's largest retail grocery organization, The Great Atlantic & Pacific Tea Company (New York, 1859), has some 80 stores, four of which are super-markets, in Greater Cincinnati and 70 others nearby, serviced from the local office, warehouse and bakery, 3250 Fredonia Avenue.

### *Wholesale Commerce*

LEATHER-CLAD SETTLERS of Cincinnati's first days needed essential goods pretty badly. But there were obstacles such as the lack of transportation facilities, unsatisfactory methods of barter, and the disappointing discovery that expansion was restricted because the infant United States had been unable to set up a standard system of currency exchange. Nevertheless, many Cincinnatians plunged hopefully into trade. They found that the Ohio River could make a good highway and widen their sales frontier. Immediately they took the surplus grain, flour, meats, whiskies, and a small selection of hand-made articles west and south to New Orleans, where they

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bartered their goods for merchandise needed in Cincinnati and talked up Cincinnati to the South.

These early missionary efforts were good for Cincinnati commerce. Much machinery and many manufactured products required by the South were bought through Cincinnatians. As trade increased, huge warehouses for storage of merchandise made a tall facade for the city along the waterfront; from dawn to dusk roustabouts loaded boats with cargo destined for far-away markets and fast packets carried local merchants and salesmen into untapped sales territory.

Commerce was spurred on by the opening of canals and railroads and later by the use of the telegraph and the telephone, until sales of nearly 500 million dollars in 1935 made the Queen City's market the thirteenth largest in the nation.

Today Cincinnati's 1,383 wholesale establishments, carrying thousands of articles in stock, from heavy equipment to paper and waste materials, give employment to some 14 thousand persons, with annual payrolls of more than 22 million dollars. Leading the various units in sales is the grocery trade, with more than 69 million dollars; next come coal and coke, with 59 million dollars, and farm products, both consumer and raw materials, with a total of 55 million dollars. In 1935 the combined net sales of local companies amounted to more than 477 million dollars, while the 63 other Hamilton County establishments had sales of some 36 million dollars—a total of 513 million dollars for the 1,446 Hamilton County companies engaged in wholesale commerce.

Modern methods of refrigeration in railroad cars, motor trucks, warehouses, and stores have eliminated the waste and spoilage common during shipment, and they have made possible the local distribution and sale of perishable fruits and produce grown in Florida, Louisiana, Texas, Arizona, and California. Cincinnati is now the distributing center for a region embracing southwestern Ohio, eastern Indiana, and northern Kentucky, and daily auctions of fruit and produce are conducted by the Cincinnati Produce and Fruit Exchange, 27 West Front Street. In season a farmers' wholesale market is held at Twelfth Street and Central Parkway, where the early

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hours of the morning see farmers beside their trucks and produce bargaining with many of the city's grocers.

Because of its geographical situation Cincinnati has also become the focal point for distributing articles produced elsewhere. Many large national organizations maintain local sales offices and warehouses, while others keep merchandise in public storage depots.

The largest and most modern local general and bonded warehouse firm is the Cincinnati Terminal Warehouse, Inc. (1924), 49 Central Avenue, which has a seven-story fire-proof building containing 16 acres of space, a third of which is for cold storage. High-speed elevators transfer merchandise, and railroad cars are loaded and unloaded within the structure. Other general warehouses are Baltimore & Ohio Warehouse Company, Second and Smith Streets; Cincinnati Merchandise Warehouses, Inc., 7 West Front Street; Front and Butler Warehouses, Inc., Front and Butler Streets; Manufacturers Warehouse Company, 717 Sycamore Street; Cincinnati Storage and Warehouse Company, 221 Plum Street; Merchants Cold Storage Company, 646 Freeman Avenue; and Cincinnati Ice Manufacturing & Cold Storage Company, 417 East Court Street.

### *Department Stores, Specialty Shops*

THE RISE AND GROWTH of the modern department store has been phenomenal. The city has ten major stores of this type having combined annual sales exceeding 30 million dollars. In the Greater Cincinnati area there are an additional 11 stores, with sales in 1935 totalling nearly three million dollars.

The department store in Cincinnati dates back to January 2, 1832, when William McLaughlin and John Shillito became partners and bought the staple and fancy dry goods business of J. W. and O. B. Blanchly at 55 Main Street.

A good example of 1832 merchandising methods is an advertisement of McLaughlin and Shillito in the November 25 issue of the *Gazette*:

WILLIAM McLAUGHLIN AND JOHN SHILLITO  
having purchased the entire stock of the late firm of

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J. W. & O. B. Blanchly, respectfully inform their friends, the customers of that firm, and the public in general, that they have united the above mentioned stock to that of William McLaughlin, and without enumerating the various articles now comprising their stock, they would merely observe that they think they are enabled to offer an assortment of goods not inferior to any in the market; & they entertain hopes that the attention which will be bestowed in the future selection of their goods and their undivided attention to business, will secure a continuance of the patronage which has been extended toward the two establishments.

Cinc. Nov. 25, 1832.

McLaughlin & Shillito.

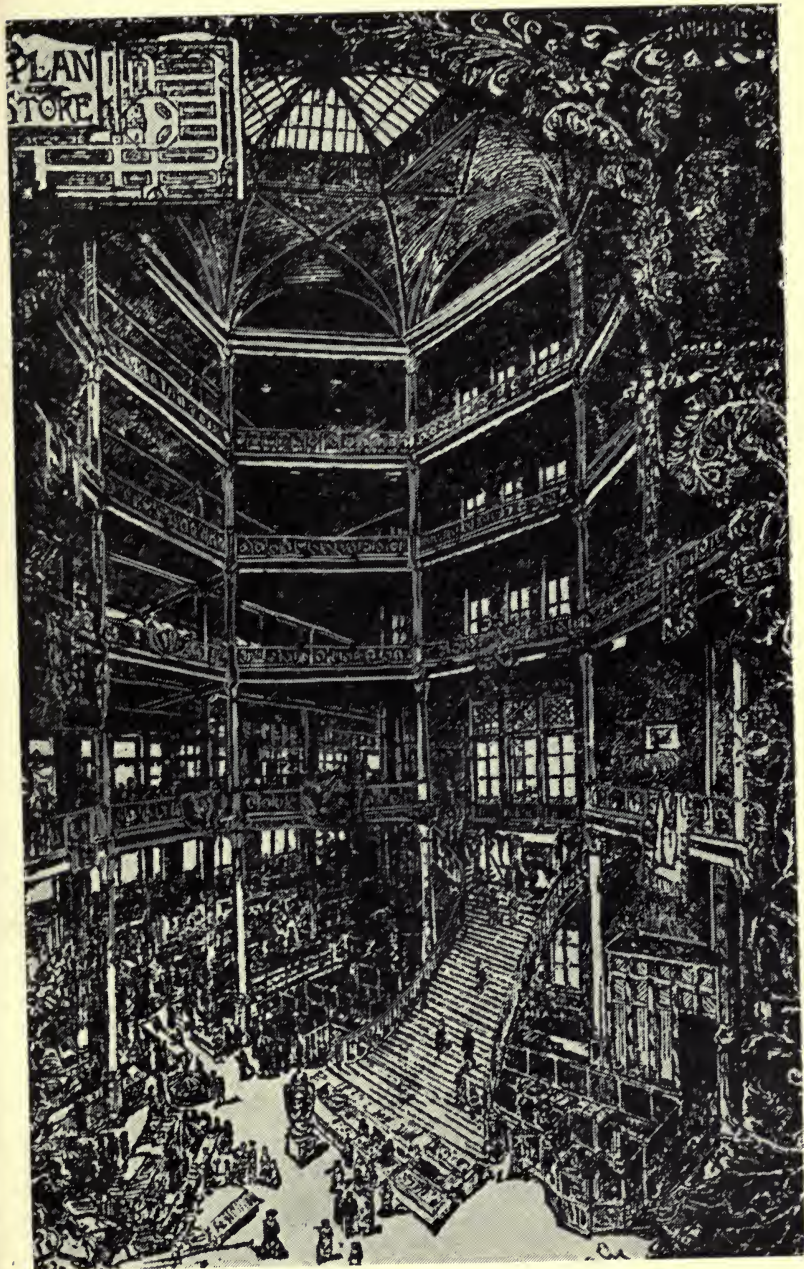
The story of McLaughlin and Shillito not only represents changes in retail methods, but also epitomizes the general development of other stores in the city. At first, the firm did an extremely good business. But the junior partner was not satisfied; he wanted to get more sales by adding more departments. His partner disagreed, and the partnership was dissolved about 1840 when Shillito purchased McLaughlin's holdings and inaugurated his own system of merchandising.

His success was phenomenal, and by 1884, when a new building was erected at the southwest corner of Seventh and Race Streets and Shillito Place, the John Shillito Company was operating the largest department store in the Middle West. When other stores adopted new methods and leaped into competition, the growth of Shillito's was somewhat retarded. Since 1930, however, when the John Shillito Company was absorbed by the Lazarus interests of Columbus, it again jumped ahead.

In 1937 Shillito's completed a two million dollar expansion and modernization program. The exterior of the original brick building was rebuilt in stone, an addition constructed, and a garage for customers added. The present store, the largest in Ohio, has 13 acres of floor space, occupying an entire city block from Race to Elm Streets and Shillito Place to Seventh Street. Included among the 130 departments are four restaurants, a 20-bed emergency hospital, and a testing laboratory with facilities for accurate examination of fabric, colors, hosiery threading, and general merchandise.

The retail and wholesale dry goods trade flourished particularly well just before the Civil War. In 1852 G. W. McAlpin





DEPARTMENT STORE OF 1884



MARKET DAY

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set up a small store for the sale of yard goods. Slowly the business grew, departments were added, and today the McAlpin Company, Fourth Street, between Vine and Race Streets, is a huge retail store. Sales in 1925, the firm's best year, totalled \$3,010,929.23. In 1937 sales amounted to \$2,006,195.75, and the 185 employees earned nearly 200 thousand dollars in wages.

Unsettled business conditions in Cincinnati during the Civil War did not keep H. and S. Pogue from trying their hand at retail trade. Forming a partnership in 1863, they opened a dry goods store, weathered the hard times during and after the war, and slowly expanded the business into a department store. Incorporated as the H. & S. Pogue Company, in July 1887, Pogue's store at Fourth and Race Streets is today one of the city's major retail establishments (about 75 departments). Annual sales exceed 11 million dollars. In 1938 employment was about 1,500.

During the Civil War two young brothers and a stranger, all Cincinnatians fighting side by side in the Union forces, became warm friends. After demobilization, W. H. and Fred H. Alms and W. T. Doepke decided the best way to continue the war-time comradeship was to become business partners. Pooling their savings, they accumulated capital of 10 thousand dollars and in 1865 leased a small store at Canal and Main Streets, where they set up a wholesale and retail dry goods and floor covering business. Jutting up from the bank of the canal, the store was far from the shopping district. Competitors smiled and bet the business would fail in a few months. But the wagers were never collected, for the enterprise returned handsome profits. In 1889 it was incorporated as the Alms & Doepke Company, with a paid capital of \$1,200,000. In 1923 the company declared a two hundred percent stock dividend. Today the store covers an entire block, from Central Parkway to Reading Road and from Main to Sycamore Streets. Since the city's major shopping area has not yet crept to the doors of Alms & Doepke, the company operates a private motor bus system for customers. Wholesale trade now accounts for a third of the gross sales. About six hundred persons are employed.

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In 1877 C. R. Mabley stood in front of his clothing store on Fifth Street, between Vine and Walnut Streets. His shop was neat and business was good, but Mabley was intrigued with the idea of setting up a department store at the busy northeast corner of Fifth and Vine Streets. Later that year he discussed his plans with a friend, J. T. Carew, and within a short time a partnership was formed to make the dream a reality. The store prospered. When the Carew Tower building was erected in 1931, Mabley & Carew moved into its present ultra-modern quarters. The store now has more than 50 departments.

Rollman's, on the northwest corner of Fifth and Vine Streets, was founded in 1867 by Henry Rollman. The Fair Store (1896), Sixth and Race Streets, was the first local retail sales concern to open suburban branches in Norwood and Covington.

In 1896 a small notions store opened on West Fifth Street, west of Central Avenue. Despite its location in one of the poorer sections of the city, the store was managed by men having a good business sense, and new departments were soon added. Now the Big Store Company, Seventh and Race Streets, is one of the fastest growing department stores in the city. The company was the first in Cincinnati to adopt a merchandise club plan for children.

The Cincinnati unit (1929) of Sears Roebuck & Co., 2900 Reading Road, is the only large retail department store not situated in the downtown district. Unlimited free parking space for customers, however, has offset this disadvantage and helped expansion. Branches are in Norwood and Covington.

In addition to Cincinnati's department stores the roster of retail enterprises carries hundreds of men's and women's specialty shops, shoe stores, hat shops, hosiery and lingerie shops, fur retailers, and a number of variety enterprises, offering five, 10, 25 cents, and one dollar merchandise.

Competition has aided enlargement of the specialty shop chains; and many of the city's retail enterprises now are operated by national sales organizations. Kline's Inc., Fifth and Race Street, is the largest exclusive specialty shop for women. Other leading women's ready-to-wear stores are La Mode (1887),

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Sixth and Race Streets; Lerner's, Fifth and Race Streets; Jenny Inc. (1932, formerly Jenny L, 1922), 8 West Fourth Street, having record net sales of 566 thousand dollars in 1937; and Gidding Company, Inc., 10 West Fourth Street.

The Burkhardt Bros. Company Inc. (Burkhardt the Hatter, 1866), 8 East Fourth Street, is the leading men's specialty shop, having haberdashery, clothing, and shoe departments. Gross sales annually exceed a million dollars.

### *Chain Drug Stores*

THE AMERICAN DESIRE to experiment, to change old methods in conformity with new business conditions, is illustrated strikingly in the evolution of the drug store from the old-time prescription expert to the ultra-modern druggist, a merchant who has fitted his store with soda fountains and luncheonettes, sells magazines and books, tobaccos and pipes, perfumes and powders, toys and novelties, candles and electrical appliances—and still manages to administer to the needs of the sick. The modern druggist is not unlike the old-time general storekeeper, willing to stock any sort of merchandise his customers want to buy. A Cincinnati woman is responsible for this revolutionary change.

In 1915 Miss Cora Dow, who had inherited the business from her father, was operating several drug stores. One of these was at the southwest corner of Sixth and Vine Streets; just opposite it stood Weatherhead's Drug Store. Although both were situated at one of the city's busiest intersections, business was poor. Miss Dow decided to untangle this competitive knot. She effected a merger, closed Weatherhead's store, and organized the Dow Drug Company. She then began a sales innovation by installing a soda fountain, and adding perfume, powder, and tobacco departments.

The new merchandising method proved successful and was widely copied by competitors. As the business grew, new stores were opened in rapid succession. In 1938 the Dow Drug Company had 33 stores in Cincinnati, two in Hamilton, one in Newport, one in Covington, two in Springfield (Ohio), and

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six in Pittsburgh. Annual sales exceed five million dollars, and the 37 Greater Cincinnati stores employ 520.

Another important chain drug store concern is King Drug Company (1929), 628 Sycamore Street, which operates about a dozen retail stores in the Greater Cincinnati area.

During the 1920's, when both the Dow Drug Company and King Drug Company were showering the city with stores, several other chain drug systems began operating in Cincinnati. During the depression years following 1929, however, practically all of these succumbed to poor business conditions; and today the city has only the two major drug store chains.

## Chapter XIII

### *Public Utilities • Water Supply • Telegraph Lines • Fire and Burglar Alarms • Gas and Electric Systems • Telephone*



COMPLEX CONVENIENCES of the modern city are built on the regular, dependable operation of public utility services. Let those services once stop or falter, and the city is soon paralyzed.

Cincinnatians remember the flood of January 1937, and know their dependence on basic utilities. Rising water stopped the city's power plant and threatened the city's water supply; offices and factories closed; streetcars stopped running; telephone service was maintained only with difficulty; and citizens carried and boiled water brought by railroad from other cities and then went to bed by candlelight. Cincinnati had always taken its water and its electric power for granted; it discovered their value when it had to do without them for a while.

A municipally owned plant provides Cincinnati's water. Gas and electric power are supplied by the Cincinnati Gas & Electric Company; telephone service is given by the Cincinnati & Suburban Bell Telephone Company; and telegraph, cable, and radio message services are supplied by the Western Union and Postal Telegraph Cable systems.

Cincinnati's first citizens met the need for public utilities by private makeshifts. They took their water from the Ohio River, from nearby creeks, or from the wells which they dug on their farms. They lighted their houses with homemade candles. They cut the dry wood that they found in the forest and used it to heat their houses and cook their food. If they wanted communication with the outside world, they could always send messages by waggoner or boatman.

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With the opening of the first post office in 1791, Cincinnati flung out her lines of communication, and mail moved with fair regularity up and down the Ohio on river boats. In 1791, also, an ingenious huckster trundled a cart loaded with water for sale; but he did little business. Cincinnati distrusted its water supply, and quenched its mounting thirst with whisky. Sanitation and sociability advanced together.

Gradually the supply of utilities was systematized and mechanized. In 1909 pipelines reached Cincinnati with natural gas for heating and lighting. The telegraph spun Cincinnati into its growing web by 1847, the city appeared in 1878 on the telephone switchboards of the nation, and electricity for power and light came a couple of years later.

All except one of Cincinnati's public utilities are supplied by private corporations operating under municipal franchises. When private concerns failed, in the early nineteenth century, to meet the growing city's need for water, citizens voted in 1839 to set up a public department to operate the local waterworks. From time to time the city watches campaigns for public ownership of other utilities. In 1930 voters refused to ratify purchase of the local gas and electric plants. The battle continues, wavers, comes to an end; both sides give their arguments, and nothing happens. Cincinnati moves slowly in matters of political and economic change.

### *Cincinnati's Water Supply*

Till taught by pain, men really know not what good  
water's worth. . . .

SAID BYRON BEFORE he was too busy dying at Misolonghi to write about his feverish thirst. But Cincinnati, sitting beside an ample river, was not too busy in its days to realize that a healthy community needs good water. In 1791 along came the cart. In 1805 one of these contraptions was used to drum up enough business to supply 1,700 residents who preferred this water to whisky. This primitive system continued until July 3, 1821 when horses walked a circular treadway to bring water up two crude wooden pumps constructed by the



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Cincinnati Manufacturing Company on Front Street near Deer Creek. The water was pumped from the Ohio River to a tank on Front Street, and thence to a reservoir on Third Street.

Subscribers to the service got their water through log conduits connected with the reservoir and tank. The pipes, 10 inches in diameter and 12 feet long, had 2½-inch holes bored through them. Since taps were unknown, users plugged the pipes when water was not needed.

Civic satisfaction with this improved water service was not unanimous. Fresh in the memory of many residents was the political battle which had raged for years over the granting by the city of a water pumping franchise. The first plan for a works had been submitted to city council as early as 1810, but it was not until 1817 that an agreement was reached by the lawmakers. On March 31 the Cincinnati Manufacturing Company was given an exclusive 99-year contract to supply water to subscribers, to construct pumps, tanks, and reservoirs, and to lay pipes through the city streets. Furthermore, the town was to receive a hundred dollars per year and free water for fire protection.

As finally approved in 1818, the ordinance extending the exclusive water privilege allowed the company to

. . . convey the water into that part of town lying south of Third Street and commonly called the "bottom," within two years from and after July first next . . . and into that part lying north of Third Street, commonly called the "hill," so that the same may be delivered three feet above the first floor of James Ferguson's kitchen, within three years from July 1st, 1818.

After completing construction of the wooden pumps, the tank, and the reservoir, the Cincinnati Manufacturing Company transferred its franchise to Samuel W. Davies, who finished the building operations agreed upon in the franchise.

In 1824 two new pumps, having a capacity of 1,200,000 gallons a day, were installed; they were operated by an engine taken from the steamboat *Vista*. In 1826 the Cincinnati Water Works was incorporated with limited capital of 75 thousand dollars. Although expansion of facilities was slow, the corpora-

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

tion in 1828 laid its first iron pipes, eight inches in diameter, as a supply connection with the reservoir. In 1831 the pumps and sections of the buildings housing the machinery were destroyed by fire. For three weeks, the time necessary for emergency repairs, Cincinnati was without water.

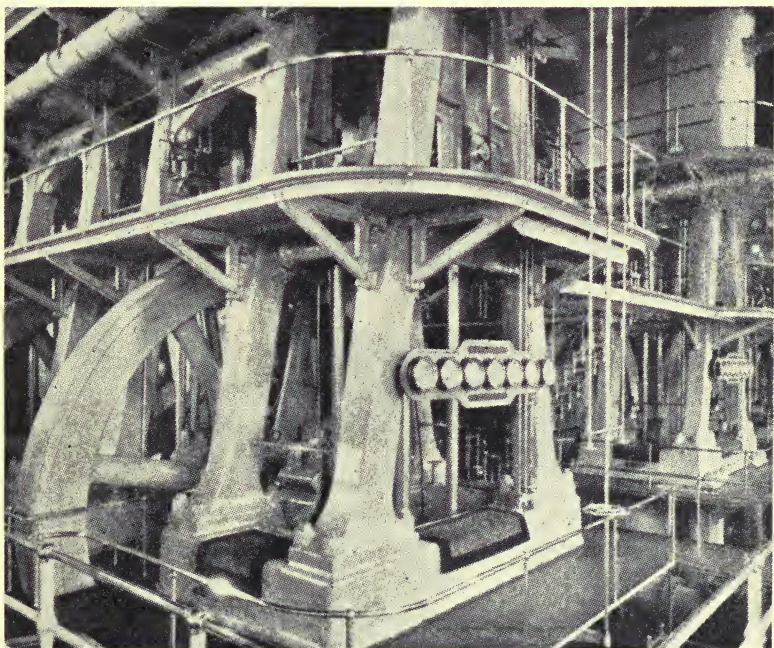
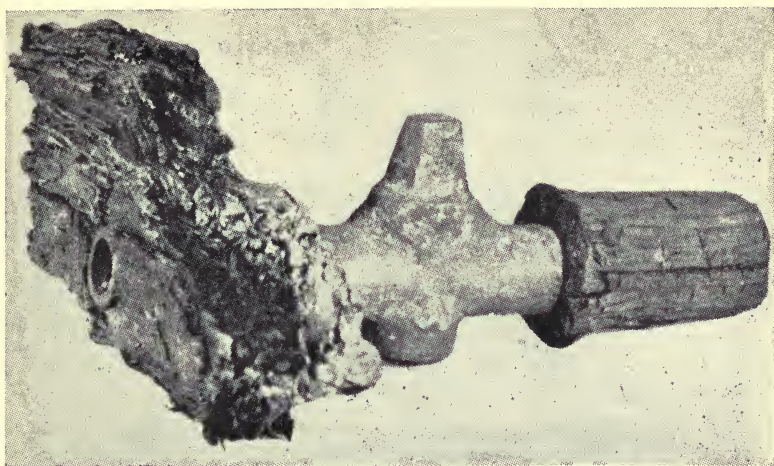
Meanwhile residents favoring municipal ownership of the waterworks continued to win converts. In 1824 this group succeeded in putting the purchase plan on the election ballots for the first time. Voters, however, summarily rejected the issue, 244 to 25. Undeterred by this setback, organizers of the movement bided their time. In 1832, believing they had accumulated enough strength, they again set the plan before the voters. Once more it was defeated, 617 to 303, and then again in 1836, 1,274 to 956.

Early in 1838 the operating company raised water rates 20 percent. This was a poor business move, for public opinion in favor of a municipal water supply was stronger than before. City leaders again placed the issue before the electorate in November and won a decisive victory, 1,563 for, and 521 against, the proposal.

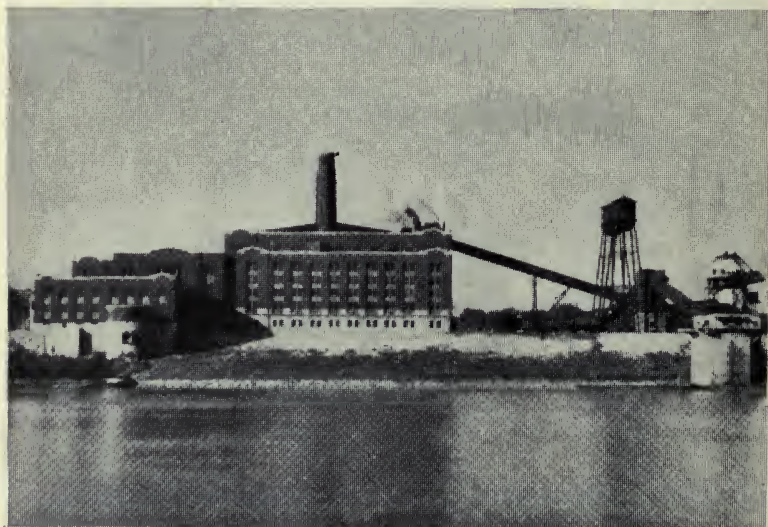
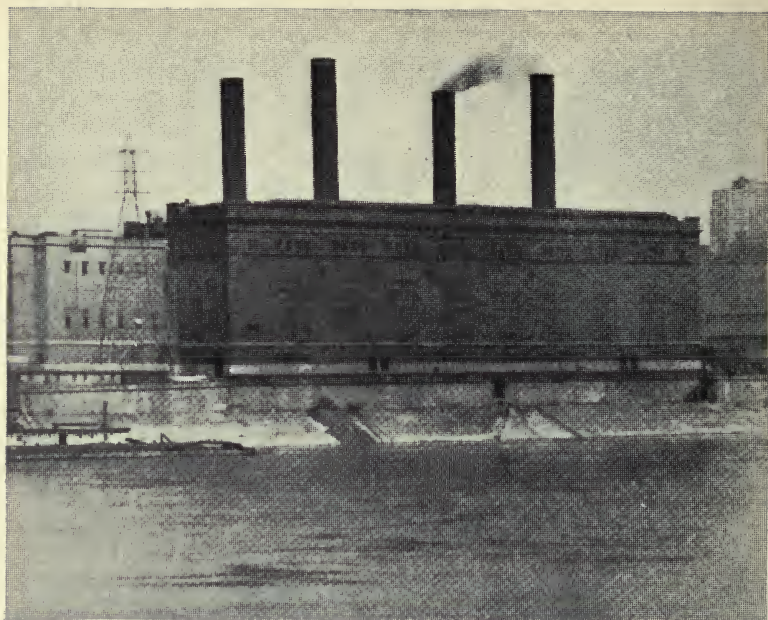
Before plans could be made for the city to take over the property, opponents of municipal ownership succeeding in having the state legislature pass, on March 16, 1839, an act which made a second vote necessary. At this special election, conducted May 3, voters again approved the purchase plan, 728 to 563.

On June 25, after the final papers had been signed, the city took possession. Owners of the Cincinnati Water Works were paid 300 thousand dollars for the property. They accepted city bonds, redeemable in 1865 and bearing six percent interest. Assets, besides the service contracts, consisted of the Third Street reservoir, two pumping engines, and 3½ miles of iron, and 19 miles of wooden, pipe.

After the city took over operations, service and plant improvements were made slowly. Since the many people who were coming to live in Cincinnati were as thirsty as the residents, some extensions to pipe lines had to be made. In 1845 the first major improvement under public ownership came with the completion of a 20-inch iron supply pipe, connecting the



FIRST WATER PIPE AND TODAY'S PUMPS



**POWER**

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

pumps with the reservoir. The following year a new pump of greater capacity was installed at the Front Street plant.

At the same time engineers were working on plans for a larger reservoir, to be built on Third Street. When completed in 1853 the added storage capacity it gave assured a constant supply of water for subscribers. To take care of the additional pumping operations, two steam engines of new design and greater capacity were installed in 1851 and 1854.

Completion of the Third Street reservoir marked the beginning of a new phase in the operation of the waterworks. Before that time improvements had been made only when absolutely necessary; and even this allowed procrastination. But Cincinnati was growing so fast that executives began to realize the economy of planning for the future. Engineers therefore worked out plans for construction of the Eden Park reservoirs, which would give additional service to hilltop residents. Despite considerable political manipulation, work on the reservoirs was started in May 1866.

As early as 1849 trustees of the waterworks placed before city council plans for a 200 thousand dollar bond issue to finance improvements. Although, according to the trustees, "the waterworks have never been a tax upon the city," legislative action was slow and the attempts to finance the project from departmental surplus, even slower. In time the habitual delays annoyed many residents, who threw complaints at waterworks executives for plant conditions causing the inadequate water supply. On July 27, 1872 the *Gazette*, commenting on the continued bickering between trustees and council, put the blame squarely on councilmen for failing to authorize the bond issue. The editors urged immediate completion of the reservoir; they pointed out that the waterworks had but one reservoir in use, and that if this source of supply should ever be rendered useless the city would indeed be in a sorry state.

Finally on October 19, 1874 engines began pumping water into the upper basin of the reservoir; four years later construction work on the lower basin was completed. All this did not happen peacefully. Early in May 1876 it was discovered that waterworks collectors were some 20 thousand dollars short

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in their accounts; and a public scandal was in order. Investigation revealed that some employees were doing a brokerage business on capital taken from waterworks service accounts. Charges and counter charges were hurled, and the investigation dragged on for months. When the storm was over, without much lifting of the clouds, the waterworks was operating under a plan which permitted closer supervision of accounts.

The department then rushed improvements, and by 1880 a 46-inch main was laid from the Third Street reservoir to Eden Park, the lower basin was filled, and in 1881 Western Hills citizens were given city water service. During the next 10 years four new pumping engines were installed, and on July 3, 1890 an auxiliary plant was ready for use.

But even with rapid improvements, including a Cummins-ville pumping station (1893), the opening of the Eden Park Station (1894), and the reconstruction of the Hunt Street Station (1896), the fast growth of population, the annexation of near-by villages, and the natural demand for water service made further advance necessary.

To meet the heightened demands, engineers made a survey, and then suggested construction of an entirely new plant, one comprehensive enough to take care of the city's future growth. On February 2, 1897 the new Waterworks Act, approved by the Ohio legislature the year before, was declared valid, and in May 1898 work was begun on the new plant.

On January 2, 1907 the main pumping station at 2526 Eastern Avenue began servicing the high-pressure mains. Work on the California filtration plant was rushed, and on November 1 all city water was filtered for the first time. On December 15 the Western Hills station, with a pumping capacity of 10 million gallons daily, began giving service to the western section of the city. The new system proved satisfactory. In 1907 the department abandoned the Eden Park and Mt. Hope pumping stations, and in 1908 the Westwood station. Meanwhile the rush of residents to build homes in the Western Hills raised a further need for water service. On August 6, 1912 two huge storage tanks on Ferguson Road were put to use, and the Western Hills pumping station began servicing Price Hill, West-

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

wood, Cheviot, Mt. Airy, College Hill, Mt. Healthy, and Fairmount. In 1914 a 17 million-gallon engine for eastern pumping service was installed at the main station, while in 1915, because of the continued influx of population in the western section of the city, another seven million-gallon pumping engine was installed at the Western Hills Station.

During the next decade shifting population and industry necessitated plant improvements. In 1918 a service main through Norwood was completed; in 1925 the Eastern Hills reservoir was finished; and in 1927 the Mt. Airy reservoir, with connections to supply service to St. Bernard, was opened. Then in 1930 came a midwestern drought, and new Cincinnati records for consumption, filtration, and pumping were established. Because of the drain made on Cincinnati water facilities, city council that year authorized an engineering survey of the entire system so that plans for future expansion could be met.

In 1931 the first effects of pollution, caused by canalization of the Ohio River, began to be noted here. When users began criticizing water tastes and odors caused by sewage sedimentation, chloronators were installed at California to treat the water before it was pumped to users.

Beginning in 1933, when the Federal Government, through the Public Works Administration and other organizations, appropriated huge sums of money for municipal construction, the Waterworks Department received approval to modernize its plant and facilities. A new Western Hills Pumping Station was constructed in 1937. It is equipped with electrically driven pumps having a capacity of 30 million gallons a day. Should more than this amount be needed, pumps can be added. Other improvements were made at California and at the main pumping station, where the capacity was increased from 153 million to 200 million gallons daily. Many miles of new pipe were laid, and plans made to prevent cessation of service because of floods.

Today the department, which employs more than five hundred persons, has more than a thousand miles of pipe and about a hundred thousand meters in use. It maintains a service and repair department, whose crews are on constant duty. In 1936 the total expenditure of the department was \$2,307,279.

Today, because of the 1937 flood, Cincinnati officials are contemplating a new program, one that will make the water-works impregnable to the onslaught of future Ohio River floods.

### *Telegraphic Facilities*

ITS GREAT IMPORTANCE as a center for manufacturing and trade made Cincinnati the first city west of Pittsburgh to be connected by telegraphic communication with Eastern communities. Only three years after Samuel F. B. Morse (1791-1872) had publicly tested his telegraph instrument in 1844, Henry O'Reilly, one of the industry's pioneers, extended his "wire" from Washington to Pittsburgh.

Believing success would come from expansion to the West, O'Reilly personally surveyed the territory and decided Cincinnati was the natural gateway to the South and West. At that time Chicago was a small village, St. Louis was on the western frontier of American civilization, and Detroit and Cleveland were given scant attention because he considered them poor distributing cities.

After obtaining capital O'Reilly organized the Pittsburgh, Cincinnati & Louisville Telegraph Company. Selecting a route leading from Pittsburgh to Wheeling, West Virginia, he rushed construction work. Crossing the Ohio River at Wheeling, O'Reilly's wire followed the National Pike to Dayton, passing through Zanesville, Columbus, and Springfield. From Dayton it came into Cincinnati over the Reading Pike. Offices were on the third floor of the College Building, Walnut Street above Fourth Street. On the floor below was the Merchants Exchange, one of the original O'Reilly stockholders.

On August 20, 1847 the wire between Cincinnati and Pittsburgh was opened. The following day the *Gazette* commented:

Cincinnati and Pittsburgh shook hands yesterday by means of Mr. O'Reilly's telegraph. We had the good fortune to be present at the first flash. Accidentally and incidentally a sort of editorial solo: and the way we were thrown into wonderment by the performance of the little brass piece on the desk of our friend O'Reilly, with its wheels, cogs, clogs, wires, etc. we shall leave our



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brethren of the Press who were not present to imagine. The whole affair worked beautifully, and the first word Cincinnati uttered in the ear of Pittsburgh took the Iron City quite by surprise. She recovered her equanimity in a short time and very politely sent us an interesting communication . . . The steamer *Cambria*, it will be seen, reached Boston on the afternoon of the 19th inst. . . . Breadstuffs were then dull . . . Compliments of Cincinnati *Gazette* and its conductors to Henry O'Reilly and his telegraph.

Although the O'Reilly line operated irregularly because of technical deficiencies and "wire tappers," an organized group of cutters who tried to manipulate market quotations, another wire was strung from Cincinnati to Louisville. This followed Harrison Pike to Cleves; thence it passed through Lawrenceburg, Aurora, and Madison, Indiana, into the Kentucky city. Service between the Queen City and Louisville began September 24, 1847. The New Orleans & Ohio Telegraph Company, later known as the "Case Line," strung the second line from Louisville to Cincinnati. Messages were sent and received from the O'Reilly office. Later the firm built a wire east from the O'Reilly office at Cincinnati along the river to Wheeling. A loop crossed the stream at Maysville, Kentucky.

The next year a wire went from Cincinnati to Lawrenceburg, North Vernon, Seymour, and Vincennes, Indiana, to St. Louis. The O'Reilly system then built the first line to Indianapolis, looping it from Dayton through Richmond. The second line (Wade system) followed the highway to Hamilton, Ohio, and then through Connersville, Indiana. The Wade concern also pioneered construction of the first Cleveland wire, which followed the highway through Columbus, Xenia, and Dayton. The Wade Cincinnati offices were on the south side of Third Street, east of Main Street. Charles Davenport and William Hunter were the operators.

In quick succession competitive telegraphic companies were organized. Among those opening offices here were the House system, having headquarters adjoining O'Reilly's on Third Street; Atlantic & Pacific Telegraph Company, with offices on the south side of Third Street, west of Walnut Street; Pacific and Atlantic Telegraph Company, north side of Third Street,

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

west of Walnut Street; Mutual Union Telegraph Company, south side of Fourth Street, east of Vine Street; United States Telegraph Company, Third Street; American Union, Fourth and Walnut Streets; Baltimore & Ohio Telegraph Company, Fourth Street, west of Walnut Street; and Bankers and Merchants United Lines, Fourth Street, between Vine and Walnut Streets.

Because all the earlier systems had not been scientifically devised, messages could be sent and received only under the most favorable conditions. Breaks in transmission were common; and of course most of these were blamed on the weather. Owing to transmission delays and "butchery" of messages, the early telegraph was regarded as a toy rather than as an important agent of commerce. Patronage was discouraging, stockholders learned to do without dividends, and often employees went unpaid. Offices usually closed at 8 p. m., but on occasion it was necessary to keep the wire open later. When this occurred operators received no extra pay. This condition, since it was repeated frequently as patronage increased, soon led to dissatisfaction among the operators. Labor difficulty, plus the fact that there was not sufficient business to be divided among the competing companies, resulted in an organized movement among executives to form one strong national network of telegraph lines. And the era of consolidation, beginning in the 1860's, was under way.

Meanwhile the O'Reilly system was doing well. Henry Ware, a Cincinnati, received a contract to manufacture the concern's equipment, and made all instruments by hand. Recalling those days, Ware once remarked, ". . . The only difficult part of the work was the collection of my bills."

About 1860 the Cincinnati O'Reilly office hired a young man named Thomas Alva Edison (1847-1931). In a short time Edison was handling a key. General Anson Stager, chief operator and manager, relates that young Edison

. . . had the peculiar habit of becoming ill whenever business in the office was light and his services not actually required. Upon being excused by the chief operator, instead of going to bed, he went directly to the Public

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Library and there read every book that contained even a hint about electricity. . . .

Apparently the young man's proclivity for study and strategic illness disturbed his fellow employees. When Edison got a job as telegrapher for a railroad, Stager did not try to persuade him to stay in the company's employ. Less than 10 years after leaving the city Edison discovered the principle for the incandescent electric light lamp.

Another Cincinnati employee of O'Reilly made a find that proved highly important to the telegraphic industry. George B. Hicks, a part-time operator and maintenance man, conceived the idea for a repeater to replace the paper registers on the earlier instrument, and succeeded in building the first magnetic sounding box.

In 1861, 14 telegraph wires came into Cincinnati; seven were strung along railroad rights-of-way. The first major technical improvement was made in 1863 when a galvanized wire was constructed from Xenia to the city. This lightened the work for circuit riding, "trouble shooters" who traced transmission breaks caused by defective joints, escapes, and grounds. The galvanized wire, bridged and soldered at the joints, removed much of the break hazard.

When the railroads began to use the telegraph frequently in the 1880's, technical development was given added impetus. For a time the fierce competition for business between the commercial and rail concerns brought with it the threat of disaster for both. Efforts pointing toward workable consolidation of parallel lines succeeded with the formation of the Union Telegraph Company (1864), predecessor of the Western Union Telegraph Company.

The first Western Union Telegraph Company office in Cincinnati was opened in 1866. In March that year the United States Telegraph Company, with all its wires and equipment, was absorbed by the new company. Compared with modern standards the first equipment installed here by Western Union was a crude assortment of tables and wires. The main switchboard had four mercury-filled holes bored through the top of the operating table. In order to switch from one wire to another

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

the various holes had to be connected by a section of wire whose ends were turned at right angles.

Since late in 1866, when the last of about five hundred consolidations and acquisitions gave Western Union a national wire network, the company has prospered plentifully. From 1870 until 1909 the corporation piled up between 20 million and 30 million dollars worth of "record communications" business each year—without much straining to get a single message.

Many mechanical and technical improvements were made during this period. The most important were the perfection and installation of two-way wire circuits, the laying of a transatlantic cable, the perfection of the telegraphic printer for this type of communication, and the instituting of a comprehensive method of delivering messages. Even control in the 1870's by Jay Gould (1836-1892), the ruthless financial tycoon who welded a new national network of common carriers, did not stop the even expansion of the telegraph system.

In 1909 Theodore N. Vail, president of the American Telephone & Telegraph Company, traded 30 million dollars worth of A. T. & T. stock for the controlling interest in Western Union held by the Gould estate. Vail believed that telephone and telegraph are complementary, best operated by one concern. By 1910 anyone having telephone service could file a telegram by phone; charges were collected with the telephone bill. In four years Vail increased Western Union revenues from 34 million to more than 50 million dollars a year. He resigned the Western Union presidency in 1915 and immediately approved A. T. & T.'s sale of its stock in the telegraphic concern because criticism of the corporate structures suggested that the inter-relationship might result in monopoly.

Meanwhile the company's Cincinnati facilities were becoming larger and more efficient. After contracts had been signed with American railroads, branch offices were established in terminals. The demand for faster delivery of commercial messages later brought about the opening of branches in various parts of the city. From 1866 until 1892, Western Union in Cincinnati, as well as elsewhere in the nation, depended upon the Mutual Union Telegraph Company for its messenger service.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

The American District Telegraph Company (in Cincinnati the Ohio Messenger & Telegraph), a Western Union subsidiary, succeeded M. U. T. in 1892 as the messenger supply house. This arrangement continued until 1919 when the parent organization took over that part of the telegraphic communications business. Delivery operations were speeded noticeably, for they had been extremely slow. The typical M. U. T. delivery boy had been ill-mannered; many an A. D. T. boy had been not only a surly fellow but also a gambler, likely to be delayed for hours if he stumbled upon a profitable game of "craps."

Western Union now employs about 14 thousand uniformed messenger boys, whose average age is 17 years. To avoid professionalism, or the belief that messenger work is a lifetime job, the company discourages youths from remaining in the service longer than two years. In that time they average about \$8.50 a week in wages. About a hundred boys are employed for Cincinnati messenger work.

From 1920 to 1929 Western Union spent 147 million dollars for plant improvements. Wire mileage was increased by 37 percent, copper wire replaced iron on trunk circuits, multiplex printing equipment superseded the Morse wires in 75 major offices, and three new high-speed permalloy transatlantic cables were laid. Over these cables 2,500 words can be transmitted every minute. Cincinnati's share in these huge expenditures included installation of the multiplex apparatus in the Dixie Terminal Annex on Third Street, west of Walnut Street; junking of the old wire system which had been at headquarters in the Ingalls Building, Fourth and Vine Streets, since 1906; and opening of a new main office at Fourth and Walnut Streets. The local improvements were completed in 1926. Later the automatic printing apparatus for direct contact with Western Union switchboards was set up in branch offices and in industrial and commercial offices.

In 1928 Western Union employed about 30 thousand managers, clerks, and operators, and some 2,500 line maintenance men and laborers in the United States. The system had about 30 thousand agencies. There are more than 24 thousand Western Union offices; and some 15 thousand telephone sending

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

agencies are in gasoline stations, drugstores, and mercantile establishments. Revenues in 1937 were \$100,483,000.

The company now sells telegrams, cablegrams, stock market reports, baseball and football scores, express service, money orders, radiograms to ships at sea, United States Naval Observatory time, and an electrical stop watch. In addition, it will sight incoming ships for a client, make air line reservations, and through the delivery department handle all kinds of curious errands, such as delivering, to home or office, samples of any manufactured product. It operates 14 cables—eight across the Atlantic Ocean, three to Cuba, one to Barbados and then South America, and two to the Azores and then to Italy, Spain, and Germany. Through connections with RCA communications, Western Union will send or receive messages to and from Hawaii, the Philippines, and the Far East.

In Cincinnati, Western Union has 28 offices and, besides its hundred messengers, 350 employees. About 250 of the workers are attached to the traffic department, which includes Morse and printer operators and line and maintenance men.

### *Postal Telegraph*

THE POSTAL TELEGRAPH and Cable Company has a story like that of its competitor in the record communications business. Organized in the early 1870's, the system has grown steadily, especially in the large Eastern and Middle Western cities, where its service facilities equal those of Western Union.

The rise of the company was accelerated in 1928 when it was purchased by the International Telephone & Telegraph Company. That year Postal duplicated Western Union's wire-telephone billing service, making it possible for a phone subscriber to file a telegram over either system; the telephone company then added the charges to its 30-day statement. Extension and improvement of plant and wire facilities followed. During the 1920's the use of teletype, or automatic printing machines, superseded the Morse system of sending and receiving, and a few years later direct contact with central switchboards and offices of clients was started.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Through Commercial Cables, Mackay Radio, and agreements with subsidized foreign telegraphic organizations, the Postal system now functions as a world-wide record communications body. In Greater Cincinnati the system has 17 offices, with main offices and transmission facilities at 528 Walnut Street. About two hundred persons, including 75 messengers, are employed locally.

### *Police, Fire, and Burglar Alarm System*

THE COMMERCIAL TELEGRAPH companies are the major communication systems in Cincinnati, but several police, fire, and burglar alarm telegraphic systems are also operated here. Organized to give protective service to stores, factories, offices, and homes, three private concerns co-operate with the city police and fire departments. Two municipal organizations also maintain their own telegraphic call and alarm systems.

The American District Telegraph Company of Hamilton County, 128 East Sixth Street, organized in 1876, is the oldest of the local protective concerns. The Ohio Messenger & Telegraph Company, 18 West Seventh Street, is a Western Union subsidiary. (Cincinnati is the only city where this protective service is not called American District Telegraph). The Walnut Hills District Telegraph Company, 108 West Sixth Street, was founded in 1892.

Devices of all three companies are similar. For example, in a large department store an intricate maze of wires links every floor with the master control wire in the office of the telegraph company. If a watchman fails to make his specified calls, a company messenger is sent to investigate. Should a fire break out while the watchman is in another part of the building, wires connecting the automatic sprinkler system with both the telegraph company and the fire tower will register the alarm when the heat causes the sprinkler system to flood with water the blazing part of the store. Burglar alarm systems link the store with both the police and telegraph company. So sensitive are these mechanical sentries that even the slightest touch on a door or display case will set the alarm in action.

### *Gas and Electric System*

BOTH THE INDIAN and the early white explorer probably knew that natural gas existed in the Ohio Valley. By 1825 it was being used as a novelty, and in the 1840's gas from Pennsylvania and West Virginia wells was used to evaporate salt brine.

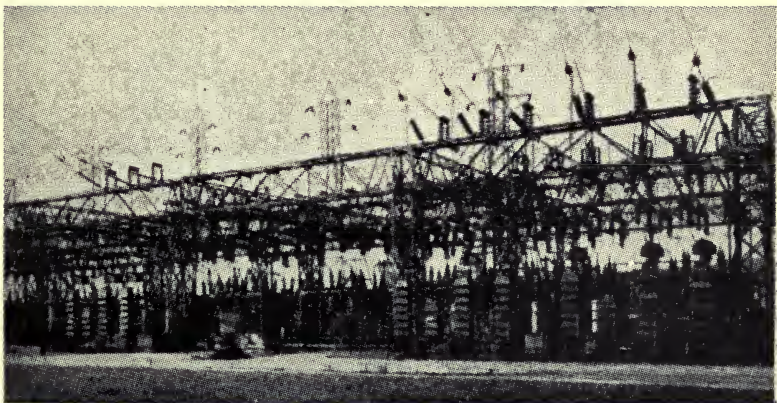
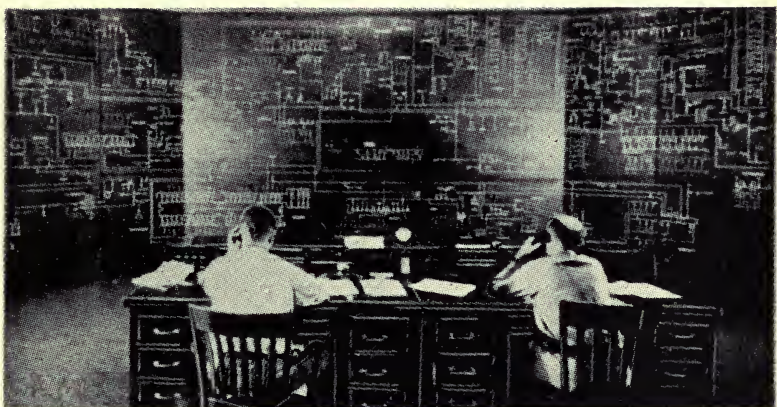
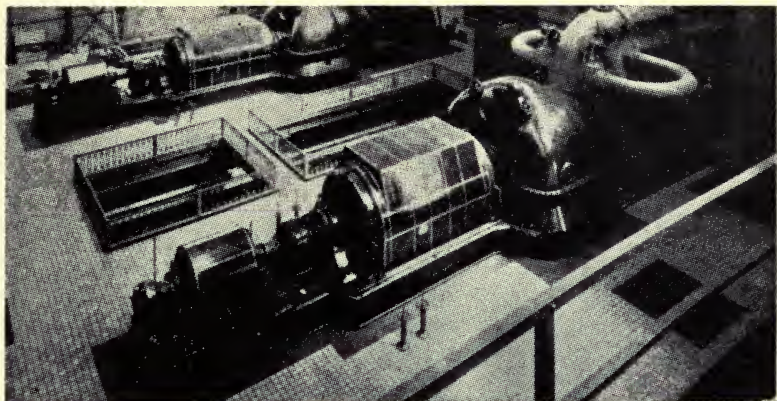
Even after the discovery of petroleum (1859) at Titusville, Pennsylvania, investors generally regarded gas as useless, for at the time there were no methods for transporting the fuel to the bigger urban centers. Natural gas was therefore not used for general industrial purposes until about 1883.

Many years before, the Cincinnati Gas, Light & Coke Company, chartered by an act of the Ohio General Assembly (1837), began in 1843 to supply Cincinnati with artificial gas. Probably the artificial gas was first used locally to light the cotton mill of the early eighteenth century; but the invention stirred local editors to speculate about the prospect of having lighted streets. As the city grew, the service was extended. In 1875 the city council contracted with the Globe Light Company to light and extinguish street gas lamps at a rate of \$29 per lamp a year. Difficulties soon arose. The wind frequently blew out all street lights on Gilbert Avenue and on Glendale Road. Engineers struggled for years before they solved the problem by using a new kind of glass-enclosed burner.

About 1905 the local demand for manufactured gas became so great that executives of the Cincinnati Gas & Electric Company (1895) discussed the possibility of bringing natural gas to the city. To do this more capital was needed. In 1906 the Union Gas & Electric Company was organized, leased all property of the Cincinnati Gas & Electric Company, and prepared to build a pipeline from West Virginia to Cincinnati.

Two important things, both requiring a big outlay of capital, remained before the program could be completed: Enough wells had to be purchased so that demands of the Cincinnati market could be met, and a high-pressure line had to be laid from West Virginia, a distance of more than 185 miles. The Columbia Corporation, now the Columbia Gas & Electric Company, was





**ELECTRICITY: PRODUCTION, CONTROL, DISTRIBUTION**



TELEPHONE (1879, 1913, 1938)

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

therefore formed on September 11, 1906. In turn Columbia organized the Cincinnati Gas Transportation Company, a subsidiary which built a 20-inch pipeline from West Virginia to Cincinnati. At the time, the Union Gas & Electric Company served 52 thousand customers through its six hundred miles of artificial gas lines in Greater Cincinnati. In thousands of homes gas was used for cooking and lighting, and hundreds of the city's streets were illuminated by gas light. Annual consumption exceeded two billion cubic feet.

Early in June 1909 the pipeline was finished. On June 25 the *Post* announced:

A flaming torch, one hundred feet in height, at the foot of Greenup St., Covington, Kentucky, will proclaim to the citizens of Cincinnati the turning on of natural gas Wednesday night. The actual turning on of the gas into the pipes of Cincinnati will not take place until Thursday morning. A standpipe is being erected on the Kentucky side of the Ohio River opposite Walnut St., from which the huge flame will burn Wednesday night from darkness until midnight. It will make light the territory for miles around. . . .

Everything is in readiness for the substitution of natural gas for the artificial product, according to Secretary W. T. Hunter, of the Columbia Company. Except the torch, there will be no ceremony of any kind to commemorate the event.

After completing the gas line the Union Gas & Electric Company grew phenomenally. By 1912 it had some 114 thousand gas, and 23 thousand electric, customers. Today the Cincinnati Gas & Electric Company and its Greater Cincinnati subsidiaries supply gas to about 195 thousand customers.

Electrical phenomena were still novel to Cincinnatians in 1870. Although hundreds of inventors were trying to discover a means of using electricity, little headway had been made. In 1872 Professor Osborne, of Miami University, delighted hundreds of visitors at the Industrial Exposition by throwing a ray of light on the cascade of a fountain. Newspapers reported that the result was not satisfactory because of the unsteady nature of the light; but it gave an "unwonted brilliancy" to the water. When Thomas Alva Edison developed the tungsten

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

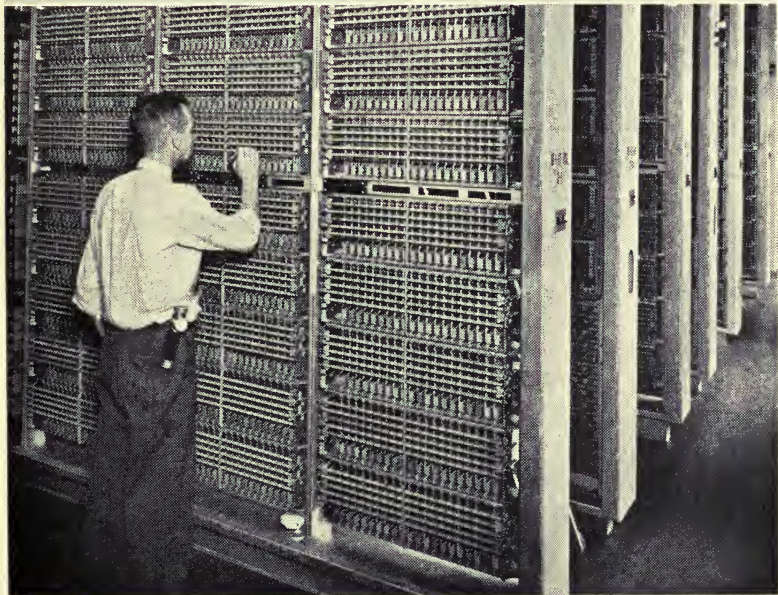
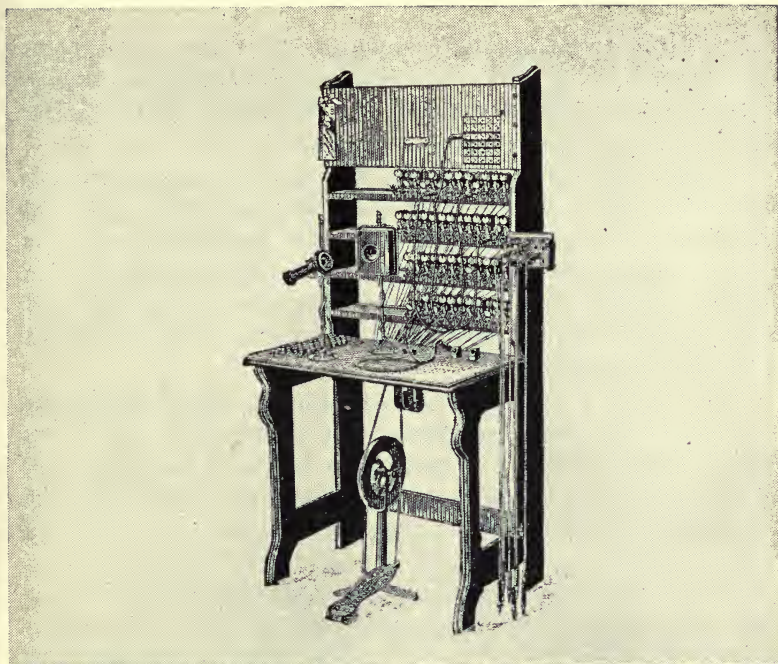
filament lamp in 1884, electric power almost immediately began shaping America's mechanical age.

In Cincinnati many small operating concerns were formed to supply current. By the turn of the century nearly a dozen electric power companies were rivals furnishing the city with electric power. Duplication of plants, lines, and operations resulted in unnecessarily heavy service charges. In 1901 General Andrew Hickenlooper, president of the Cincinnati Gas, Light & Coke Company, merged the competing companies. By 1912 the consolidated company had 23 thousand electric power customers, a gain of more than a hundred percent over its service list of 1901.

In 1917 the Union Gas & Electric Company made plans for enlarging its electric output in Greater Cincinnati. Gas and electric customers on the lines had almost doubled in five years, and the old Edison power house on Canal Street and the smaller generating station in Newport, Kentucky, were nearing their maximum capacity. In 1916 construction had already started on the West End Station, Front and Rose Streets (on the site of Hobson's Choice), which was to have an initial capacity of 60 thousand kilowatts.

In 1918 the switches were thrown for the two 30 thousand kilowatt generators at the West End Station. Although the added generating capacity assured constant service, engineers found new demands so urgent that a third generator was installed within a year. A fourth was added later to complete the present capacity of 120 thousand kilowatts. During the next two years sales of electricity soared high. From a total of 132 million kilowatt hours in 1919, consumption rose to almost 202 million kilowatt hours in 1921.

Although factories were responsible for the major part of this increase, home owners in the city also were beginning to realize the advantages of domestic lighting and appliances. In three years, from 1919 through 1921, about 35 thousand new electric customers were added in the Cincinnati area. During the next three years new local installations were even more frequent, averaging more than 22 thousand electric customers each year.



SWITCH TABLE TO DIAL BOARD (1884, 1938)

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

By 1923 engineers had to build another generating plant. In February 1924 work was begun on the Columbia Station, situated on the Ohio River near the mouth of the Big Miami River, about 16 miles from Cincinnati.

In 1925 the giant Columbia Power Station was formally dedicated. Two 45 thousand kilowatt generators were used to furnish current to southwestern Ohio, southeastern Indiana, and northern Kentucky communities. Designed to have an ultimate capacity of nearly a million horsepower, the Columbia plant soon became the basic load station for supplying power in Greater Cincinnati.

The 112 gas wells owned by the company and its subsidiaries in 1912 had increased to nearly nine thousand in 1937, and the 13 billion cubic feet of gas sold in 1912, to more than 147 billion cubic feet. Growth of the electric department has also been extremely rapid; the 23 thousand consumers in 1912 had become 199 thousand in 1937. In Greater Cincinnati the Cincinnati Gas & Electric Company, the Union Gas & Electric Company, the Union Light, Heat & Power Company, the Southwestern Ohio Power Company, the Columbia Gas Supply Company, and several smaller subsidiaries serve customers in 129 communities which in 1930 had a combined population of about a million.

### *Telephone System*

FOR TWO YEARS after Alexander Graham Bell invented the telephone (March 10, 1876) he spent much of his time delivering lectures in the hope of interesting capitalists and the public in the instrument. Meanwhile he also had to defend himself in a series of lawsuits, from most of which he came out victor. Later the Bell Telephone Associates was formed to promote the use of his telephone.

In 1877 Gardiner Hubbard, member of Bell Telephone Associates and father-in-law of Bell, visited Cincinnati and publicly demonstrated the new invention. Among those who watched the demonstration was Charles Higbee Kilgour (1833-1906), majority stockholder in the City & Suburban Tele-

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graph Association. This organization had been formed in July 1873 to furnish communication over private telegraph lines; it operated telegraph tickers, single stroke bells, and sounders.

Hubbard's demonstration convinced Kilgour of the telephone's utility. With his younger brother, John, Kilgour set out to develop a communications system in Cincinnati. A line was strung from the old Franklin Bank, East Third Street, between Walnut and Main Streets, to John Kilgour's home on Mt. Lookout. While conducting experiments, the Kilgours tried to find subscribers for the service. For months they struggled against popular skepticism, but finally succeeded in getting enough subscribers to open an exchange.

On July 1, 1878 the first Cincinnati exchange, at the southeast corner of Fourth and Walnut Streets, began servicing 18 subscribers. The freight office of the Cincinnati, Hamilton & Dayton Railroad was first on the list. The first operators were men and boys, and it took several minutes to complete the calls. At the time service began, Cincinnati was the second city in the nation to have a telephone exchange. (New Haven, Connecticut, was the first).

The first list of subscribers was printed on a small card; in 1879 card number eight, printed on one large sheet of paper, carried the names of 200 patrons. Seven of these telephones were in residences. Today a book of more than 700 pages is needed to list the 179,500 telephone subscribers in Greater Cincinnati.

By 1880 about 6,300 calls were being completed every day; today nearly a million calls are made daily in the Cincinnati area. In March 1880 the first long distance call travelled between Hamilton and Cincinnati. Two years later connections were extended to Eaton and Dayton, and in 1885 to more than 300 other communities.

In 1886 a new exchange was opened in the old Masonic Temple Building, Third and Walnut Streets. It replaced three others in the downtown district, and was equipped with the latest type of telephone switchboard. In 1890, when the company had about 3,800 subscribers, the first suburban exchange (Walnut Hills) was opened. That same year the first under-

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ground wires were laid in the downtown district, and long distance connections could be made with the large cities in the East and with Chicago and Milwaukee.

Meanwhile new inventions to improve telephone service were being marketed. The most important of these was the two wire metallic circuit. Late in 1893 the local company began replacing its single wire, or grounded, circuit with the metallic one. By 1900 this work was finished. All batteries were now in the central office instead of beside the subscribers' instruments.

At the turn of the century the Cincinnati Telephone Company began a co-ordinated telephone system in the Cincinnati area. In 1901 the Citizens Telephone Company, operating in northern Kentucky, was purchased; since that time the number of plants and exchanges has increased from eight to more than 50. In 1903, the present name, Cincinnati & Suburban Bell Telephone Company, was adopted.

About the same time, Almon B. Strowger, a Kansas City (Missouri) undertaker, was conducting experiments with an automatic telephone exchange. His first model was made with a few pins and a collar box. A few years later Strowger moved to Chicago and perfected the dial telephone switchboard. The modern automatic switchboard (the kind now being installed in Cincinnati) utilizes a series of magnetic selectors which pick out the proper letter and number by rising and turning through an intricate series of channels.

In 60 years the local telephone system has grown from a small organization of 22 employees to one of the city's major employers of labor, having some 2,250 workers. In 1930, the peak year, 3,659 persons were on the company's payroll.



## Chapter XIV

### *Radio Broadcasting • Receiving Sets • Furniture and Office Supplies • Music Instruments • Watches • Pottery and Glass*



**R**ADIO, SO POWERFUL a voice in contemporary American life that it has been called the Fifth Estate, dates back to about 640 B. C. when Thales, of Miletus, observed that amber after being rubbed acquired the electric property of attracting straws. Centuries passed before the next discovery was made. In 1654 Robert Boyle, British scientist, learned that electric propulsion can take place in a vacuum. In 1725 Stephen Gray discovered the principle of conduction when he noticed that electricity could be carried for more than five hundred feet along a hemp thread. During the ensuing years other discoveries stimulated further research in electrical phenomena. But as late as 1831, when Michael Faraday made possible the magneto and the dynamo by formulating the laws of electromagnetic induction, practical methods for the control of the phenomenon were still unknown.

A year later (1832) Samuel F. B. Morse astounded listeners when he discussed his idea of telegraphy; almost 12 years later, messages from city to city sped along thin strands of wire. Thereafter methods of telegraphic communication sprinted. On August 16, 1858 the first transatlantic cable was put into service; in 1876 the telephone was invented by Alexander Graham Bell; 20 years later Guglielmo Marconi sent and received the first wireless signals across his father's estate at Bologna, Italy. Methods of communication were being revolutionized and electrical research workers and chemists raced to shape the new invention into a more widely useful medium. From a mass of new discoveries came the present-day method of radio tele-

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phony. The first practical test was made on July 28, 1915 at Arlington, Virginia, by engineers of the American Telephone & Telegraph Company who talked to Paris, 3,700 miles away.

These demonstrations proved the practicability of radio telephony. Immediately energetic men rushed to develop broadcasting. In November 1916 Dr. Lee DeForest opened an experimental radiophone station at High Bridge, New York. That same month another experimental station 2ZK, New Rochelle, New York, began broadcasting music between 9 and 10 p. m. daily except Sunday.

Even as it thickened the storm over Europe, the day of radio broadcasting arrived bright in America. But American industry was still faced with the problem of making receiving sets for a public anxious to hear the broadcast programs. Manufacturers quickly met the need, and soon the old-time crystal detector sets were marketed. The receiving apparatus was crude; sets were unable to pick up programs originating more than 10 miles away. But they were wonderful to the people who tried to listen in—families who squabbled over turns at the earphones and tried to hear the faint, often distorted, broadcasts of musical programs then aired at night by the several low-power stations in existence.

Although as early as 1911 a Cincinnati was licensed as an operator of wireless telegraphy, Cincinnati's interest in the new radio was purely amateurish until 1919. That year the Precision Equipment Company established an experimental broadcasting studio, using the call letters WMH, in a second-floor room at Peebles Corner. Several retail stores selling electrical products began to stock the crystal sets; and talkative people at social gatherings usually asked, "Did you hear Station So-and-So?" This interest in radio was noted carefully by the manufacturers. Early in 1920, less than six months after WMH went on the air, the first Cincinnati-made crystal sets were in use. The first regular broadcast of a national event came on November 12, 1920 from KDKA, Pittsburgh, which sent out the returns of the Warren G. Harding-James M. Cox Presidential election.

About the same time the particular fate who guides industry was weaving a pattern of events soon to give Cincinnati what

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now is the world's most powerful broadcasting station. The young son of Powell Crosley, Jr., at that time a manufacturer of phonographs and automobile accessories, asked his father to buy a receiving set, and the elder Crosley, in order to satisfy a boy's whim, went shopping. Learning that the cheapest apparatus cost \$130, far more than he wished to spend, Crosley made a compromise with the boy: he would build a set at home.

While assembling this apparatus at a total cost of \$35, Crosley came upon the idea of manufacturing moderate-priced receiving sets. Intensive experimentation followed, and soon he was able to sell a complete detector apparatus for \$15. In 1921 Crosley began experimenting with radio broadcasting by operating Amateur Station 8CR from the livingroom of his home. Later he transferred the station and transmitting equipment to his factory on Hamilton Avenue, where in March 1922 Station WLW first sent its call letters into the countryside. Today, with 500 thousand watts power, WLW is the most powerful broadcasting station in the world.

Since radio had proved to be commercially feasible, improvements came thick and fast on the usual big American scale—so gigantic that David Sarnoff, president of the Radio Corporation of America, on June 15, 1936 avowed to the Federal Communications Commission at Washington:

Measured by the advances made in other fields, radio in the last ten years has lived a century. Perhaps it may crowd a thousand years into the next decade.

Beginning in 1922, progressive change in technical devices quickly made possible better reception of broadcasts. The phonograph loud speaker was adapted for use in receiving sets; condensers to prevent distortion were contrived; and more effective means of selecting programs were produced. Establishment of Federal regulations—since 1934 under the Federal Communications Commission—assigning regional channels virtually eliminated the "drowning out" of broadcasts by high-power stations.

In 1922 the programs of another local station, WFBE (now WCPO), rode the air lanes. The following year WSAI was

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

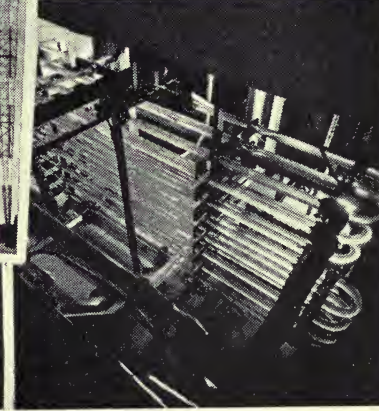
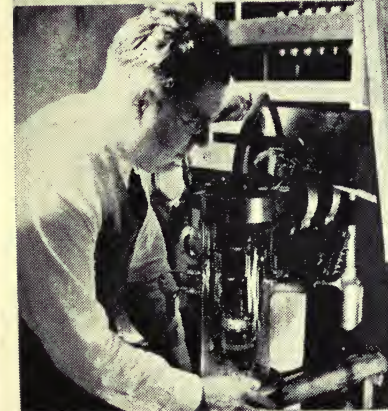
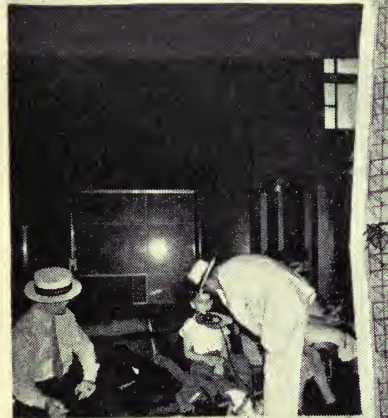
heard for the first time; in 1924 the second Cincinnati studio to use the call letters WMH (since 1925 WKRC) was founded; and in 1929 WCKY, Covington, went on the air.

As early as June 1923, when the first multiple hookup of stations for broadcasting purposes was successfully tried by WEA, New York, WGY, Schenectady, KDKA, Pittsburgh, and KYW, Chicago, a nationwide network of stations was being promoted. But it was not until the National Broadcasting Company was organized, November 1, 1926 with WEA and WJZ as key stations, that this plan was put into practice. Now the NBC operates two basic networks, Red and Blue, linking together more than two hundred stations. In Cincinnati WLW, WSAI, and WCKY broadcast NBC programs.

On September 18, 1927, 16 American station joined another national network, the Columbia Broadcasting System; by the summer of 1938, 110 member stations were in the system.

A few months after receiving an experimental license to use 500 thousand watts power, WLW executives in 1934 decided to make the station one of the key outlets for a new chain, the Mutual Broadcasting System. Four stations, WLW, Cincinnati, WOR, Newark (New Jersey), WGN, Chicago, and WXYZ, Detroit, comprised the original group. Now the Mutual System, with 107 affiliated stations, is a nationwide network. WLW and WSAI carry its programs locally.

Beginning in 1922 the success of sponsored programs selling merchandise opened a new phase of advertising. Staffs of broadcasting stations, until that time content to fret the air with phonograph music and to put on an occasional "live talent" program, scoured their wits to give prospective sponsors programs that would help sell merchandise and services and at the same time entertain. So American radio companies began to dramatize historic and scientific happenings and serial stories, and to present news, sports, and educational events—interlarded with advertisements of the sponsors. In 1922 WFBE was the first local station to broadcast sponsored baseball games. Since both listeners and sponsors appeared satisfied with this seeing through the eyes of commentators, program directors have slavishly followed this type and others that attract listeners.



RADIO



**BROADCASTING: FIRST AND LATEST**

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

"Follow the leader" policies and the cautiousness of sponsors, whose slogans seem to be: "Millions for a tried program, but not one cent for the new," have stereotyped radio broadcasting in America. Curiously enough, this conservatism has directed major changes in radio. In 1935 few broadcasts originated in Hollywood; in a few years the movie capital broadcasts became so popular that Hollywood is today the broadcasting center for network schedules. New York is now second, Chicago third, and Cincinnati, because of the super-power facilities at WLW, fourth.

When an invention reaches the big business stage in America, business usually plunges it into intensive research, and consequently takes vast strides. In January 1938 there were 728 licensed commercial broadcasting stations in the United States, whose combined 1937 income was estimated at about 141 million dollars. The number of American receiving sets has jumped from a few hundred in 1919 to an estimated 36,500,000 (including five million automobile sets) in 1938. About 130 thousand sets are in use in the Greater Cincinnati area.

Television seems about to provide the next big change in radio broadcasting. Although the transmission and reception of "see and hear" programs is now practical for short-distance broadcasts, engineers of NBC, CBS, and several independent stations are still conducting experiments to bring it to the American home as a finished product. In England and Japan regular "televised" programs are already being broadcast daily.

Progress in mechanics has been paralleled by growth in other phases of the radio industry. WLW's huge equipment is far different from the best apparatus of the early 1920's. Whereas all sending gadgets at that time were housed in one small room, many special mechanical contrivances are today necessary. At the main WLW studios are the studio control rooms and the master control room. The engineer at the studio control puts the microphones in position so that sounds can be picked up, and during the broadcast manipulates various levers so that the proper tone values are brought out. The signal then goes to the master control room, where it is again amplified, while technicians at delicate instruments check the level and quality of

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

the program. Then the signal is sent by wire to the transmitting station at Mason, about 25 miles from the studios.

When the signal reaches Mason it is stepped up to compensate for the volume it has lost while riding the wire, and is then turned over to the transmitting equipment. In transmission, radio energy is generated at the required frequency of seven hundred kilocycles at low power. The generator of this power is a quartz crystal known as a Piezo Electric Oscillator, the temperature of which is controlled by a thermostat. (The slightest variation in temperature would change the crystal dimensions, and throw the station off its wave length). Next, the 500 thousand-watt transmitter amplifies the signal from the studio into audio power of about four hundred thousand watts. The radio energy created by the crystal is also amplified to 500 thousand watts, and then combined with the signal in the last stage of amplification. Twenty 100 thousand-watt amplifying tubes and 73 smaller ones are used in the transmitters; the tubes are cooled by a million gallons of water daily and 1,350,000 cubic feet of air each hour.

After the signal is amplified, a tuning unit transfers the energy from the tubes to the vertical radiator antenna. From this tower, 831 feet high, the signal goes out in all directions to the receiving sets tuned in on seven hundred kilocycles. The same general procedure in transmission is followed by other local stations.

In 1938 Cincinnati was the home of five commercial radio broadcasting stations, several operated by the Government, and many low-power licensed amateur stations. The combined commercial employment was about five hundred, with an estimated annual payroll of more than 800 thousand dollars.

### *Cincinnati Stations*

WLW, "THE NATION'S STATION," owned and operated by the Crosley Radio Corporation, since 1934 has been the world's most powerful broadcasting station—500 thousand watts power day and night (50 thousand regular, 450 thousand experimental). It operates on a cleared American channel of



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seven hundred kilocycles. Main studios are at the Crosley plant, 1329 Arlington Street; downtown studios are in the Union Central Building Annex, Third and Vine Streets, and in the Netherland-Plaza Hotel, Fifth and Race Streets. WLW carries programs of both the Red and Blue networks of the National Broadcasting Company, the Mutual Broadcasting system, and those originating in Cincinnati on its "line to New York" (Station WHN). Three other stations are members of this optional hookup—KQV, Pittsburgh, WSAI, Baltimore, and WFIL, Philadelphia. All programs broadcast over this network originate either in Cincinnati or New York. In 1938 WLW, WSAI, and W8XAL, employed about 350 persons.

Progress at WLW epitomizes that of radio in general. In 1921 Powell Crosley, Jr., declared that if people were to buy sets it would be necessary to furnish listeners with entertainment. He built a small experimental broadcasting station, using 20 watts power and the call letters 8CR. Nightly in the living room of his home Crosley played again and again a victrola recording of Rimsky-Korsakoff's *Song of India*, and asked all who heard the broadcasts to telephone him. The answers were few, but they sufficed to convince him that he should go ahead with his experimenting.

At the time the few broadcasting stations in existence operated "hit or miss" programs on an irregular schedule. In July 1921 Crosley was granted an experimental broadcasting license; a few months later he moved his transmitting equipment to the Crosley plant on Hamilton Avenue.

In March 1922 the first license under the call letters WLW was granted. In 1923 Crosley acquired the controlling interest in WMH, which had been operated since 1919 by the Precision Equipment Company, and discontinued the station. Ever since, Crosley has concentrated his interest in WLW. In 1924 he established The Crosley Radio Corporation.

During the fall of 1924, when Crosley anticipated permission from the Department of Commerce to increase WLW's power to five thousand watts, new studios were constructed at the Crosley manufacturing plant in Brighton. With this increased power granted early in 1925, the world's first remote

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control equipment to be used for radio broadcasting began transmitting WLW programs from a plant at Harrison, 22 miles from the studios in Cincinnati.

In 1927 WLW secured a cleared channel of seven hundred kilocycles. On May 25, 1928 the Federal Radio Commission authorized the Crosley Radio Corporation to construct a 50 thousand-watt transmitter for WLW. Five months later, on October 4, the new transmitter at Mason, Ohio, about 25 miles from the studios, began operations. In 1933 the WLW studios were moved to the eighth floor of the Crosley plant on Arlington Street, and five years later WLW was the first Cincinnati station to start experimental facsimile broadcasts. Using 50 thousand watts power on a channel of seven hundred kilocycles, the station broadcasts from 2 to 5:45 a. m. daily a program of printed news and pictures which is received by special apparatus at certain experimental stations.

WLW uses the W. G. H. Finch system in conducting reception and public appeal tests. The apparatus employs rolled dry paper with a sensitized carbon back—turned to black or to half-tone values by the facsimile signals. From eight to 10 minutes is needed to record an 8 by 10-inch photograph on the self-synchronized apparatus, which can be operated from any power source. About 15 other American broadcasting stations are conducting facsimile tests. Facsimile transmission, invented by Captain R. G. Ranger in 1924, is used in transatlantic transfers of photographs by radio.

WSAI, "Cincinnati's Own Station," with main studios and offices at 1329 Arlington Street, is owned and operated by the Crosley Radio Corporation. Power is five thousand watts by day (December 25, 1937) and a thousand watts by night on a cleared regional channel of 1330 kilocycles. Until December 1937 the station had used 2,500 watts power during the day, a thousand watts at night. Although it is the basic Cincinnati outlet for the National Broadcasting Company's Red network, WSAI also carries programs of the Mutual Broadcasting System and broadcasts originating in its own studios. Established in 1923 by the United States Playing Card Company, WSAI was purchased in 1928 by the Crosley Radio Corpora-

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tion. Until March 4, 1936 programs were transmitted from equipment in the Crosley plant. On that day a high-fidelity transmitter on Warner Street, Clifton Heights, was put into service. In May 1938 a receiving antenna to pick up short-wave mobile unit broadcasts was installed atop the Carew Tower, 649 feet above street level.

W8XAL, a 10 thousand-watt short wave broadcasting station with studios at 1329 Arlington Street, is owned and operated by the Crosley Radio Corporation. The station was established in 1926 with a hundred watt power—in 1927 increased to 250 watts. Since 1931, when W8XAL was granted its present power license, the station has been entertaining a world-wide audience 14 hours a day.

WCKY, "One Minute from Cincinnati," with main studios at Sixth Street and Madison Avenue, Covington, Kentucky, is Greater Cincinnati's second largest station. Variously known as the "L. B. Wilson Station" and "the Voice of Cincinnati," WCKY first began broadcasting on September 16, 1929 as an associate outlet for the Blue network of the National Broadcasting Company. L. B. Wilson, president and general manager, in 1928 interested several Northern Kentucky and Cincinnati business men in radio broadcasting. The group organized L. B. Wilson, Inc., and applied to the Federal Radio Commission (since 1934 Federal Communications Commission) for a license to operate a five thousand-watt station with the call letters WCKY. Studios were built in Covington, and a transmitter was constructed near Crescent Springs, Kentucky, about 15 miles from Covington.

Before November 1931, when he began active management of the station, Wilson engaged in banking, theater management, manufacturing, retail merchandising, and politics. After disposing of some of his business interests, Wilson started the expansion program at WCKY which in July 1937 doubled the station's power—from five thousand to 10 thousand watts, both day and night. In 1937 a new high-fidelity transmitter was constructed at Crescent Springs. The station broadcasts on a cleared regional channel of 1496 kilocycles. In 1938 WCKY was on the air 19 hours daily. A Cincinnati studio is operated

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

in the Netherland-Plaza Hotel; business and advertising sales offices are in the Hotel Gibson.

About 80 percent of the programs are network-sponsored. By means of a change made in December 1937 Cincinnati has a split-network program: commercial sponsors may use either WLW, WSAI, or WCKY, the NBC stations. About 50 persons, including five announcers, six engineers, and the rest script writers, technicians, and studio and office workers, are employed by L. B. Wilson, Inc.

WCPO, "Cincinnati's News Station," with studios and offices at 523 Walnut Street, is the city's only broadcasting station without network affiliations. Established in 1922 with the call letters WFBE, and with studios and transmitter in the Parkview Hotel, Garfield Place, between Race and Elm Streets, the station quickly won a large local audience by pioneering in the broadcast of local sports events.

On October 1, 1935 the Continental Radio Corporation (since 1937 Scripps-Howard Radio, Inc.), a subsidiary of Scripps-Howard Newspapers, purchased WFBE and got permission from the Federal Communications Commission to change the call letters to WCPO, "The Voice of the Cincinnati Post." New and larger studios were opened in the Sinton Hotel, Fourth and Vine Streets, and the news program policy, originating in the editorial offices of *The Cincinnati Post*, was inaugurated. In 1937, after the studios on Walnut Street had been opened, the present program of news and live talent was adopted, and a high-fidelity transmitter at East Sixth and Court Streets was put into operation. WCPO has 250 watts power during the day and a hundred watts at night on a cleared local channel of 1,200 kilocycles. About 30 persons, including four regular announcers, are employed.

WKRC, "First on Your Dial," with studios and offices in the Hotel Alms, a residential hotel in Walnut Hills, since November 1, 1931 has been the Columbia Broadcasting Company (CBS) outlet in the city. Operating on five thousand watts power by day and a thousand by night, WKRC is one of the 10 basic stations in the nationwide Columbia chain. About 85 percent of its programs are network-sponsored.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

WKRC broadcasts on a cleared regional channel of 550 kilocycles.

Station WKRC used the call letters of Cincinnati's first broadcasting station when it was established in 1924. On April 5, 1925, the Ainsworth Radio Company purchased WMH, then changed the call letters to WKRC and increased the power from five hundred watts to a thousand, both day and night, and later sold the station to the Kodel Radio Corporation. In 1929 WKRC, Inc., was organized. A license increasing the power to five thousand watts at night was granted CBS in 1937, and in April of that year new studios and transmitting equipment were put to use in a penthouse of the Hotel Alms. Of the 38 persons employed by the station, eight are regular announcers. The WKRC programs of the Cincinnati Symphony Orchestra and the Cincinnati Conservatory of Music are now heard on the entire nationwide CBS network of 110 stations.

Several Government-owned and city-owned stations are in Greater Cincinnati. The Bureau of Air Commerce owns and operates station WMAS, established March 31, 1935 at Lunken Airport. The transmitter and the four directional antennae (radio beams) for airmen are at Indian Hill, about six miles from the airport. As a combined radio broadcast and range signal station WMAS is operated primarily for airplane pilots. Signals are in continental code. When it leaves the transmitter, the signal, or "beam," is about the size of a needle point. The beam then expands to form an aerial highway 10 miles wide at its broadest point. Pilots know when they are in the proper lane of traffic by listening for the signals through earphones.

Four vertical antennae send this beam from the Indian Hill transmitter. One tower shoots it in a northeastern direction toward Columbus; another propels it southwest toward Louisville; a third directs it northwest towards Indianapolis; and a fourth tower points the beam into the southeast towards Huntington. The fifth tower acquaints airmen with weather reports and atmospheric conditions. The radio beam signals are on 1,500 watts power; the weather reports, 50 watts. The station operates on two frequencies of 236 and 332 kilocycles.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

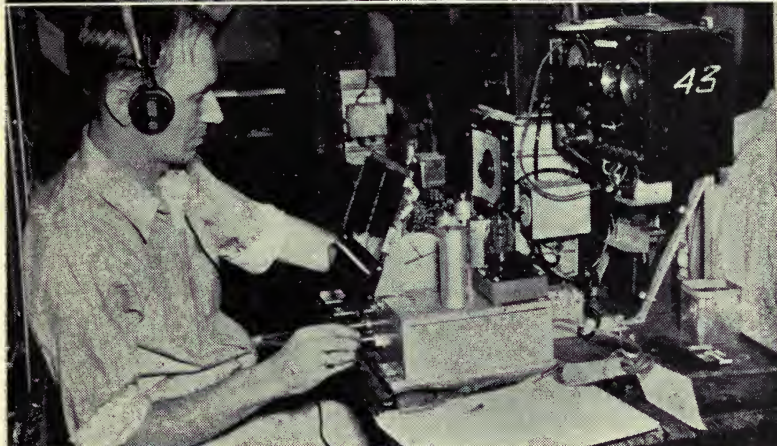
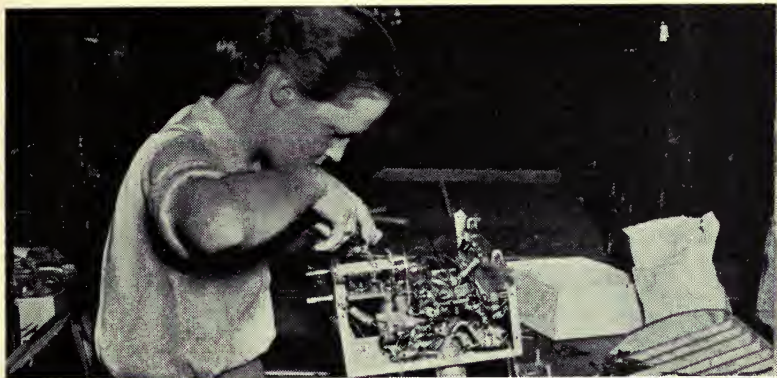
WUV, another Government-owned station in the Cincinnati area, uses both long and short waves. The broadcasting equipment, operated by the Army Signal Corps at the Fort Thomas Barracks, Fort Thomas, Kentucky, was set up in 1923. Three men are on duty 12 hours daily.

WKDU, "the Cincinnati Police," established in July 1931, is owned and operated by the Cincinnati Police Department. Broadcasts are made from police headquarters, Ninth Street and Central Avenue, to more than a hundred local Safety Department automobiles. Police and sheriffs' departments in the Greater Cincinnati area are linked with the station. Transmitting equipment is in Eden Park.

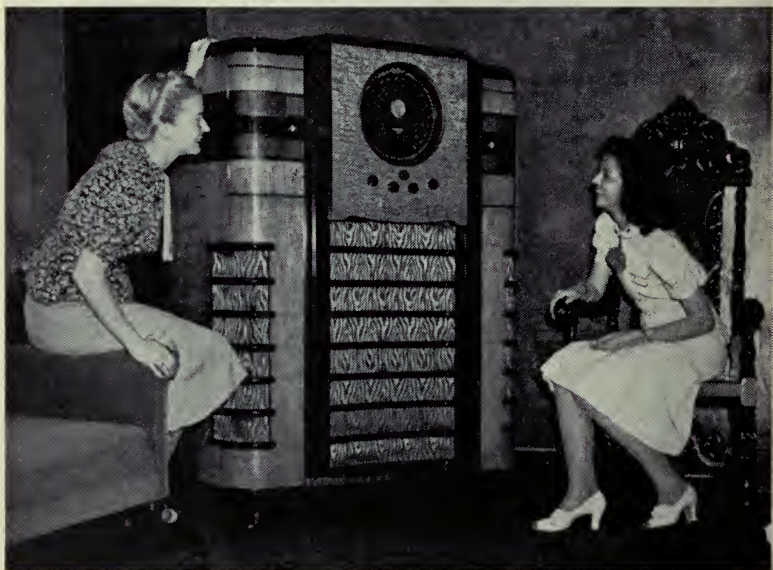
W8XSD, "Indian Hill Rangers," is a 50-watt short wave two-way broadcasting station owned and operated by the police department of Indian Hill, a suburb skirting Cincinnati on the northeast. Considered one of the most advanced police radio units in the country, the broadcasting equipment was first put to use in May 1938. Three automobile scout cars are equipped with cradle telephones and with 15-watt transmission and receiving units linking them with the key station and transmitter at Drake and Shawnee Run Roads. The 24 regular and deputized rangers make direct crime and accident reports. The maximum range of the station's broadcasts is about 10 miles.

Using the first two-way police units in Ohio, the Hamilton (Ohio) Police Department has broadcast reports over the air since November 28, 1935. Nine police automobiles are now linked with short wave Station W8XF, while three motorcycle patrolmen receive reports. Transmitting equipment is at headquarters in the City Building, Hamilton. W8XF operates on a frequency of 37 meters (8,100 kilocycles).

More than five hundred licensed amateur radio operators are in the Greater Cincinnati area, each using power up to a thousand watts. The largest and best-known of these is X8YX, maneuvered by engineering students at the University of Cincinnati. Power is six hundred watts for radiophone, and a thousand watts for code transmission on a channel of 3,996 kilocycles. Equipment includes two 80-foot towers atop Swift Hall on the university campus in Burnet Woods. This station



**SOLDERING, TESTING, AND FINISHING RADIOS**



**RADIO SETS (1921, 1938)**



proved particularly valuable during the 1937 flood when students stood by for several days broadcasting information.

### *Radio Set Manufacturing*

IN 1920 RAPID advance of radio broadcasting and the subsequent rush by American industry to supply the demand for receiving sets helped the country break the minor depression which had set in following the World War. At that time two local plants manufactured a limited number of popular, although expensive, crystal radio receiving sets. One of the firms, the Precision Equipment Company (1919), was also operating a broadcasting station on a more or less regular schedule. The programs were chiefly rebroadcasts of phonograph music.

Several Cincinnatians were becoming engrossed in the problems of radio manufacture. Using his Hamilton Avenue phonograph factory, Powell Crosley, Jr., manufacturer of phonograph cabinets and automobile accessories, was making one-piece porcelain sockets for vacuum tubes and later complete parts for sets. Afterwards he designed and produced a variable condenser and a rheostat, and at length was manufacturing a complete crystal detector set. This apparatus, which sold for \$15, was cheaper than any other device of its kind on the market. In the fall of 1921 Crosley proposed to his engineer, Dorman Israel, that they try building a receiving set without a crystal. Israel concocted something that included a coil with an old oatmeal box as its core. That night the two men sat beside this contraption at Crosley's home and tried to tune in Station WMH, at Peebles Corner, about seven miles away. Soon they heard sounds, and then an announcement, "This is Station WJZ, Roselle Park, New Jersey."

Crosley and Israel were amazed. Nervously they turned the dial, hearing Pittsburgh, Detroit, Hamilton, and again WMH. Using the experimental set as a model, Crosley designed and soon was manufacturing Harko, Sr. Once more he was able to undersell competitors, and by the spring of 1922 the Crosley plant was producing five hundred radio receiving sets daily;

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

it had become the world's leading manufacturer of small crystal sets.

Crosley did so well in 1922 that he bought a large building at Colerain Avenue and Alfred Street. Two years later, shortly after the business was incorporated as the Crosley Radio Corporation, the continued big demand for radios again overloaded the firm. A building at Colerain Avenue and Sassafras Street was therefore remodeled into a factory. A four-story addition was built in 1926, and an eight-story structure completed during 1929.

In 1938 the Crosley Radio Corporation plant, extending from Sassafras Street to Arlington Street on Colerain Avenue, and more than six hundred feet west on Arlington Street, housed not only the radio set manufacturing division, but also the studios of WLW, WSAI, and short wave Station W8XAL, and the electric refrigerator, washing machine, ironer, Xervac, and gas and electric stove production units of the corporation. The plant has a manufacturing capacity of two thousand home and automobile radio receiving sets daily. Branch factories of the corporation are in Richmond and Kokomo, Indiana.

Because of the straight-line production methods he inaugurated, Crosley has often been called "the Ford of the Radio Business." At the Crosley plant manufacturing is reduced to its simplest processes. A conveyor belt two miles long moves up and down the building, carrying radio receiving sets, refrigerator compressors, and other pieces in various stages of production. Each article passes through thousands of hands, slowly taking form until, at the end of the belt, the product is complete. In 1938 the company was marketing what is said to be the world's largest set, having 37 tubes and six speakers. A modern radio receiving set consists of more than five hundred separate parts.

In 1920, when the first commercial radio receiving sets were offered for sale, Midwest Radio Corporation, 909 Broadway, became one of 12 companies in the nation manufacturing the apparatus, and today the firm is still in the business. In recent years the concern has developed an extensive mail-order trade for radio receiving sets and electrical refrigerators.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Another local manufacturer of radio receiving set apparatus is the Fishwick Radio Company, with shops at 407 East Eighth Street.

In 1938 more than a hundred Cincinnati concerns and individuals were engaged in the repair and maintenance of home and automobile radio receiving sets. That year combined employment in both the manufacturing and repairing phases of the radio industry amounted to about 1,500. The annual payroll was estimated at more than two million dollars.

### *Furniture and Office Supplies*

THICK WOODS FRINGED the Ohio and Miami Valleys when the first settlers came here to live. In the stout way told and retold by many history books the pioneers cut the trees, put them up into log cabins, and tooled them into rude furniture. At first there was no need for the furniture maker, but as Losantiville and near-by communities grew and men became specialists in their occupations, along came the firm dealing exclusively in the making of articles for the home.

As early as 1800 the concern of Lyon and Maginnis made desks, escritaires, dining tables, and other articles in a shop 11 miles from Cincinnati on the Hamilton Pike. Soon others were aping Lyon and Maginnis. The business was particularly good because the city was growing fast, and new homes meant more furniture needed. From 1800 to 1815, because it was cheaper to make furniture than to have it hauled over the bumpy roads from the East, the local business flourished. After 1815 sideboards, secretaries, bureaus, settees, and chairs "elegantly gilt and varnished," were shipped by steamboats to the far reaches of the American frontier.

Cincinnati met this competition by creating big concerns employing several cabinet makers, men who earned as much as a dollar a day. One of these old firms came jubilantly through the years until 1937: The Robert Mitchell Company, West Second Street, established in 1834 at 21 East Second Street as Mitchell & Moore, for many years was Cincinnati's most popular maker and distributor of quality furniture. Among

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

concerns that began in Cincinnati's early days, became famous for their furniture, and then passed quietly into oblivion were Jones & Rammelsberg, with a shop at 18 East Fourth Street, and Churchill & Ricords, 13 West Fourth Street.

In 1851 the Cincinnati chair factory operated by C. D. Johnston was said to be the largest in the world. In 1860 Mitchell & Rammelsberg, having a warehouse on West Seventh Street, advertised that it employed more than six hundred workers. Mitchell & Rammelsberg chairs were priced at from 50 cents to two hundred dollars.

The Cincinnati cabinet maker continued drawing a good wage through the Civil War period. In 1869 the value of Cincinnati-made furniture was about 17 million dollars. That year two Cincinnati companies destined to make the city famous for billiard equipment and office furniture were the largest of their kind in America—the Brunswick Company (today the Brunswick-Balke-Collendar Company, billiard and bowling supplies) and the Thomas Kelsall Company, exclusive producer of desks and school furniture.

Since America's Victorians loved gingerbreaded furniture, the talent of Benn Pitman (1822-1910) and his many proteges and of William H. Fry (1830-1929), son of Henry L. Fry, carver of Queen Victoria's throne chair, was in much demand. Pitman and the Frys carved many mantels, doors, baseboards, and articles of furniture still found in old Cincinnati homes. They liked particularly to shape birds, vines, and fruits.

Cincinnati made the first standardized bank and bar fixtures in the local woodworking plants in the 1870's. By 1890 the city had 134 furniture plants, with a combined capitalization of \$5,213,850, an output valued at \$7,349,000, and employees numbering 3,213. An immense amount of lumber went into Cincinnati furniture. During the year ending August 1892 local factories used 39,500 carloads of poplar, cherry, hickory, walnut, yellow pine, ash, elm, maple, gum, oak, and sycamore.

This huge drain on local timber soon depleted the forests surrounding Cincinnati, and the furniture industry, beginning about 1900, shifted northward to the Michigan forests and built Grand Rapids. Since woodworking concerns close to good



**UPHOLSTERING**



**FINISHING**

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

timber could now undersell Greater Cincinnati's household furniture concerns, the local trade began to concentrate its talent in the making of office equipment and store fixtures. The Globe-Wernicke Company (1884), Carthage Avenue, Norwood, became America's foremost manufacturer of office furniture and supplies. Its plant, which now covers about 26 acres, produces more than four thousand items, including filing cabinets, wood and metal desks, tables, filing supplies, storage cabinets, wardrobes, stationers' goods, visible record equipment, sectional bookcases, library equipment, steel shelving, wood and steel partitions, and special steel and wood equipment for public buildings. Other Cincinnati manufacturers of office furniture and supplies are Lyon Metal Products, Inc., 626 Broadway; H. Belmer Company, 1101 West Sixth Street; and Kruke Store and Office Fixture Company, 17 West Pearl Street.

Although the city is better-known for its office, than its household, furniture, however, Cincinnati has not deserted the household furniture business. In 1938 more than 25 plants employed about a thousand workers, who received more than a million dollars in wages.

Cincinnati's present furniture manufacturers are Sol Better Company, 2016 Reading Road; DeCamp-Swensen Company, formerly the John P. DeCamp Company, 1015 Broadway (suspended in May 1938); Haussler Upholstering Company, 3142 Linwood Road; George Lubke, 4134 East Pearl Street; Ace Dimension Mill & Lumber Company, Whateley Avenue and B. & O. Railroad; American Furniture Company, 1048 West Ninth Street; Artistic Furniture Manufacturing Company, Inc., 1275 Budd Street; Betts Street Furniture Company, 914 Betts Street; Broering Manufacturing Company, 18 East Pearl Street; Buckeye Upholstering Company, 134 West Second Street; Covington Furniture Manufacturing Company, 1342 Hermes Avenue, Covington, Kentucky; Urban J. Heyker (1918), 2124 Freeman Avenue; Henry Hoffeld Upholstering Company, Richmond and Carr Streets; Kemper Furniture Company, 922 Betts Street; Manual Arts Furniture Company, 1015 Hulbert Street; Marietta Chair Company, Second and Plum

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Streets; Samuel Mesh, 234 East Third Street; Monarch Furniture Manufacturing Company, 419 West Fifth Street; Peerless Reed Company, 1508 Elm Street; Regal Furniture Manufacturing Company, 1243 West Eighth Street; Joseph Scheid Sons Company (1869), manufacturer of living room furniture, 1908 Dunlap Street; Schirmer Furniture Company, 1911 Elm Street; George W. Schutte Furniture Company, 830 Wilkink Street; Stille & Duhlmeier Company (1877), 1200 Wade Street; C. F. Streit Manufacturing Company, 1104 Kenner Street; C. F. Thauwald Company, maker of bedroom suites, 1224 Harrison Avenue; James Lewis Reed Furniture Company, 4332 Spring Grove Avenue; and Fick's Reed Company, Findlay Street, near John Street.

### *Music Instruments*

CINCINNATI ACQUIRED CULTURE very early in its history. Today it still has a considerable music reputation. Programs of the Cincinnati Symphony Orchestra and the summer opera at the Zoological Garden reverberate in the musical world of the Middle West, while lesser-known, but fine, musical, choral, and orchestral groups give Cincinnatians opportunity to express themselves in song.

Cincinnati's music leanings have also been directed to the manufacture of pianos. Prior to 1824, pianos used in Cincinnati had to be imported either from Europe or the East. The first piano made here is said to have been fashioned in 1824 by George Charters in his woodturning shop at Fifth and Sycamore Streets. It took Charters nearly a year to construct the piano; each of the hundreds of parts were carved by hand. Because many of the parts had to be imported from Europe, and because much time was needed to complete the work, Charters sold the instrument for \$2,000. This first instrument, of square design, is now owned by Dr. and Mrs. Robert Sattler, Indian Hill.

Among the early local manufacturers of pianos were John Britting, who had a small shop on Canal Street, east of Vine Street; The D. H. Dury & Co., with a factory in the rear of a



## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

retail store on Main Street, above Third Street; and Thomas R. Blackburn, whose plant stood on Broadway near Seventh Street.

Before the Civil War several local concerns produced other types of musical instruments. In 1860 one of America's leading makers of organs was the Swaub Pipe Organ Manufacturing Company. The following year, Britting & Co., with a factory at 227 West Fifth Street, not only built pianos but also operated the largest fife and drum plant in the West, with a capacity of a hundred instruments a week.

In 1856 the opening of a small store on Main Street, between Third and Fourth Streets, marked the beginning of a business which has evolved America's largest and oldest music house. Rudolph Wurlitzer, born in Saxony, in 1853 came to Cincinnati without much money but with a sound knowledge of the making and marketing of lutes and violins. After reaching this city Wurlitzer decided to buy a few instruments and then continue his violin and flute studies.

But the prices asked by local stores for their instruments seemed too high. At the time practically all musical instruments, except pianos, organs, fifes, and drums, were manufactured in small European shops. The craftsmen who made them sold their products to an agent, who again resold them to a jobber; from this man they passed to an exporter, from whom they were bought by a New York City importer. After passing through the hands of a jobber in the Middle West, the instruments reached the retail store and ultimately the musician. But musicians like the Wurlitzer of 1853 could not afford to buy.

Wurlitzer decided to import directly from the manufacturer musical instruments that would have ready sale in America. By this new method he was able to sell at a large saving to musicians. When he opened the Main Street store, the business was known as "Rudolph Wurlitzer, Importer, Wholesaler, and Retailer of Musical Instruments." This early enterprise was successful, and Wurlitzer began manufacturing drums, bugles, and other instruments. During the Civil War many a Union bugler and drummer did a tune on a Wurlitzer piece.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Wurlitzer then opened retail stores in other cities. In 1938 the Rudolph Wurlitzer Company also operated factories at North Tonawanda, New York, and DeKalb, Illinois, and through agreements with associated concerns marketed all kinds of musical instruments. Twenty-one retail music stores are also operated in cities east of the Mississippi River, while more than a hundred studios and agencies are in other communities. Executive offices are at 121 East Fourth Street, Cincinnati.

In 1862 Dwight Hamilton Baldwin opened a one-room music store at Fourth and Elm Streets. This site, now used as a downtown salesroom, later became the location of the present Baldwin Piano Company, which covers 11 acres on Gilbert Avenue, opposite the entrance to Eden Park. The factory group is comprised of six buildings, including the main, or assembly, unit, which is eight stories high. The main building houses a chemical and research laboratory, the only one of its kind in the world, where materials used in the making of pianos are tested. More than eight thousand parts are needed in the assembly of a modern piano. At the Baldwin factories about eight hundred persons fashion and shape these parts into the finished product. Instruments manufactured at the Baldwin plant can be purchased in every large American city, as well as in 48 foreign countries. When Rear Admiral Richard E. Byrd cut the Antarctic ice, a Baldwin piano entertained his staff on the *Jacob Ruppert*.

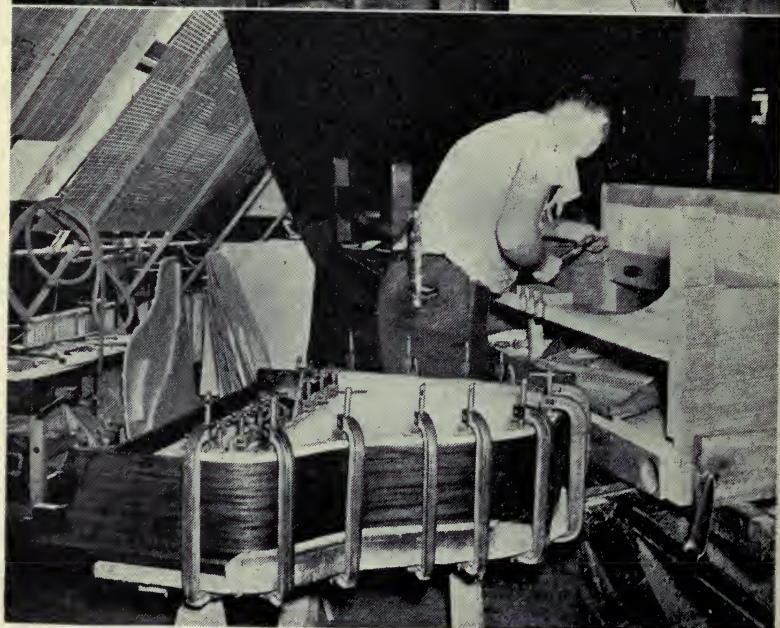
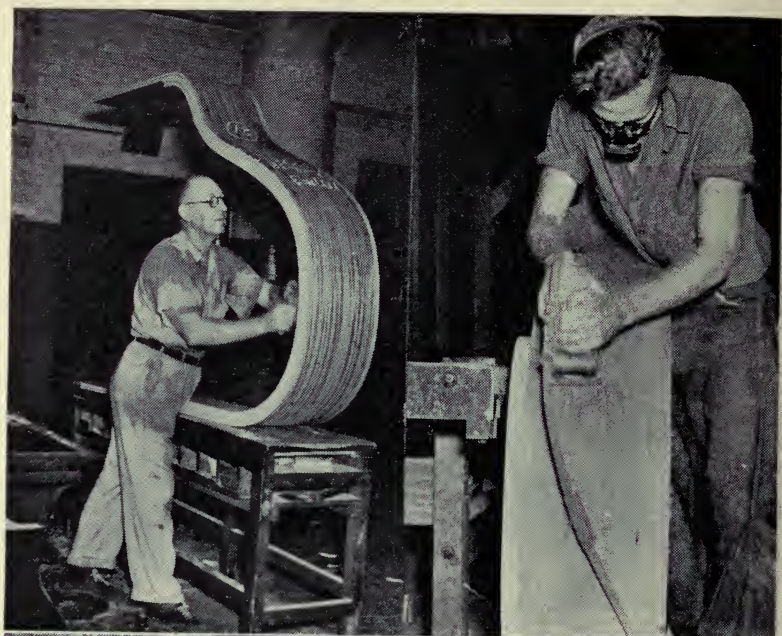
During the years when the phonograph droned its melodies into willing ears, thousands of victrola cabinets were manufactured in Cincinnati shops. Now that radio has become far more important than the phonograph, several woodworking plants have been producing cabinets for radio receiving sets.

### *The Manufacture of Watches and Jewelry*

MAN CONSTANTLY FEARS time, which shapes his days. Each day he asks himself or others "What time is it?" and jumps off to an appointment, or prods himself along, or merely settles back for more leisure. He kills time only by doing something he considers not worthwhile.



FIRST AND LATEST PIANOS



PIANO WOODWORKERS

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Time and the telling of time have been important since the days of long-armed men in caves, who when they ventured out noticed that, as the sun moved, the shadows cast by the cliffs also moved, and that the shadow from a certain tree fell upon a certain place on the ground or cliffs. Realizing that one stone at rest marked only one point, the cave dwellers soon began using stones to mark off the day into a number of parts—for hunting, for fighting, or for grabbing themselves a mate.

There were few improvements in time-telling habits until about 4,000 B. C. when ancient Babylon created the first calendar and divided the year into months, days, and hours. By 1,500 B. C. the Egyptians had invented a shadow clock shaped like a T-square. In 900 B. C. came the sun dial, a device which enabled man to tell time with a fair degree of accuracy so long as the sun shone. But on cloudy days, at night, and for a traveller the sun dial was inadequate, since various markings were required for different latitudes.

About 600 B. C. the clepsydra, or "water-thief," a vessel filled with water, began to drop time through a hole in the bottom. By 250 B. C. the clepsydra was superseded by the water clock with a dial, an instrument worked by a floating ratchet. During the next 1,500 years the hour glass, the Roman lamp clock, and King Alfred's graduated candle were used in the best circles. About 1,300 A. D. there was invented the first mechanical clock, a mechanism of creaky weights and wheels that struck the hours. In 1621 the pendulum clock first appeared; in 1826 came the public clock with illuminated dial; and finally, in the early years of the twentieth century, there ticked an electrical clock. The pocket watch was invented by Charles Cusin in 1574; the small, or home size, electric clock was first marketed about 1930.

As early as 1820 several clockmakers lived in Cincinnati, but they merely repaired watches. As the years passed, however, the skill of the Swiss and Germans in the city was applied not only to the fixing, but also to the making, of watches.

Although it was not established until 1874, the Gruen Watch Company, with a plant on Time Hill, East McMillan Street, where cases, parts, and movements made at its factory

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

in Switzerland are assembled, in 1938 was one of America's famous producers of pocket and wrist watches.

Dietrich Gruen, founder of the Gruen Watch Makers Guild, was the American pioneer manufacturer of the size 16 (railroad standard) pocket watch. In 1902 his son, Fred G. Gruen, chairman of the board of the company, who learned the watch making trade from his father, invented the verithin wheel train watch. Since an early date the Gruen firm has also manufactured wrist watches for women, and during the past decade it has created the baguette and curvex (patented title) movements.

In Madre-Biel, Switzerland, where men talk and think time for their livelihood rather than for their way of life, the Gruen watch movements are manufactured in quaint workshops suggestive of the medieval guild halls. Wherever modern machinery does a task more efficiently it is used in the Madre-Biel plant, but craftsmen still do most of the work by hand. Then the movements are shipped to the Cincinnati watch case-factory and service workshops, where artisans fit the movements into cases designed and executed with skill comparable with that of the old guildsmen.

In Dayton, Kentucky, across the Ohio River from Cincinnati, is the plant of the Wadsworth Watch Case Company (1888, incorporated 1892), large manufacturer of gold, gold-filled, platinum, and other metal cases. When clocks run to large size today, they are made by specialists such as the Herschede Hall Clock Company, operating a plant on East McMillan Street at Essex Place, and the Cincinnati Time Recorder Company, York Street and Central Avenue, which also assembles precision time clocks and recording apparatus. The Cincinnati Clock & Instrument Company (1912), 1117 Harrison Avenue, produces special mechanisms, gears, and timing devices for clocks.

Through Cincinnati's early years of work, the manufacture of jewelry and other fine metal articles was allied with watch-making. Among Cincinnati's early watch and clock manufacturers was the firm of Alexander McGrew and Joseph Jones, with a shop and store on Main Street, below Fourth Street. On August 1, 1818 the concern advertised in the *Western Boy*



**CHALET**

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

that it manufactured and sold clocks, watches, silverware, and jewelry—"Have engaged first-rate workmen from New York and Philadelphia." In 1862 William McGrew, a manufacturing jeweler, whose shop was at Fourth and Main Streets, advertised that he also made fine swords.

Although the first shops were small, the products were specially designed pieces of jewelry on which were lavished the pride, imagination, and skill of the craftsmen who fashioned the article. In recent years these various manufactures have gone their separate ways into the hands of specialists. Cincinnati jewelry makers have centered their interest in the manufacture of standard articles of jewelry, such as rings, emblems, and trophies.

In 1938 Cincinnati manufacturing jewelers employed about 175 craftsmen, earning an estimated 275 thousand dollars in wages. Several hundred more were employed by retail stores for the repairing of watches and jewelry. Among Greater Cincinnati's manufacturing jewelers are L. G. Balfour Company, 209½ West McMillan Street; Bihl Brothers, 123 East Eighth Street, Newport, Kentucky; Ed H. Groninger Company, 809 Walnut Street; Dorst Company, 2100 Reading Road; Gebhardt Brothers, 34 West Sixth Street; Heileman & Roth, 415 Race Street; J. P. Knight, 530 Walnut Street; T. Knoebber & Company, 811 Race Street; Lind Jewelry Company, Inc., 128 East Sixth Street; Litwin & Sons, 114 West Sixth Street; Mecklenborg & Gerhardt, 811 Race Street; Louis Michaelson, Lyric Building; Miller Jewelry Company, 809 Walnut Street; H. A. Neumeister, 114 West Sixth Street; Peck, Selmeier & Peck, 128 East Sixth Street; Henry Poppelmeyer, 604 Race Street; Rohs & Brodbeck, 604 Race Street; A. Sauer & Company, 439 Race Street; Schira Brothers, 15 West Sixth Street; A. H. Schumacher, 9 West Fourth Street; Schumer Brothers Company, 5 East Third Street; Edward Schumer & Rube, Inc., 7 East Fifth Street; Shullman Jewelry Manufacturing Company, 7 West Sixth Street; Strunk, Rosfelder & Schlueter, 434 Elm Street; Whitehouse Brothers, 5 East Third Street; Williams & Hirsch, 534 Vine Street; and A. S. Workum, diamond cutter, Schmidt Building, Fifth and Main Streets.





**MAKING POTTERY**



FINE GLASS: POLISHING AND ENGRAVING

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Several local wholesale jewelry houses also have facilities for manufacturing and repairing. Among these are Oskamp-Nolting Company, 26 West Seventh Street, and Richter & Phillips Company, Temple Bar Building, Court and Main Streets.

The Homan Manufacturing Company (1847), Findlay Street and Western and Hulbert Avenues, is Cincinnati's foremost producer of nickel-plated and silver-plated hollow ware. Its roster of products, some in intricate designs, includes tea sets, cocktail sets, pitchers, relish dishes, cups, and many more items.

A branch of jewelry manufacturing is the production of optical supplies. In 1938 more than 50 Cincinnati firms and individuals were in this business. Among the larger manufacturing opticians are Central Optical Company, Inc., 229 East Sixth Street; A. Ehrmantraut, Inc. (1910), 433 Walnut Street; The Emrie Optical Company, Union Central Building, Fourth and Vine Streets; Dr. Jos. Klein (1894), 411 Vine Street; Lyric Optical Company, 135 Opera Place; J. Harry McDonald, Union Central Building; L. M. Prince Company, 108 West Fourth Street; Queen Optical Company, 12 East Sixth Street; Southern Optical Company, 8 West Seventh Street; Tower Optical Company, Carew Tower, Fifth and Vine Streets; and Fred L. Zattel, Enquirer Building.

### *Pottery and Glassware*

THROUGH THE YEARS Cincinnati has jealously guarded its laurels as a center for the manufacture of fine pottery. Although the early pottery maker was more concerned with fashioning utility articles from clay, the rise of the industry northeast of Columbus, a section of Ohio rich in potter's clay, gradually brought a new emphasis on art. Beginning in 1880 the vases and ware turned out in Queen City shops soon won world-wide renown.

Since 1930 the industry here has been in the doldrums. But public appreciation of fine pottery is again on the upgrade, and future possibilities appear bright.

Perched atop Mt. Adams, overlooking the basin of the city and a sweeping bend of the Ohio River, stands Rookwood

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

Pottery (1880), the city's foremost producer of glazed and unglazed art pottery. Although it has almost succumbed to the continued depression, the company carries on, waiting for a new day.

A hundred yards distant is one of Cincinnati's unusual industries. At 1069 Celestial Street is the plant of the Sterling Glass Company (1902), one of America's foremost engravers and decorators of glassware.

At the factory some 125 men and women engrave, polish, and decorate stem and glassware "blown" into shape in Czechoslovakia, Sweden, Pennsylvania, and West Virginia. The company specializes in the marketing of rock crystal stemware, glass processed by immersion in acids.

## Chapter XV

### *Over the Council Table*



CINCINNATI HAS CLIMBED from the river bank into the hills, reached a hand of five bridges across into Kentucky, built highways out through the diverging valleys, and ensnared in her economic influence towns and cities lying within a wide circle about it. Cincinnati has invested in the industrial life of these outlying towns, has sent out factories to them, draws to its own plants their residents.

Covington, across the river from Cincinnati, is a great tobacco market and the distributing point for a rich Kentucky hinterland. Newport, cheek by jowl with Covington on the Ohio River, is the home of an important independent steel company and of thousands of workers in Cincinnati plants. And in Bellevue and Dayton, too, are many people who split their daily lives by working in Cincinnati and living in Kentucky.

Northward in Ohio, Cincinnati capital has set a finger on Hamilton, city of big factories and home of one of the world's greatest paper plants. Another fingertip penetrates the Armco haze over Middletown, and touches large paper mills.

With growth has come complexity. The day of the small independent factory with chiefly a local business is waning. This is the era of nationwide organizations, of firms which blanket hemispheres with their sales. Industrial relationships grow more intricate.

### *Employers' Organizations*

INDUSTRY AND COMMERCE have strengthened their position by growing comprehensive trade associations of firms selling similar products or rendering like services. These organizations hire workers, collect records and statistics, estimate

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

trends in business, style, and transportation, formulate codes of fair trade practice, plan promotion campaigns, and hire lobbyists to protect their special interests.

The nation's first industrial "protective" association—the American National Stove Manufacturers' and Iron Founders' Association—was organized in 1866. In February 1868 Association representatives voted in convention here to test their strength by cutting wages of local foundry workers 60 percent. Labor answered with a nine-months walkout, but Cincinnati employers yielded no ground, refused to arbitrate, and finally broke the strike. From this successful experiment in strike-breaking stemmed the present National Association of Manufacturers, which in 1938 numbered more than two thousand leading American manufacturers among its members.

Biggest of all trade associations is the United States Chamber of Commerce (1912), which cuts across the lines of specific industries and industrial groupings, and invites all business men into its membership. The Cincinnati Chamber of Commerce, patterned after the first Chamber of Commerce (New York, 1768), was founded in 1839 to "foster the public interests of Cincinnati, to promote commerce and industry, to collect information relative to commercial, financial, industrial, and public affairs which may be of interest and value; to secure uniformity in commercial laws and customs, facilitate business intercourse, promote equitable principles and provide for the adjustment of differences and disputes in trade." Although it is primarily a local organization, the Cincinnati Chamber is also an affiliate of the Chamber of Commerce of the United States.

The civic affairs department of the local Chamber of Commerce is concerned with postal rates, national defense, health activities, safety and fire prevention and other campaigns, and it assembles weekly forums and public meetings. The convention department encourages national, regional, and state organizations to bring their conventions to Cincinnati, and helps arrange programs and facilities for conventions held here. The industrial division of the local Chamber assists local industry and encourages the establishment of new industries in the city. Through its foreign and domestic commerce department,

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

the Chamber supplies Cincinnati business with tariff rates; translates, codes, and decodes communications; and helps to plan broad marketing campaigns. The Chamber's traffic department furnishes traffic guides and advice on transportation and shipping problems.

The Cincinnati Better Business Bureau, Inc., Chamber of Commerce Building, Fourth and Race Streets, was incorporated in 1923 to bolster public confidence in business. Founders of the organization set it up to advocate honesty and accuracy in advertising, to protect investors, and to investigate and prosecute fraudulent claims and promises. Since about 1930 a number of the largest firms in Greater Cincinnati have joined the Bureau, and now help shape its activities.

The Greater Cincinnati Brewers, Inc., 1304 First National Bank Building, formerly the Greater Cincinnati Brewers' Board of Trade, was founded in 1888 as the Brewers' Protective Association. It was formed to promote harmony among members, to collect and circulate information of the brewing industry, to oppose the enactment of prejudicial laws, to encourage useful legislation, to eliminate trade abuses, to co-operate with other trade associations and brewers, and in general to promote the welfare of the brewing industry.

Since 1933 a credit association has been operated for the protection of members. It investigates credit standings of retailers, collects delinquent accounts, and maintains an accurate card file of permit holders in Greater Cincinnati. The president, who is not connected with any member company, is responsible for the execution of the organization's program and the enforcement of regulations. Greater Cincinnati members of the organization are Bruckmann Company, Burger Brewing Company, Clyffside Brewing Company, Hudepohl Brewing Company, Red Top Brewing Company, Schoenling Brewing Company, Heidelberg Brewing Company, Vienna Brewing Company, and Wiedemann Brewing Company.

### *Labor in Industry*

MEN WHO ARE remembered set up the industries of Cincinnati, directed their growth, guided them to greatness.

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

But unremembered thousands also have built the city—wielders of steel, harnessers of fire, who with quick eye and strong hand have helped raise Cincinnati from the river bank.

The flow of hard-handed, hard-headed workers into Cincinnati has kept pace with the needs of growing industries and thriving commerce. Demobilization at the end of the War of 1812 released some thousands of Kentucky and Tennessee militiamen to settle in the city. By 1840 German workers were coming by the thousands to Cincinnati, bringing to its life their mechanical genius, their love of beer, their stubborn prudence, their canny republicanism and indomitable socialism. The mid-century saw the coming of the Irish, profane and colorful men, whose strong backs lifted the loads of Cincinnati and bore the city up from the river into the hills. About 1850 came also the Redemptionists, indentured immigrants bound under a peonage system to work off the cost of their passage. And out of the South came the Negro—to lift and haul the cargo piled on Cincinnati's Public Landing.

The later nineteenth century brought to the city a greater variety of racial groups. Conservative Germans pressed into Cincinnati in the seventies. On their heels trod new immigrants from southern and central Europe—Russians, Italians, Poles, Czechs, Slovaks, Greeks—a farrago of nationalities, richly mingled.

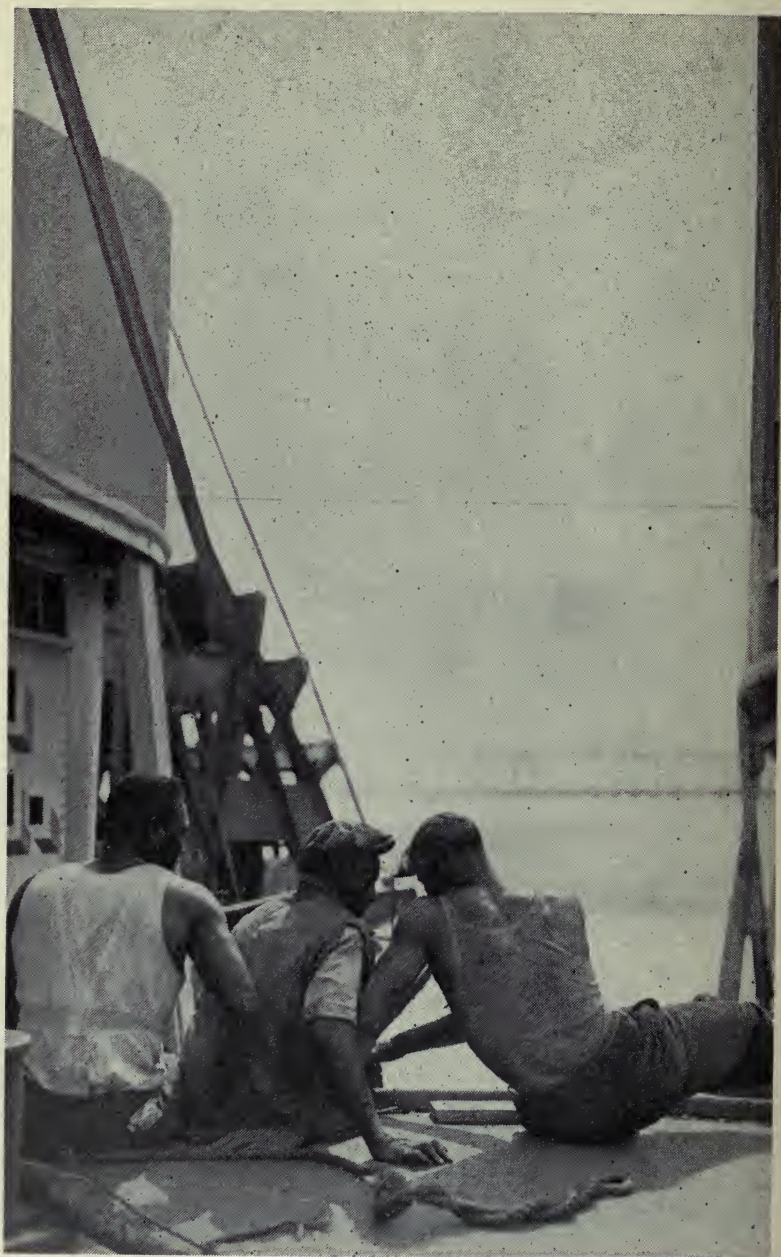
Today from the Kentucky and Tennessee mountains come trudging and hitch-hiking mountain men and their families, and Negroes eager to escape the economic and social discrimination of the South. Mountaineers and Negroes are alike disappointed; Cincinnati regards them as cheap, unskilled labor, and does not go out of its way to offer them chances for advancement.

One inevitable result of industrial progress is the development of an employed class, a sodality of labor. This trend began early in Cincinnati, growing out of the fraternal and mutual-aid guilds which early German emigrants brought to the city. By 1819, well before the growth of labor organizations in America, Cincinnati master tailors, journeymen hatters, master carpenters and joiners, journeymen tailors, and journeymen cabinet makers had formed their benevolent asso-





**BUILDER**



WAITING FOR CARGO

ciations. In 1821 there were 31 "mechanics'" societies in the city.

By the late 1820's fraternal associations were beginning to yield to the new trade unions. The master craftsman was giving way to the merchant-capitalist. Swift industrial development and the birth of cutthroat competition shoved wages downward. Modern capitalism was in birth, and modern labor was discovering itself. Wages in 1829 for skilled workmen in Cincinnati averaged one dollar for a 14-hour working day; laborers on the Miami and Erie Canal received five dollars a month. Local printers unionized in 1828, and by 1831 were publishing the *Working Man's Shield*, one of the nation's first labor papers. A new era had begun.

By 1835 Cincinnati employers were railing. Local master tailors published an *Address to the Public* which protests against the closed shop, against labor's threat of co-operative stores and factories, and against the "roving, dissipated, unsettled men" into whose hands union control had fallen. In the same year the radical Harnessmaker's Union struck for higher wages and the 10-hour day. Local master builders advertised in Philadelphia papers in 1836 for carpenters, stonecutters, and masons, while local building trades remained on strike. The city's first try at importing strikebreakers was unsuccessful; for Philadelphia labor co-operated with Cincinnati labor, and refused to come.

The panic of 1837, bankrupting industries, exploding banks, destroyed for a time the local labor movement. During the 1840's, utterly disorganized, labor turned to politics, and committed itself to astonishing programs of bizarre humanitarianism, outlandishly utopian schemes, and utterly futile labor legislation.

One of the most extraordinary ventures in this era of weird experiment was "The Producer's Exchange of Labor for Labor Association," established in Cincinnati as early as 1827 by Josiah Warren, known as America's first anarchist. Capable and ingenious, a professional musician and a successful inventor, Warren preceded Karl Marx as an exponent of the labor theory of value; he maintained that the economic value of any

## THEY BUILT A CITY: 150 Years of Industrial Cincinnati

good was simply the value of the labor necessary for its production. Each member of his "time store" received a specified number of labor-hours credit when he deposited his products at the store; and he was then entitled to draw out other goods of the same labor-hour value. Each member paid dues of 25 cents per month, but it was expected that the assessment would be lifted as soon as the rest of America accepted the labor-hour system of exchange and abolished money. The "time store" flourished for a time, and then was abandoned.

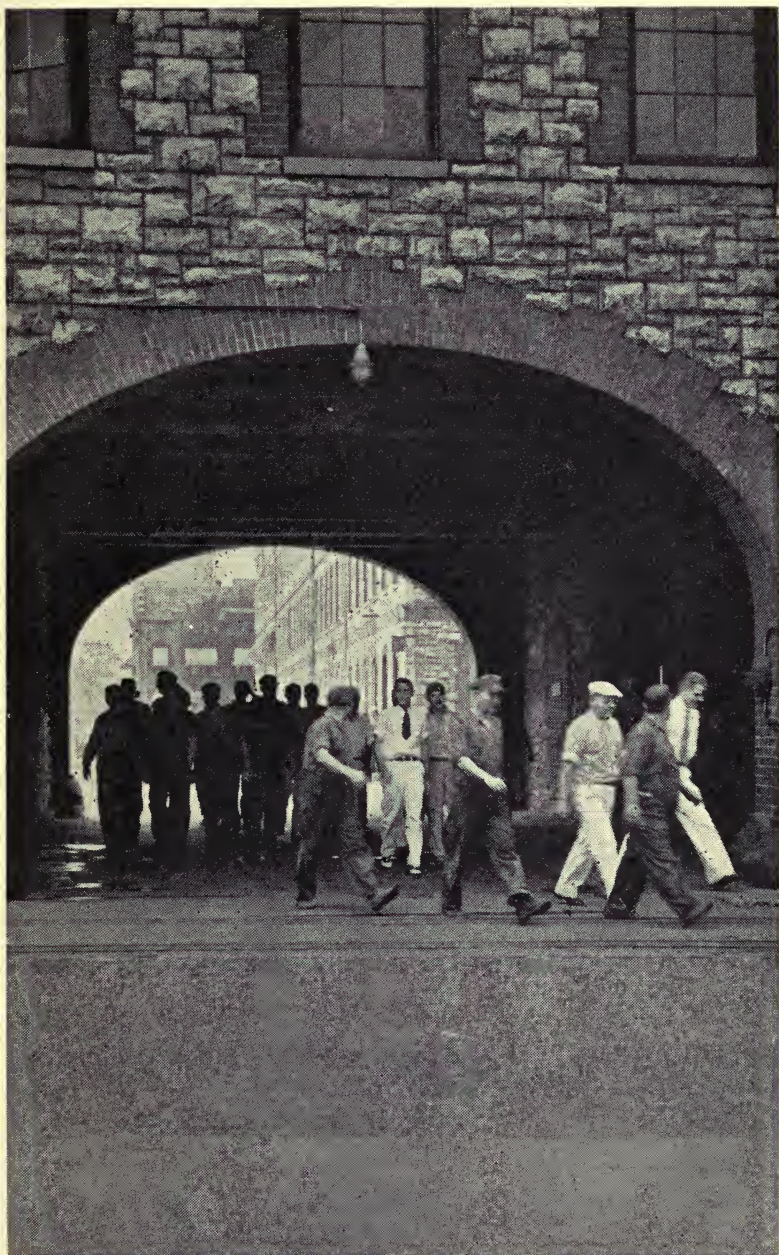
In 1847, after they had called a strike and employers had retaliated with a lockout—the city's first—local iron molders established the Journeymen Molders Union Foundry. But "time stores" and co-operative foundries were short-lived, as were the other cure-all devices; and the utopian movement was broken on the hard anvil of reality.

In 1850 Cincinnati printers joined the first national trade union; and a new surge of labor organization was under way. In 1855 the Brotherhood of Locomotive Engineers established here one of the nation's first railroad locals. Modern trade unionism came to stay for good. It was to survive the panic of 1857, the stresses of war time, and the money panic of 1873-77, and then burst forth in the Knights of Labor of the tumultuous 1880's.

When the panic of 1873 made the nation stagger, quotations in the labor market dropped headlong. By 1877 Cincinnati wage averages had fallen off 50 percent, and local union membership was down 85 percent. The pressure of starvation was crumbling the mortar of labor unionism.

Repeated wage cuts by the railroads piled up fuel for the conflagration of 1877 when workers on the Baltimore & Ohio Railroad began to quit their jobs rather than work for a sub-living wage. Sporadic rioting broke out, and spread to other roads. Labor, driven to desperation, was on the march. The Cincinnati police force requested military aid, and for the first time the state militia was mobilized against Cincinnati workers.

The railroad riots of 1877 brought class struggle to a jittery tenseness. Labor had turned; it was threatening the forces of capital. Although unionism had been driven underground for



THE WHISTLE BLOWS

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the time being, socialism gained a solid foothold; and the upheaval of 1886 was in the making.

The mushroom growth of the Knights of Labor in the 1880's brought labor organization back into the open. Agitation for the eight-hour day enlisted hundreds of thousands of American workers. Finally, in 1886, the Knights of Labor called their historic strike. Some 32 thousand Cincinnati workers walked out—a greater number than in any city in the nation except Chicago and New York. Nearly a third of the Cincinnati strikers gained their demands; the strike was more successful here than anywhere else in America. Cincinnati experienced no violence—possibly because five companies of state militia were on hand to squelch too expressive an ardor.

In 1887 Cincinnati labor formed the Union Labor Party to put through labor legislation. Nosed out by a few hundred votes in that year's municipal elections, the party flickered briefly in national politics and was soon forgotten. Another epoch in the history of labor had ended.

The Cincinnati Trades and Labor Assembly in 1892 became the Central Labor Council of Cincinnati, as Cincinnati workers affiliated themselves with Samuel J. Gompers' new American Federation of Labor. In February of that year first appeared the weekly *Chronicle*, published by the Central Labor Council as the organ of Cincinnati's union workers.

Labor in Cincinnati now settled down to a long period of slow and stable growth, abandoning its old dreams of political power and of socialism triumphant. A brief recrudescence of discontent appeared in 1913 when Traction Company employees walked out demanding union recognition and increased wages and, two months later, in July, ice company workers also struck. Labor won in both cases—with the help of the Mayor Henry T. Hunt's reform administration in City Hall.

Riding the wave of industrial recovery in 1921, union membership figures surged upward through the booming days of the twenties. In 1925 "Golden Rule" Nash, Cincinnati mail-order clothing manufacturer, startled a labor world used to opposition by inviting the Amalgamated Clothing Workers of America to unionize his open-shop plants.

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Cincinnati labor suffered an inevitable setback with the crash of 1929. Payrolls plummeted downward; unemployment spread with epidemic rapidity. Yet local union membership fell off very little; the long years of slow growth had given strength to labor unions and braced them against economic collapse.

Section (7a) of the National Industrial Recovery Act (1933), guaranteeing to labor the rights of organization and collective bargaining, was the starting gun for membership gains scarcely equalled in union history. Unorganized workers caught up by the wave of labor enthusiasm that swept the nation flocked into the trade unions. The establishment of the National Labor Relations Board in 1936, empowered to enforce labor's newly won rights, further accelerated union growth.

The withdrawal (1937) of the Committee for Industrial Organization from the American Federation of Labor split wide the national labor movement. But schism apparently brought new strength. Into the militant industrial unions of the CIO poured thousands of unskilled and semi-skilled workers, previously excluded from the strict craft unions of the A. F. of L. The United Automobile Workers of America originated the sit-down strike, and the new weapon was used in practically every city in the country.

- Union workers of the local General Motors plants went out on strike with workers in other plants of the corporation in January 1937. Members of a WPA sewing project staged a sitdown strike in February, protesting against dismissal. A prolonged strike persuaded the Remington-Rand Company to close its Norwood plant and move elsewhere; and the National Labor Relations Board ordered the company to re-employ its three thousand local employees. With a CIO organization drive threatened, the Crosley Radio Corporation signed a contract with the electrical union of the A. F. of L. Unionism moved ahead with giant strides.

Strikes make front-page news; conflicts between pickets and police or National Guardsmen perennially warrant seven-column banner headlines. Violence of course has marked most of the significant turning points in the history of labor, both locally and nationally. Yet the significance of that history is not

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indicated by a mere chronicle of strikes and riots. Through a century of growth, unionized labor has won for itself a more secure place in the national economy. In Cincinnati, as elsewhere, most of labor's gains have been registered at the council table, in peaceable consultation with employers.

Moreover, Cincinnati employers have done their part by inaugurating, even before state and Federal compulsory legislation was approved, various systems of accident and death benefits, and of stock ownership. A Cincinnati corporation, the Procter & Gamble Company, was first in the country to give employees a Saturday half-holiday, and it also pioneered a guaranteed employment plan assuring employees of work 48 weeks a year.

### *Labor Unions*

OF THE MORE than 220 labor organizations represented here, five maintain national or international headquarters in Cincinnati; all these are affiliated with the American Federation of Labor. The largest is the Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees. Formed in December 1899 at Sedalia, Missouri, the union was from the first hampered by anti-union prejudices of white-collar railroad workers. By 1918 it was barely able to make both ends come close, much less meet. Then, in the war-time emergency, the Federal Government assumed administration of American railroads. Union officials saw their chance, and by 1920, when owners resumed their places at the head of their lines, the union was so well consolidated, and its membership so large, that it was able successfully to weather attacks. Today its membership is estimated at more than 150 thousand, representing about 80 percent of the workers eligible to join. Offices are in the Brotherhood of Railway Clerks Building, Court and Vine Streets, a 600 thousand dollar structure owned by the union.

The Industrial Union of United Brewery, Flour, Cereal and Soft Drink Workers of America, the first industrial union chartered by the American Federation of Labor (1887), maintains national headquarters in its own two-story building at



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2347 Vine Street. Since 1887 strife has filled the history of the union—struggles with employers over demands for a 10½-hour day and a minimum wage of \$60 a month, the near-wrecking of the organization because of prohibition, and recurring conflicts over crafts versus industrial unionism. In 1934 came the most recent quarrel, ending when members voted 24,161 to 170 to retain the industrial structure of the union. Today the organization has more than 50 thousand dues-paying members, about 99½ percent of the eligible workers in its jurisdiction in the United States and Canada. A half-century of unionism has pushed wage rates from a maximum of \$1.50 a day (and free beer) to a minimum of \$25 a week in smaller cities and \$45-\$46 in larger communities.

Since 1870 the International Molders' Union of North America has maintained headquarters in Cincinnati. The organization, now one of the smaller A. F. of L. craft unions, with a membership of some 40 thousand skilled molders, was formed on July 5, 1859 at Philadelphia. Although it has staged many determined strikes, the union has constantly followed a program of conciliation with employers. In 1891 it signed the first contract in American labor history with a single employers' group, the Manufacturers' Protective and Development Association. As the first American labor organization to extend its jurisdiction to Canada, the I.M.U. in 1860 issued charters to four Canadian locals. International offices are in the Edwards Building, 528 Walnut Street.

Another small A. F. of L. crafts organization is the Metal Polishers, Buffers, Platers and Helpers' International Union (1888), with main offices in the Blymyer Building, 514 Main Street. The history of this labor body, which has a membership of about 13 thousand, has been hectic. From 1896 to 1933 the union paid out to striking members a total of \$554,321 in benefits. The union's hardest battle with employers was fought for four years before labor won. The tempest started at Buck's Stove & Range Company, St. Louis, in 1906. After a strike had been called, Samuel Gompers, president, and Frank Morrison, secretary, of the A. F. of L., and John Mitchell, president of the United Mine Workers of America, advocated a boycott of

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Buck's stoves. Disregarding a court injunction, they pressed their campaign against the St. Louis firm. Convicted of contempt of court, three labor leaders were given prison sentences; but they carried their case to the United States Supreme Court, and in July 1910 the charges were dismissed.

Since 1900 Cincinnati has been the home of the Hotel and Restaurant Employees' International Alliance and the Bartenders' International League of America. Founded in 1884, the union has been affiliated with the A. F. of L. since 1891. It has a membership of about 210 thousand. During the last six years the union has organized hotel service employees on a broader scale than ever before. Offices are in the Edwards Building, 528 Walnut Street.

These organizations, and others like them, speak for Cincinnati workers. The city is best built by a partnership between the men who lead industry and the workers who take their orders. After long years of struggle, capital and labor are learning the lesson of co-operation. Labor has won the right to organize; capital has come to recognize that right. And as they look back through 150 years Cincinnatians realize that all this time both employer and employee have worked shoulder to shoulder building a great city.

### *Bibliographical Note*

The major part of the information in this book came from the industrial and commercial concerns treated. Practically all such material is inaccessible to the general reader. Limited use was made of the Greve and Ford general histories of Cincinnati and of sundry books on early life in America; and the November 1935 issue of *Fortune* supplied some data for the Western Union article.

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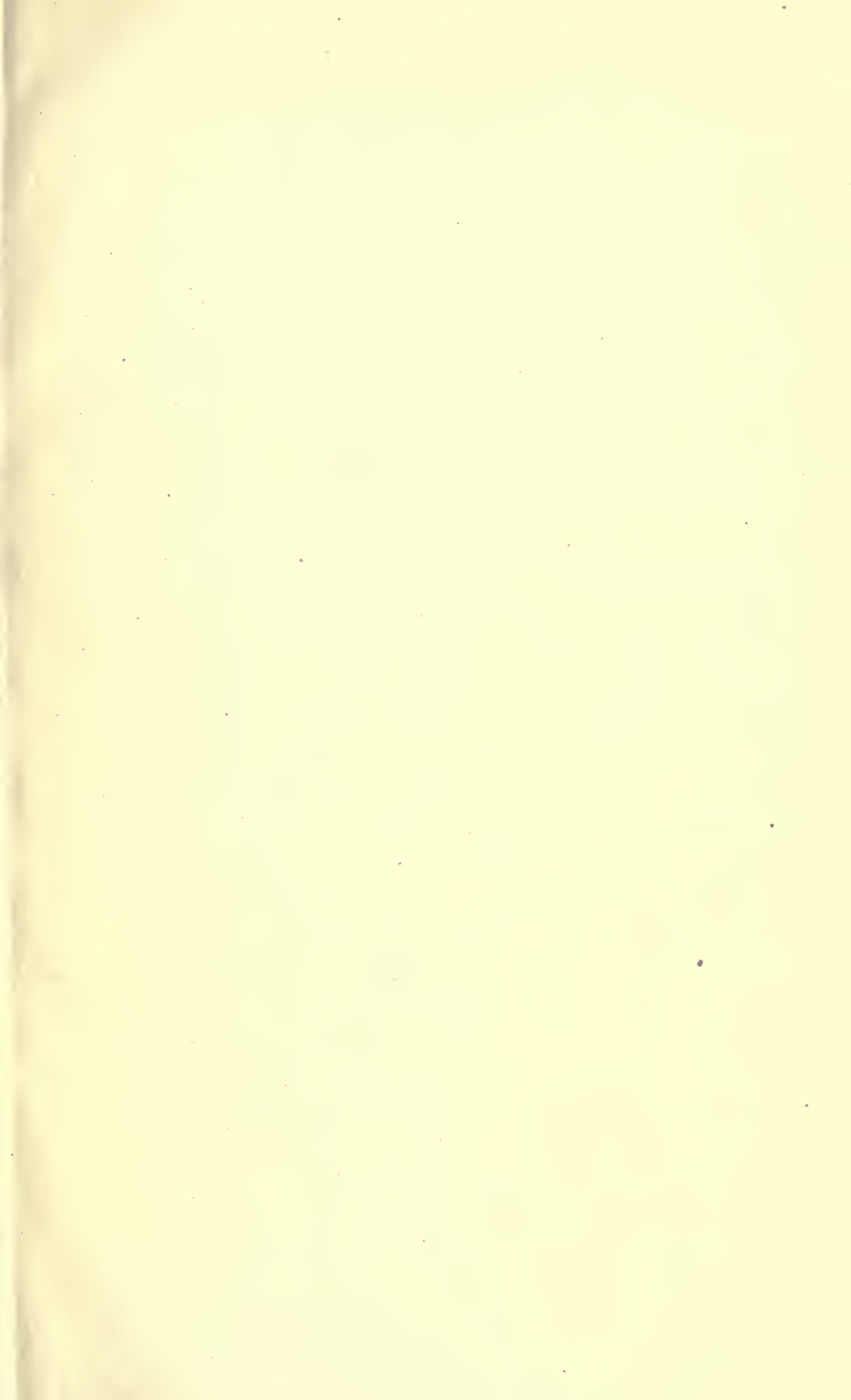
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