

The **PALIMPSEST**

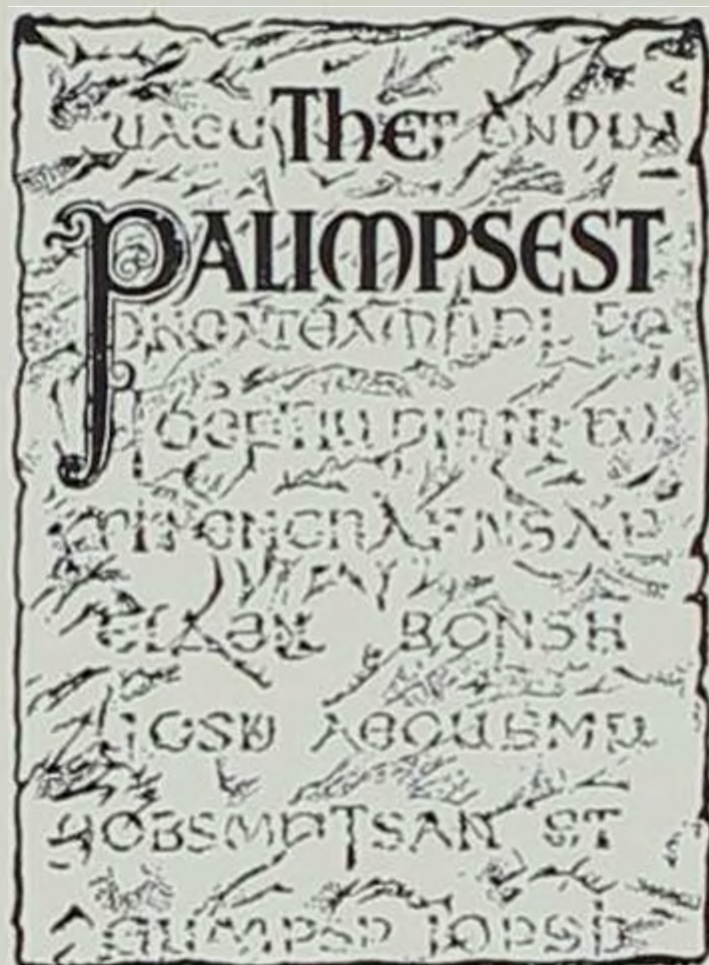


John Deere Tractor Works, Waterloo

INDUSTRIES OF IOWA

Published Monthly by
The State Historical Society of Iowa
Iowa City, Iowa

MAY 1956



The Meaning of Palimpsest

In early times a palimpsest was a parchment or other material from which one or more writings had been erased to give room for later records. But the erasures were not always complete; and so it became the fascinating task of scholars not only to translate the later records but also to reconstruct the original writings by deciphering the dim fragments of letters partly erased and partly covered by subsequent texts.

The history of Iowa may be likened to a palimpsest which holds the record of successive generations. To decipher these records of the past, reconstruct them, and tell the stories which they contain is the task of those who write history.

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Illustrations

Except where otherwise noted, all illustrations have been supplied by the individual companies.

Authors

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This issue is the first of a series to be devoted to Iowa industries. In the present issue an effort has been made to cover those industries employing 500 or more workers, although a few that employ slightly less are included. According to the Iowa Development Commission there were 63 industries in 1953 employing over 500 wage earners. It was not possible to obtain material from all in this group. Future issues will cover those industries in Iowa employing less than 500 workers.

ENTERED AS SECOND CLASS MATTER JULY 28 1920 AT THE POST OFFICE AT
IOWA CITY IOWA UNDER THE ACT OF AUGUST 24 1912

PRICE — 25 cents per copy; \$2.50 per year; free to Members
MEMBERSHIP — By application. Annual Dues \$3.00
ADDRESS — The State Historical Society, Iowa City, Iowa

THE PALIMPSEST

EDITED BY WILLIAM J. PETERSEN

VOL. XXXVII

ISSUED IN MAY 1956

No. 5

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Industry in 1840

In 1840, seven years after permanent settlement began in the Black Hawk Purchase, the first federal census was started in the Territory of Iowa. The statistics of the sixth United States enumeration were "completed and closed within five calendar months" — between June 1 and November 1, 1840. They revealed that industry was still in the handicraft stage.

Only eighteen of the twenty-two counties that had been established by law were included in the Census of 1840, and they contained 43,112 inhabitants. The five most populous counties were Van Buren — 6,146, Lee — 6,093, Des Moines — 5,577, Henry — 3,772, and Dubuque — 3,059. The smallest population was in Jones County with 471, and Delaware County with only 168 inhabitants.

Although there were some who opposed the federal government making such investigations the *Iowa Territorial Gazette and Burlington Advertiser* of February 6, 1841, felt otherwise. "The

census of 1840," the Burlington editor declared, would mark an era in the history of American Agriculture and would "furnish a more correct view of our country — our whole country, in this respect than has ever been given. . . . There can be no doubt that the tables which are provided from these returns will furnish abundant matter for the consideration of the statesman as well as the agriculturist; and probably the example now first set of such an enumeration of the products of labor, will be followed at each succeeding census of this great nation." The contrast between this first manufacturing report on Iowa and those of recent years staggers the imagination.

The Census of 1840 clearly revealed the humble beginnings of industry in the Territory of Iowa. The following categories of manufacturing called for in the Census of 1840 were not represented in Iowa: commerce; fisheries; machinery; hardware, cutlery, etc.; precious metals; various metals; granite, marble, etc.; cotton; silk; flax; mixed manufactures; powder mills; sugar refineries; chocolate; paper; cordage; musical instruments, and ships. Several of these are of considerable importance in Iowa today and provide a livelihood to thousands of citizens.

The following industries — filling only a scant page of a book — were represented in the manufacturing enumeration of the Territory of Iowa in 1840.

MANUFACTURES	<i>Estalish- ments</i>	<i>Men Employed</i>	<i>Capital Invested</i>	<i>Value of Product</i>
¹ Cannon and Small				
Arms	—	2	—	—
Bricks and Lime	—	39	\$ 8,200	\$ 13,710
Wool	—	—	—	800
Tobacco	—	2	—	40
Hats, Caps, and				
Bonnets	—	—	—	19,900
Value of straw				
bonnets				5,100
Tanneries	3	4	4,400	—
Other Leather,				
Saddleries, etc.	5	—	1,645	4,875
² Soap and Candles	—	1	—	—
³ Distilled & Fermented				
Liquors	2	3	1,500	—
Drugs and Medicines	—	7	—	2,340
Glass and Earthenware	4	7	350	1,050
⁴ Printing and Binding	4	15	5,700	—
Carriages and				
Wagons	—	3	1,400	1,200
⁵ Mills	118	154	166,650	95,425
6 — flour				
37 — grist				
75 — saw				
Furniture	—	12	1,350	4,600
⁶ Houses	—	324	—	135,987
All other manu-				
factures	—	—	8,450	34,445
	136	573	\$199,645	\$419,472

¹ Small arms made — 40² 9,740 lbs. of soap

4,436 lbs. tallow candles

282 lbs. spermaceti & wax candles

³ 4,310 gallons distilled and fermented liquors⁴ Weekly newspapers — 4⁵ Barrels of flour — 4,340⁶ Brick and stone houses built — 14
Wooden houses built — 483

Industry, however, was still in an embryonic stage a century ago. Most of the pioneers erected their own homes, made their own candles and soap, raised much of their own food, and made most of their own clothes. The simplicity of industrial development is attested by the minute directions for the preparation of shoe blacking which found their way into the pages of the *Iowa Sun*. "Perhaps the best in the world is made from elder berries. Mash the berries in your hand in a large kettle of water, set them in the shade a few days, filling it with water. After it is cool, strain and wring them through a coarse cloth, and then boil it down to the thickness of molasses. Put a small quantity with a feather on the brush, rub the shoe until there is a fine gloss. The same will make good writing ink."

But if industry was undeveloped it was nevertheless important. Population was growing steadily each year. Skilled artisans were making their way slowly westward, attracted by the high wages and the opportunity for a better life on the frontier. Lack of regular transportation and communication doubtless delayed the establishment of trade and industry during the long winter months. Eleven decades later, in 1955, the returns from industry far surpassed those from agriculture.

WILLIAM J. PETERSEN

Recent Industrial Development

Since 1900 there has been a continuous industrial growth in Iowa. In 1929 Iowa stood twentieth among the states in the value added by its manufacturing plants, but by 1947 it had fallen to twenty-sixth place according to the federal census of manufactures conducted in that year. Genuine concern was expressed because the rate of increase had not kept up with the national average.

Since the end of World War II an intensified drive has been made to reverse this trend. Led by the Iowa Development Commission, 62 communities by 1956 had definite industrial development programs with plans drawn up, lands set aside, and commissions established to make each community the most attractive location possible for new industrial plants. The visual evidence of their success is constantly at hand as one travels through the state and sees modern manufacturing structures on sites which but a short time before were cornfields.

Lest this evidence should be discounted as unscientific, one should consider a study of the 1947 and 1953 federal censuses of manufactures made by Clark C. Bloom and A. A. Montgomery of the Bureau of Business and Economic Research at the

State University of Iowa. They discovered that although the rate of increase in Iowa's manufacturing employment between 1947 and 1953 was slightly under the national average, the value added by the state's manufactures accelerated considerably faster than the rate for the entire country — an increase of 176 per cent for Iowa as against 163 per cent for the nation. In actual figures the value added by manufactures in Iowa rose from \$671,100,000 in 1947 to \$1,179,513,000 in 1953. The state's rate of increase was exceeded by only ten states — the highly industrialized states of Michigan and Delaware and eight others in the rapidly expanding South and West. Within Iowa's immediate area only Kansas did better in this regard. Iowa's over-all rank among states in value added was now twenty-fourth. Furthermore, comparing the rate of increase in employment with that of value added it was found that in only two states did the rate of output per worker increase more rapidly than in Iowa.

Many other statistics can be cited as proof of Iowa's sizable industrial progress in recent years. The total value of goods manufactured in the state during 1955 is estimated at \$3,931,700,000 which is \$131,700,000 more than the previous high of 1954 and about 242 per cent above the value of goods produced in 1945. Salaries and wages paid to industrial workers rose from \$327,000,000 in 1947 to \$680,000,000 in 1955. These payrolls

constituted 10.4 per cent of the state's income in 1946, but by 1954 Iowa's citizens were getting 14.3 per cent of their income from this source.

In 1955 the Iowa Development Commission reported that there were 3,736 manufacturing plants in Iowa, almost a thousand of which had been established after 1945. The 13 largest cities in the state had 37.7 per cent of these plants. Des Moines had the most, 315, followed by Sioux City with 214, Cedar Rapids 175, Waterloo 123, Davenport 119, and Dubuque 109. But 2,023 of these industries were located in cities and towns of less than 10,000 population. Every county had at least four factories.

Agriculture need not fear that it is about to be demoted to secondary importance in the state's over-all economy, however. The census of 1953 revealed that Iowa's industries were largely concentrated in the following 20 counties:

Polk	Wapello	Marshall
Linn	Lee	Floyd
Black Hawk	Jasper	Jackson
Scott	Clinton	Jefferson
Dubuque	Webster	Pottawattamie
Des Moines	Muscatine	Iowa
Woodbury	Cerro Gordo	

These 20 counties had a total of 154,888 manufacturing employees in 1953 with a payroll of \$592,-624,000. The other 79 counties remain strongly agricultural. In addition, the most important industries in Iowa are those which are closely linked with the farm — food processing plants and the farm equipment industry. One of the encouraging

developments of recent years, however, for those interested in a truly balanced economy for Iowa has been the marked increase in importance of the industries which are not largely dependent upon the farmer. In 1953, in eleven of the thirteen categories into which the census bureau divided the nation's industries, Iowa exceeded the national rate in increase of value added since 1947. Whereas the national rate for primary metal industries was 191 per cent, Iowa's was 310. The percentage for the rubber industries in the nation was 155, but in Iowa it was 256, while in the field of precision instruments and related products Iowa exceeded the national rate by 388 to 185.

The following pages are devoted to 54 of Iowa's largest manufacturers. With a few exceptions these companies employ 500 or more workers. Through the use of a variety of pictures and a concise, factual account of each company it is hoped that the reader may gain a better idea of the wide diversity of present-day industry in the state. For several reasons materials on a few of the large concerns could not be obtained.

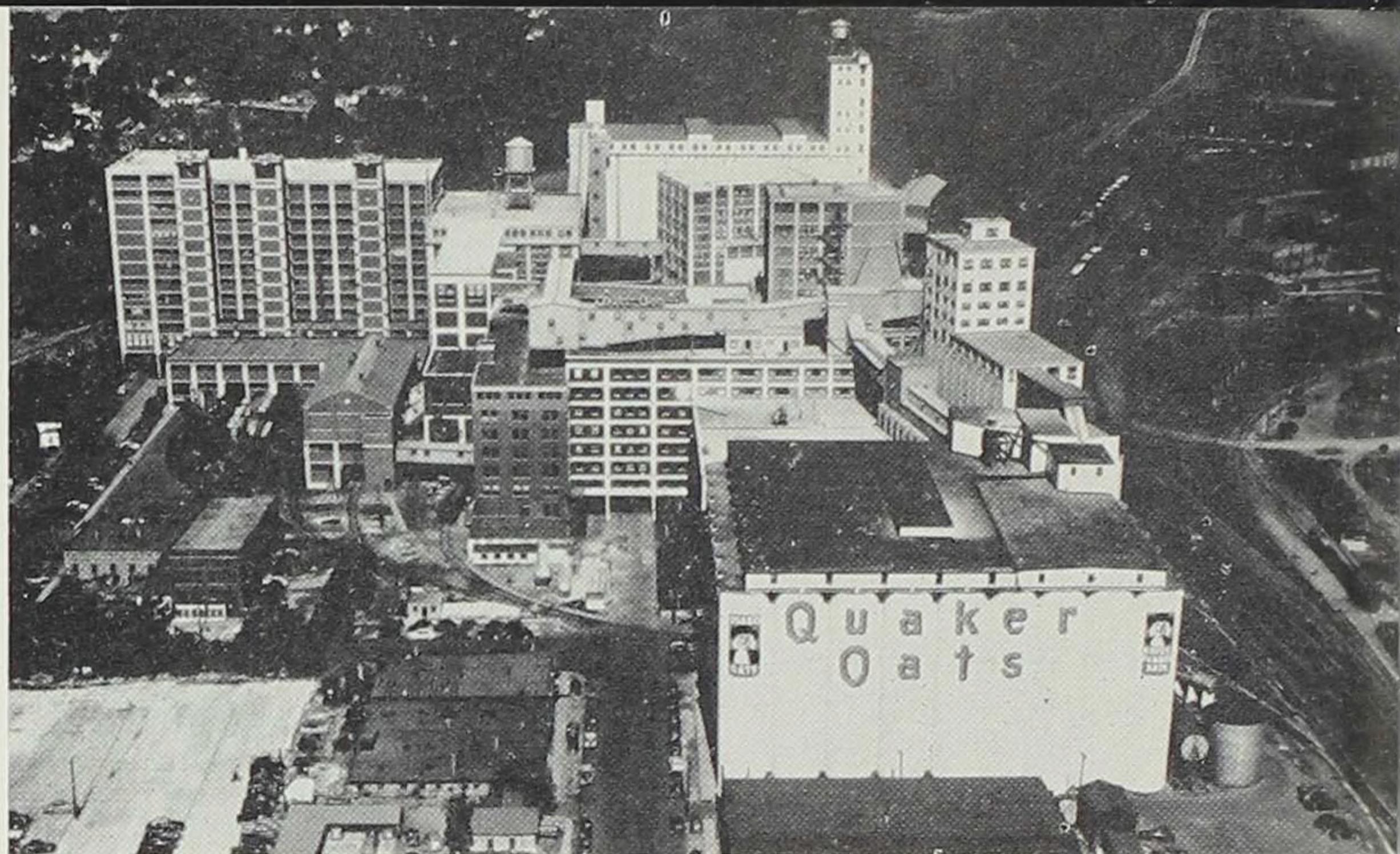
GEORGE S. MAY

IOWA INDUSTRIES: Farm-centered industries

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Rath Packing Company, Waterloo



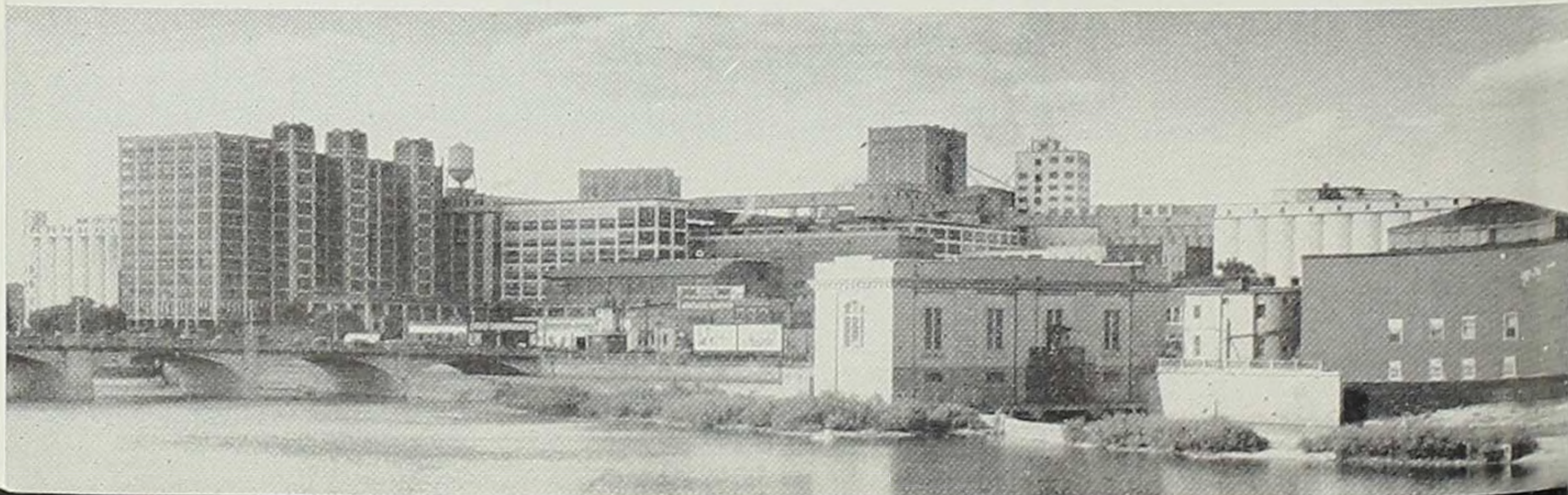


THE QUAKER OATS COMPANY: Chicago

The great Cedar Rapids plant of Quaker Oats, with its 85 acres of floor space, 1,275 employees, and \$4,000,000 annual payroll, is the world's largest single-unit cereal plant. The chairman of the company's board of directors is John Stuart, son of Robert Stuart, one of the founders in 1873 of the North Star Oatmeal Mills of Cedar Rapids, the forerunner of the present plant. Today's plant handles annually over 30,000,000 bushels of grain. Its seven huge elevators have a capacity of 10,000,000 bushels, constituting the world's largest industrial grain storage units. In addition fifty company-owned elevators are scattered throughout Iowa. It would require a farm four miles wide stretching east and west across Iowa to provide the annual grain needs of the Cedar Rapids plant. Each day there is an incoming and outgoing flow of 250 freight cars. The annual package output if laid end to end would girdle the globe. The plant has a daily capacity of 600,000 packages of rolled oats, 70,000 of cornmeal, 130,000 of Quaker's Puffed cereals, not to mention its other products. It is estimated that some Quaker Oats products are on the shelves of over 75 per cent of America's pantries.

ABOVE: a land view of the plant. BELOW: the plant as seen from the Cedar River.

Courtesy Cedar Rapids Chamber of Commerce

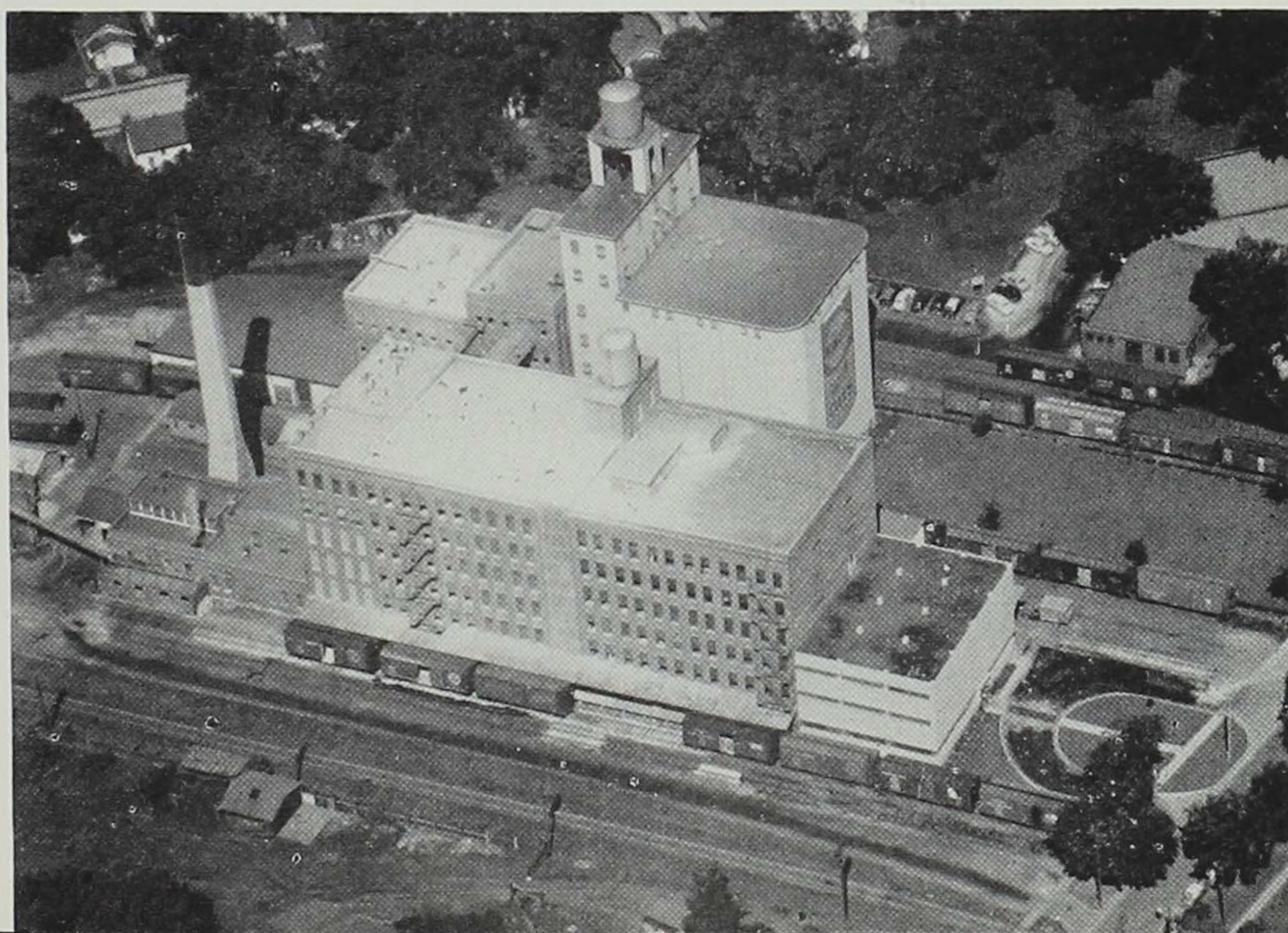


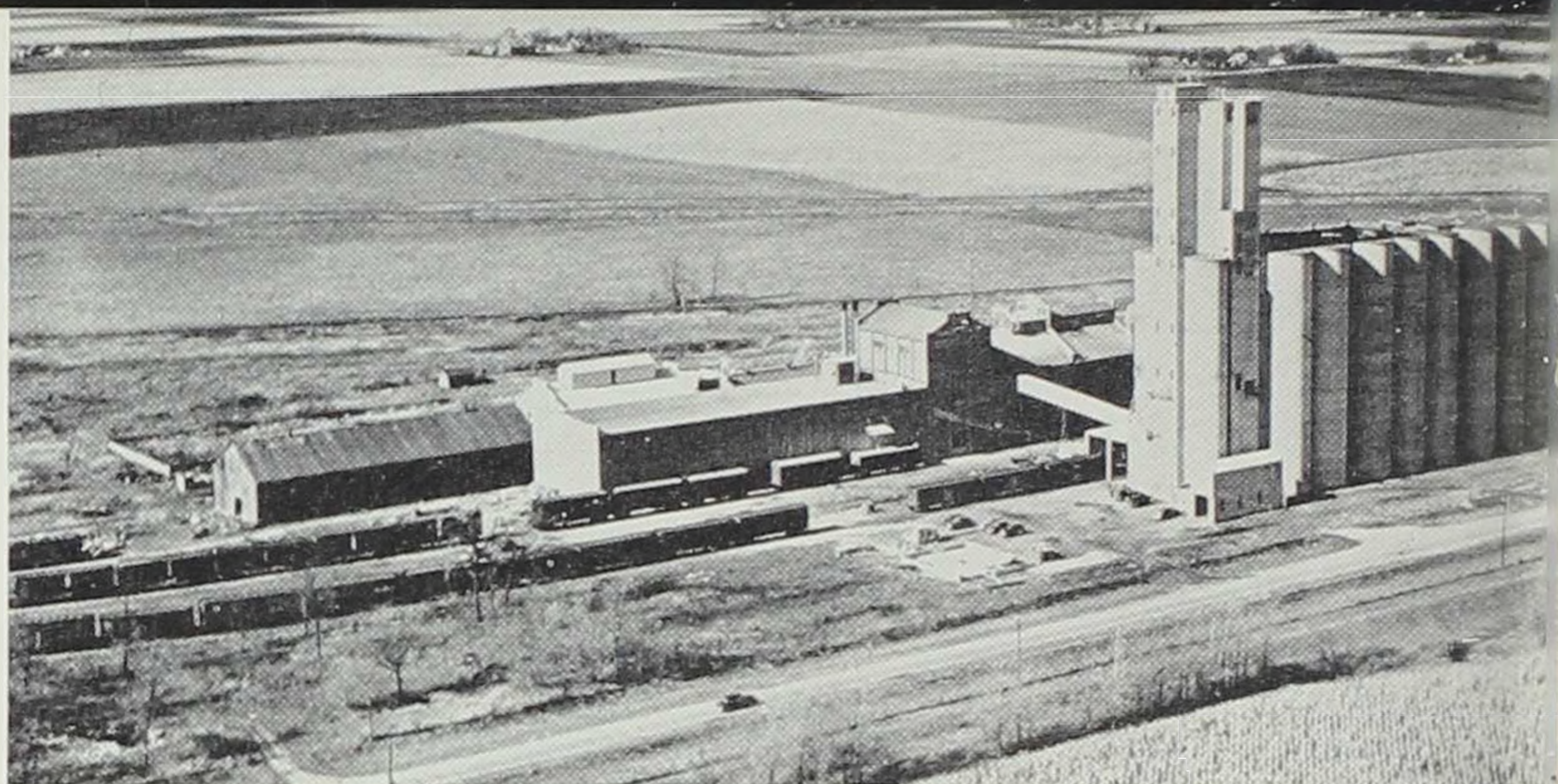


NATIONAL OATS COMPANY: Cedar Rapids

In 1906 the Corno Mills Company of East St. Louis entered the rolled oats business and in a few years purchased the Pawnee Cereal Mill at Cedar Rapids where it shortly concentrated its cereal operations. In 1922 the Cedar Rapids mill was the first to successfully produce quick cooking oatmeal. With the marketing of its "3-Minute Oats" the National Oats Company, as it had been renamed, became the nation's second largest producer of rolled oats. Seven years ago the company entered the lucrative popcorn business and is now the leading producer of that product. In 1955 the company took over the Popcorn Growers and Distributors of Wall Lake, Iowa. With a total of 410 employees, the company now does an annual business of \$12,000,000. James L. Cooper is its president.

ABOVE: some of National Oats' products. BELOW: the Cedar Rapids plant.



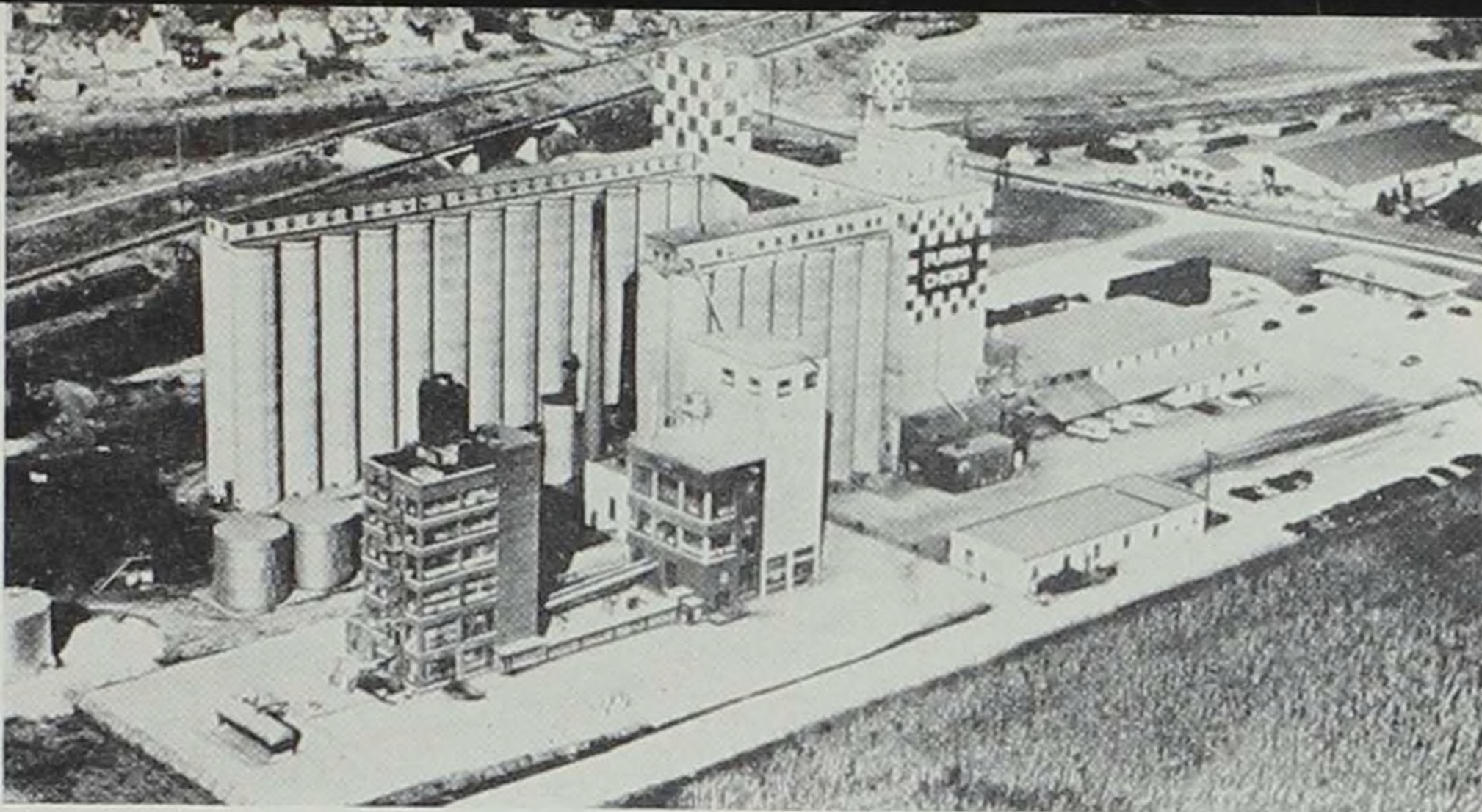


**GENERAL MILLS, INCORPORATED:
Minneapolis**

Within less than fifteen years General Mills has acquired five plants in Iowa, employing 503 workers in 1955 with an average monthly payroll of \$164,000. In 1942 General Mills purchased the Purity Oats Company at Keokuk, continuing to make the oat cereal which first appeared in 1906. At the Special Commodities plant in Keokuk, opened in 1944, new uses have been found for wheat starch. In 1945 a soybean processing plant was opened at Belmond, where, in 1955, was added a modern, electronic-controlled Larro Feed mill. This General Mills division in 1955 also opened at Indianola the Larro Feed Research Farm, previously located outside Detroit.

ABOVE: Larro Feed mill, Belmond. RIGHT: an electronic-controlled operation at Larro Feed mill. BELOW: Purity Oats plant, Keokuk.



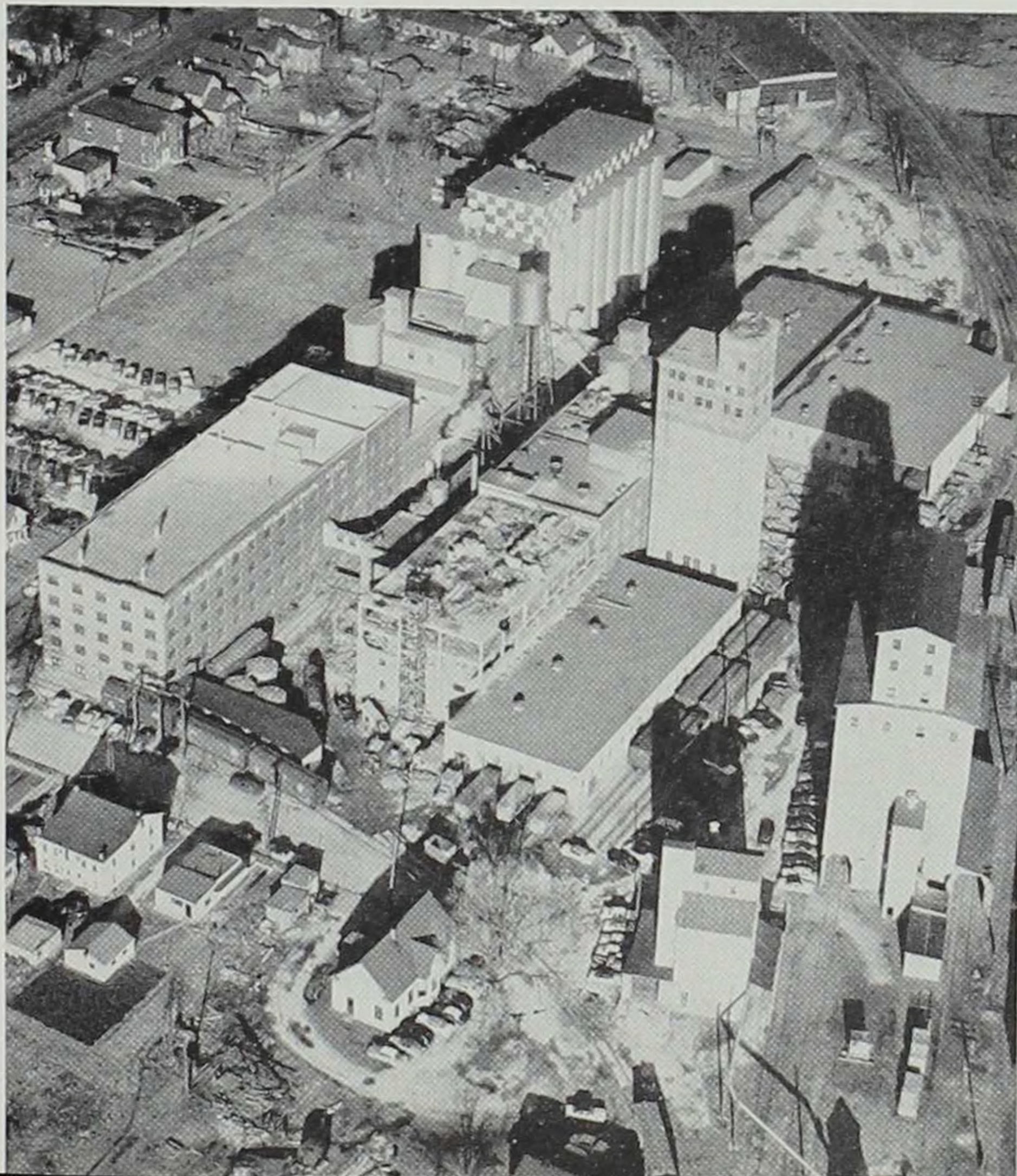


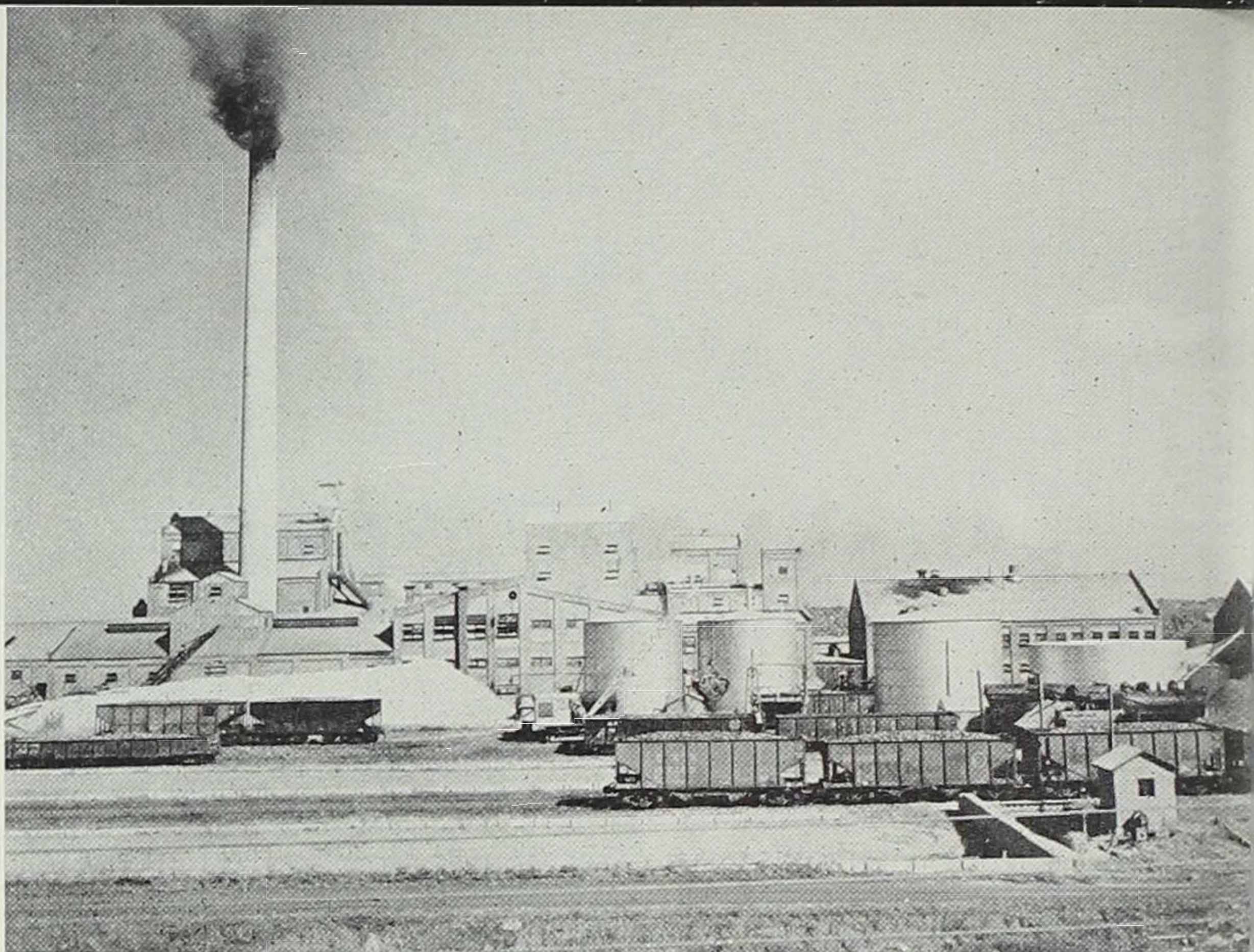
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RALSTON PURINA COMPANY: St. Louis

Ralston Purina, the country's largest producer of commercial mixed animal and poultry feeds, has three plants in Iowa. The oldest is that at Davenport, purchased in 1927. It employs 232 people in its production of Purina Chows for livestock and poultry, and Ralston cereal. A second unit at Iowa Falls, built in 1942, employs 139 workers, and consists of a Purina Chow mill and a soybean processing plant. A third plant is under construction at Sioux City which will employ about fifty persons and manufacture a full line of Purina Chows.

ABOVE: the Iowa Falls plant. BELOW: the Davenport plant.

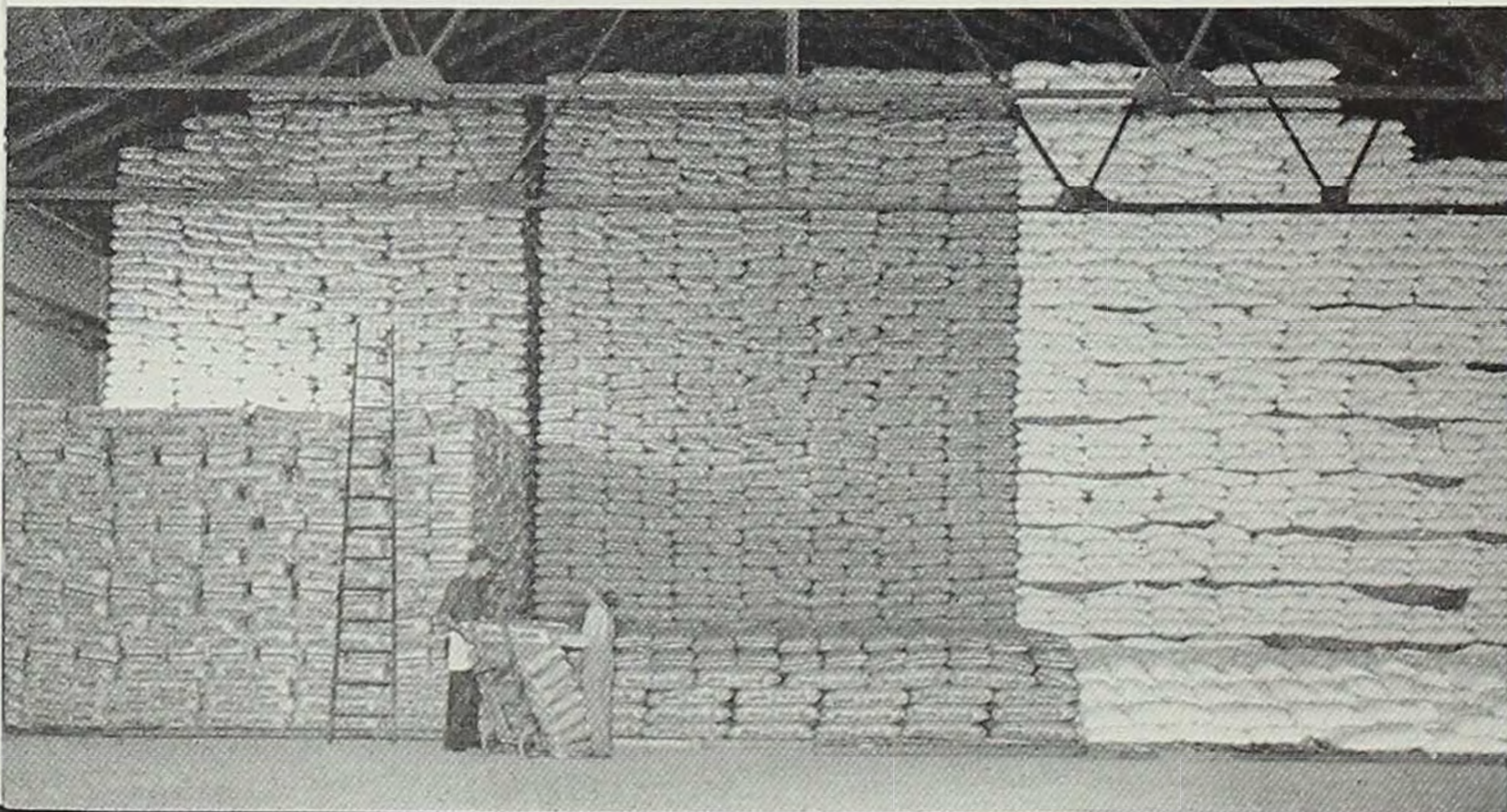


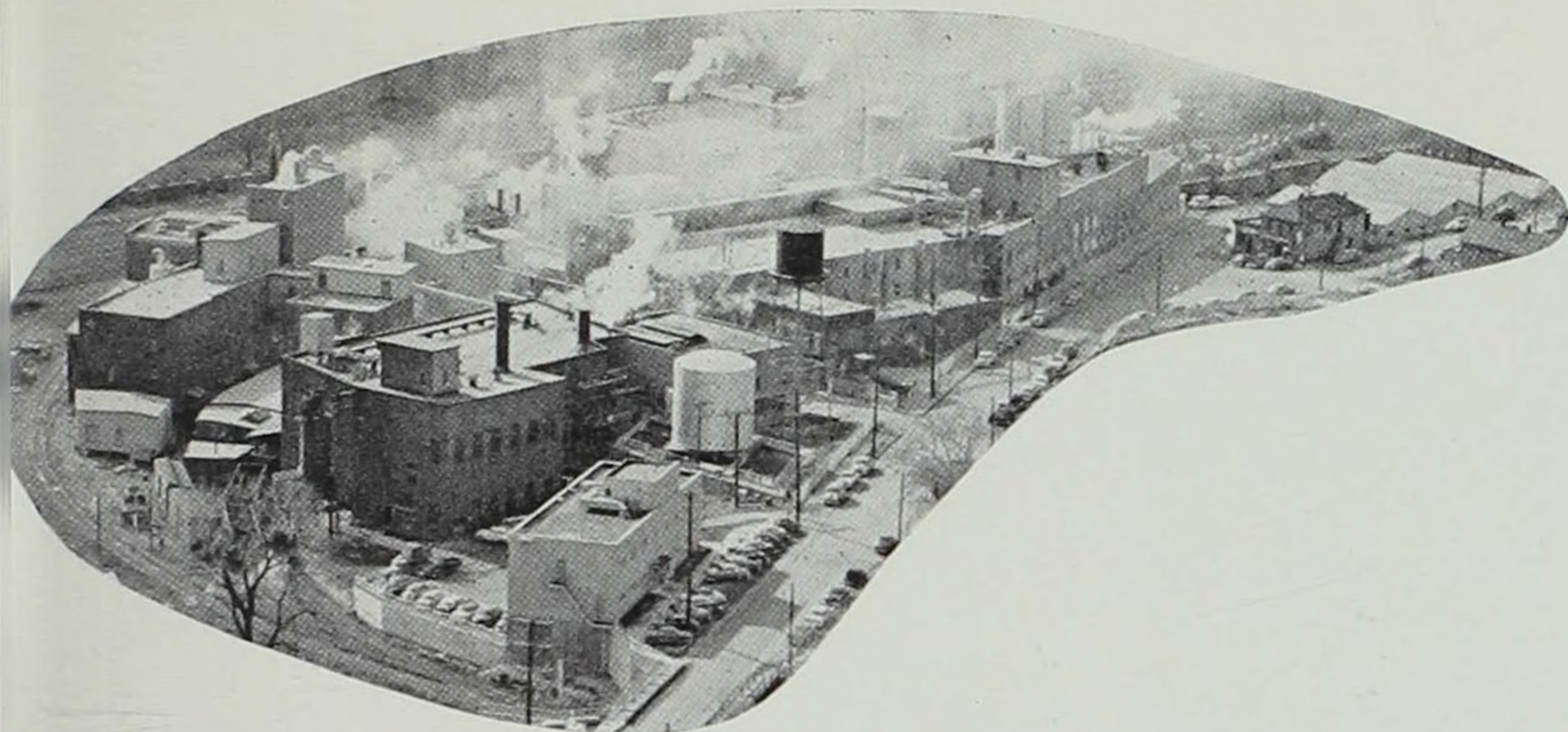


AMERICAN CRYSTAL SUGAR COMPANY: Denver

American Crystal Sugar, third largest American beet sugar producer, has one plant in Mason City, the only one of its kind in Iowa. Built in 1917 by the Northern Sugar Company the plant was acquired by its present owners in 1925. During most of the year the plant employs only 50 to 70 men, but when the sugar beets have been harvested in September, the plant operates 24 hours a day, seven days a week for as many as 100 days, the number of workers then increasing to as high as 470 with a payroll of as much as \$160,000 a month. During this "sugar campaign" from 150,000 to 200,000 tons of sugar beets go through the mill. Some are grown on farms in the Mason City area, most come from the Dakotas. In addition to certain by-products, the plant produces some 45,000,000 pounds of sugar annually, enough sugar to sweeten almost $3\frac{1}{2}$ billion cups of coffee. The value of the plant's product in the peak year of 1951 was \$3,994,998.

ABOVE: the Mason City plant. BELOW: warehouse bulging with beet sugar.

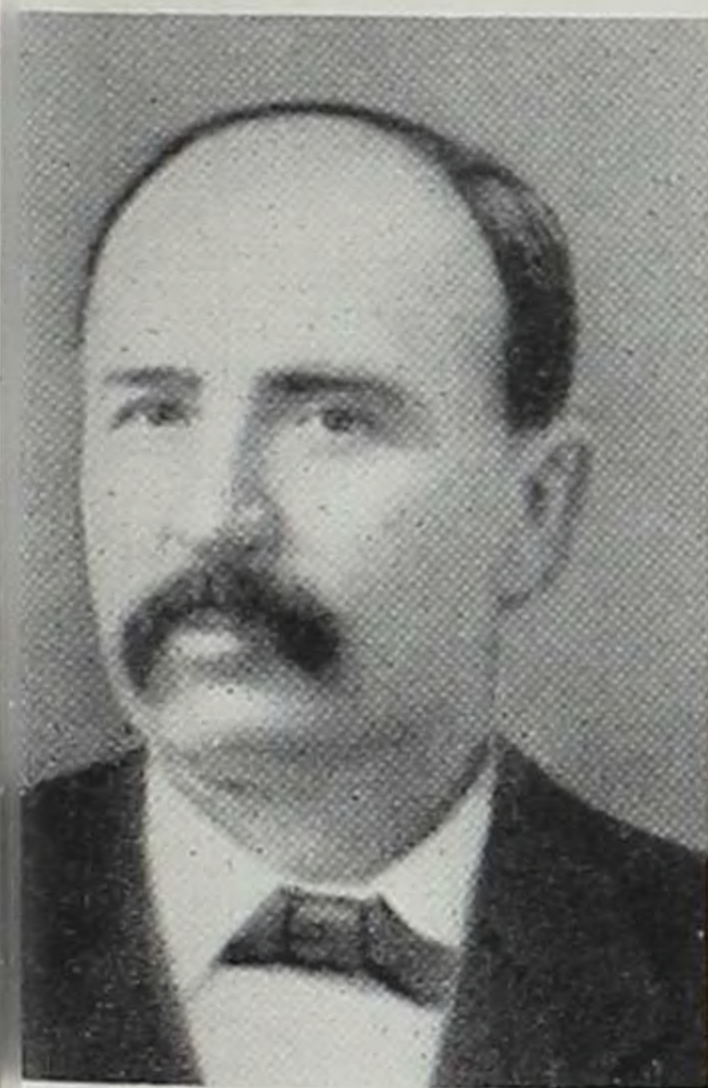


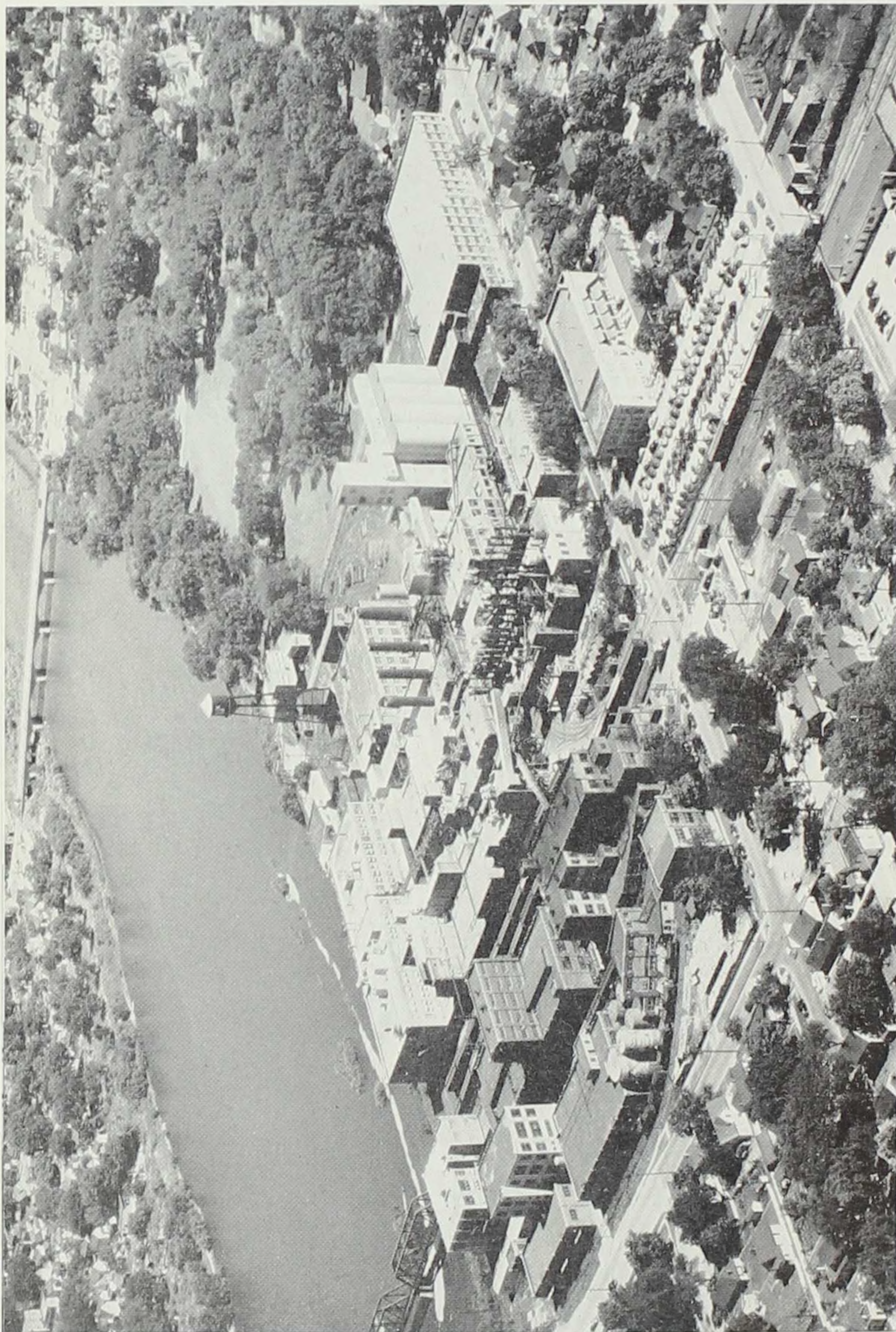


THE HUBINGER COMPANY: Keokuk

During the 1870's, J. C. Hubinger developed a home-made laundry starch out of corn starch that became so popular that in 1881 he induced his three brothers to join him in forming a company to produce and sell his Elastic Starch, as he called it. The firm prospered, and, to assure a steady supply of corn starch, it began its own milling operations in Keokuk. In 1955 the Hubinger Company employed 555 workers at its plant in Keokuk which occupies twenty acres and is valued at \$5,600,000. The monthly payroll averaged \$265,000. In addition to corn starch the firm produces corn syrup, corn sugar, corn gluten feed, corn gluten meal, corn oil cake meal, and crude corn oil. The total value of these products in 1955 was \$22,000,000. From a family concern the company has developed into a publicly owned corporation with 957 shareholders owning stock worth \$6,200,000. Robert S. Fisher is chairman of the board, Roy L. Krueger is president.

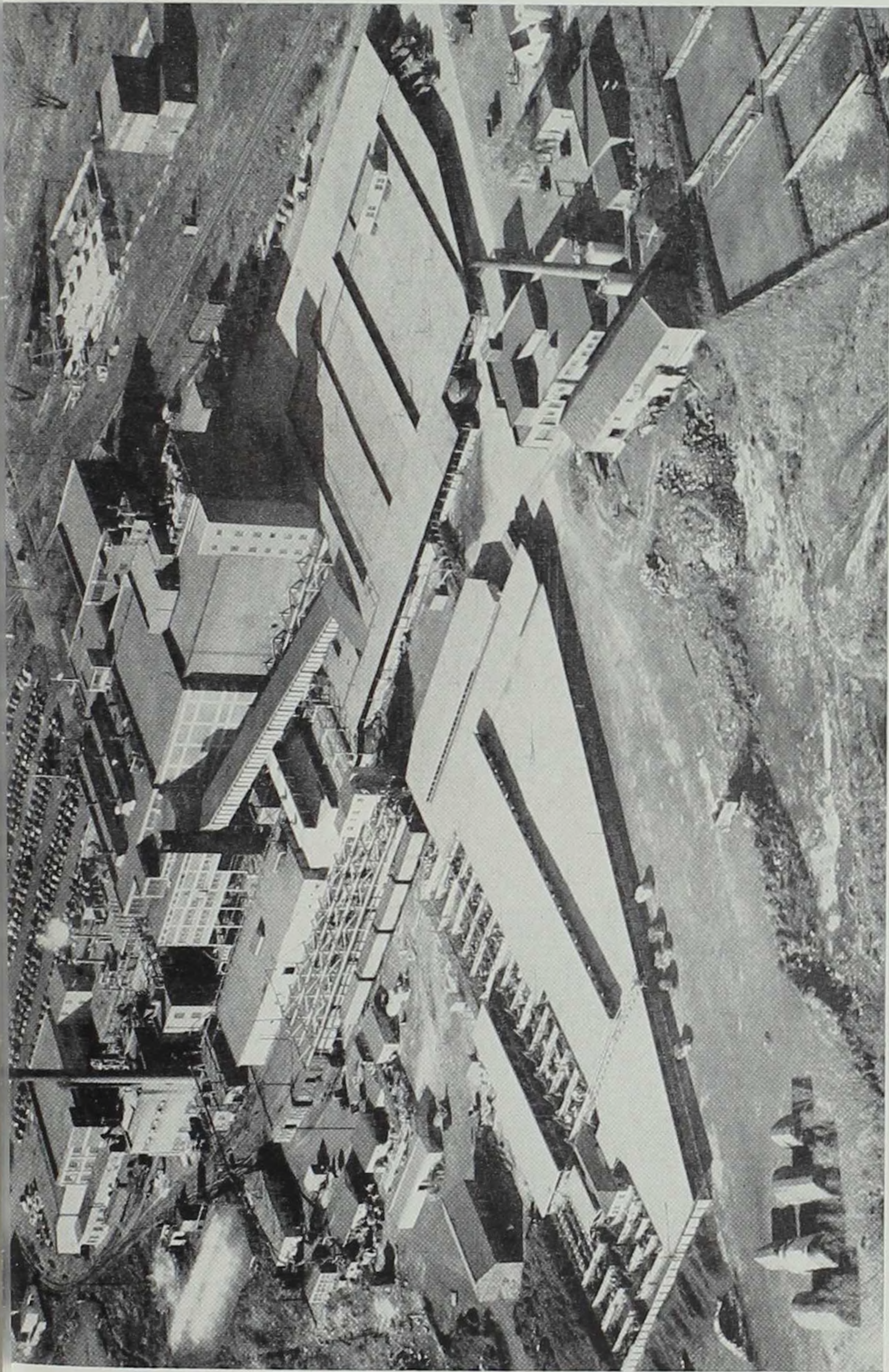
ABOVE: the Keokuk plant. LEFT: J. C. Hubinger. BELOW: the evolution of the Elastic Starch package.





PENICK AND FORD, LTD., INCORPORATED: New York

The Cedar Rapids plant (shown above) is the largest of Penick & Ford's six American production units. In 1955 it employed 1,300 of the total of 1,600 workers engaged by the company. The annual Cedar Rapids payroll was \$5,239,000. This contrasts with the 500 employees and \$600,000 payroll when the company was organized in 1920. The chief products of the 20-acre, 42-building plant are corn starch, corn syrup, corn sugar, and corn oil. Penick & Ford doing ten per cent of the country's corn refining. Each day the plant uses more corn than the average Iowa farmer can grow in a year on a 700-acre tract of land. It also uses daily more water than is used by all of Cedar Rapids, 375 tons of coal, 12 tons of chemicals.

**SWIFT AND COMPANY: Chicago**

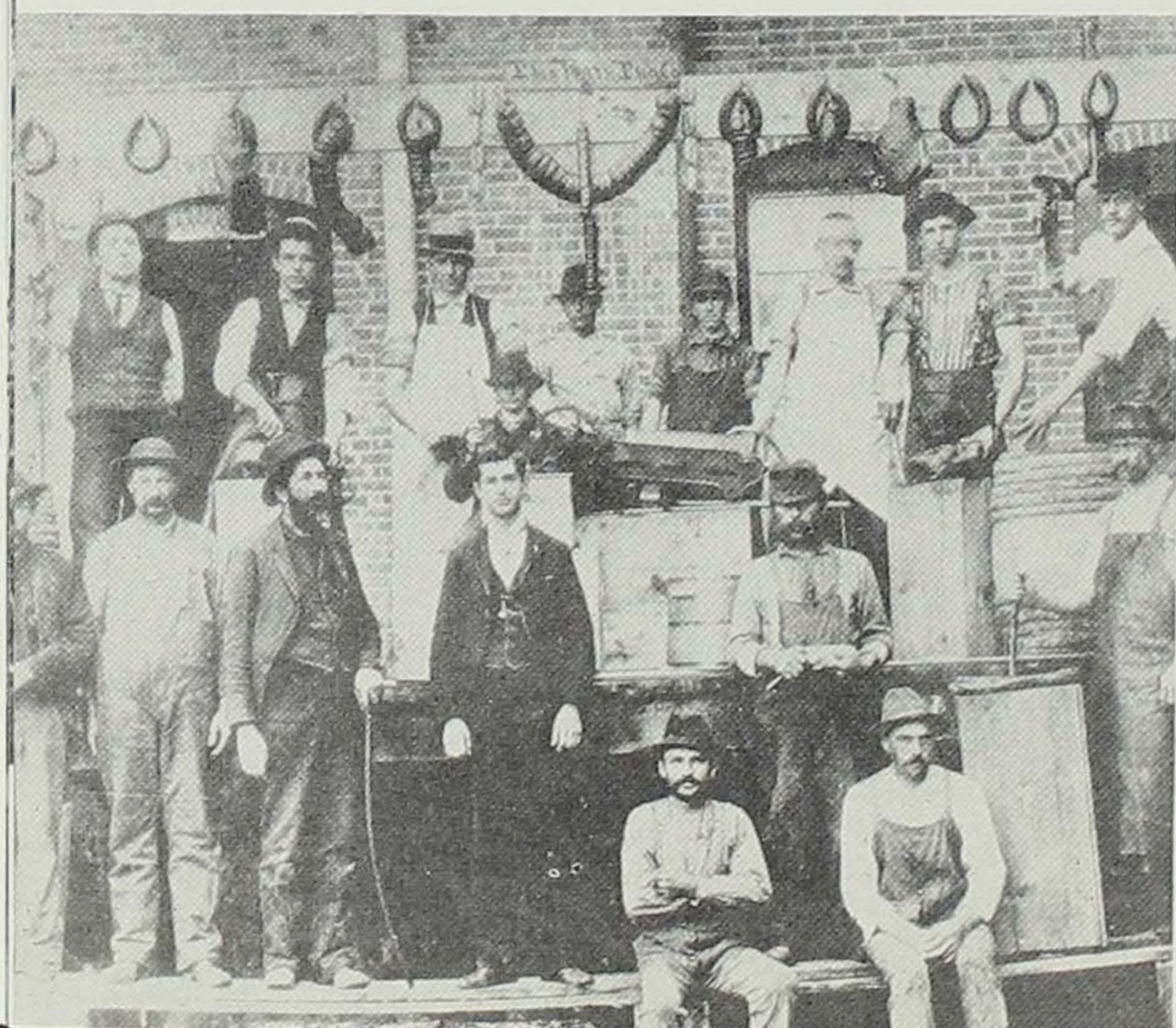
The world's largest processor of meats, Swift operates twenty different plants in Iowa, including four meat packing plants at Des Moines, Sioux City, Perry, and Marshalltown, nine dairy and poultry plants, a turkey dressing plant, an ice cream plant, a hatchery, a plant food factory, a soybean oil mill, a livestock feed mill, and one sales unit. These units employ over 5,000 workers and have an over-all expenditure of nearly \$200,000,000. More than 1,800 of the company's 65,000 shareholders live in Iowa. Pictured above is the plant of the Iowa Packing Company of Des Moines, since 1925 a subsidiary of Swift. It employs almost 1,300 persons, has an annual payroll of \$5,000,000, and daily ships out 35 carloads of meat and by-products.

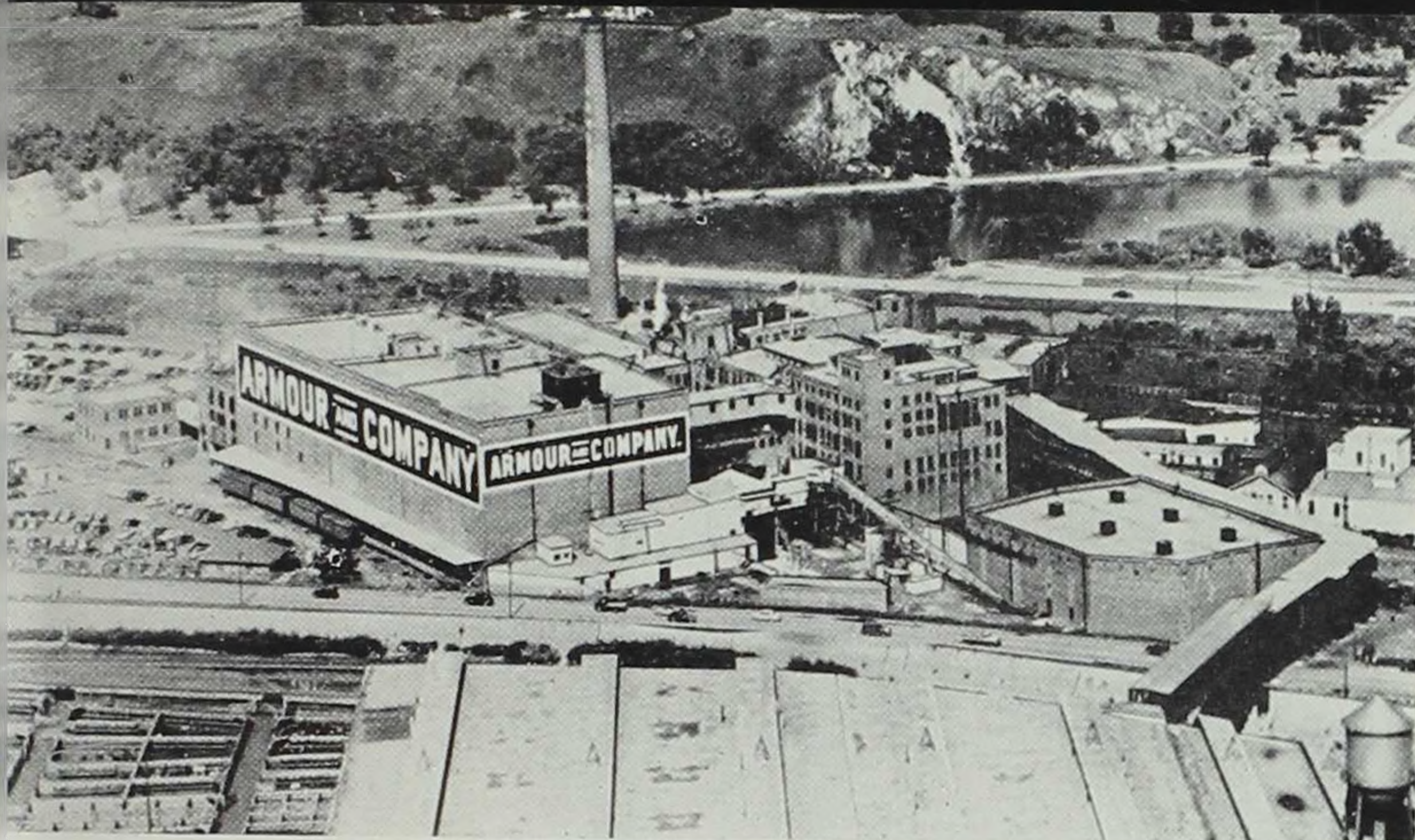


RATH PACKING COMPANY: Waterloo

Two cousins, E. F. and John W. Rath, founded the Rath Company in 1891. Starting with an investment of \$25,000, a force of 18 workers, and a business of \$101,000 the firm has grown until it now employs 8,200 with a monthly payroll of \$3,160,000. Some 4,800 stockholders own \$9,000,000 worth of common stock. In the peak year of 1954 the vast 40-acre Waterloo plant, valued at \$25,000,000, turned out meat products with a total value of \$273,000,000. Over 500 Rath salesmen call on some 40,000 customers in the United States and abroad. Chairman of the board is Howard H. Rath, son of co-founder John W. Rath. A. D. Donnell is president.

ABOVE: Rath plant in 1901. RIGHT (top): E. F. Rath; (bottom): J. W. Rath. BELOW: workers in early days.



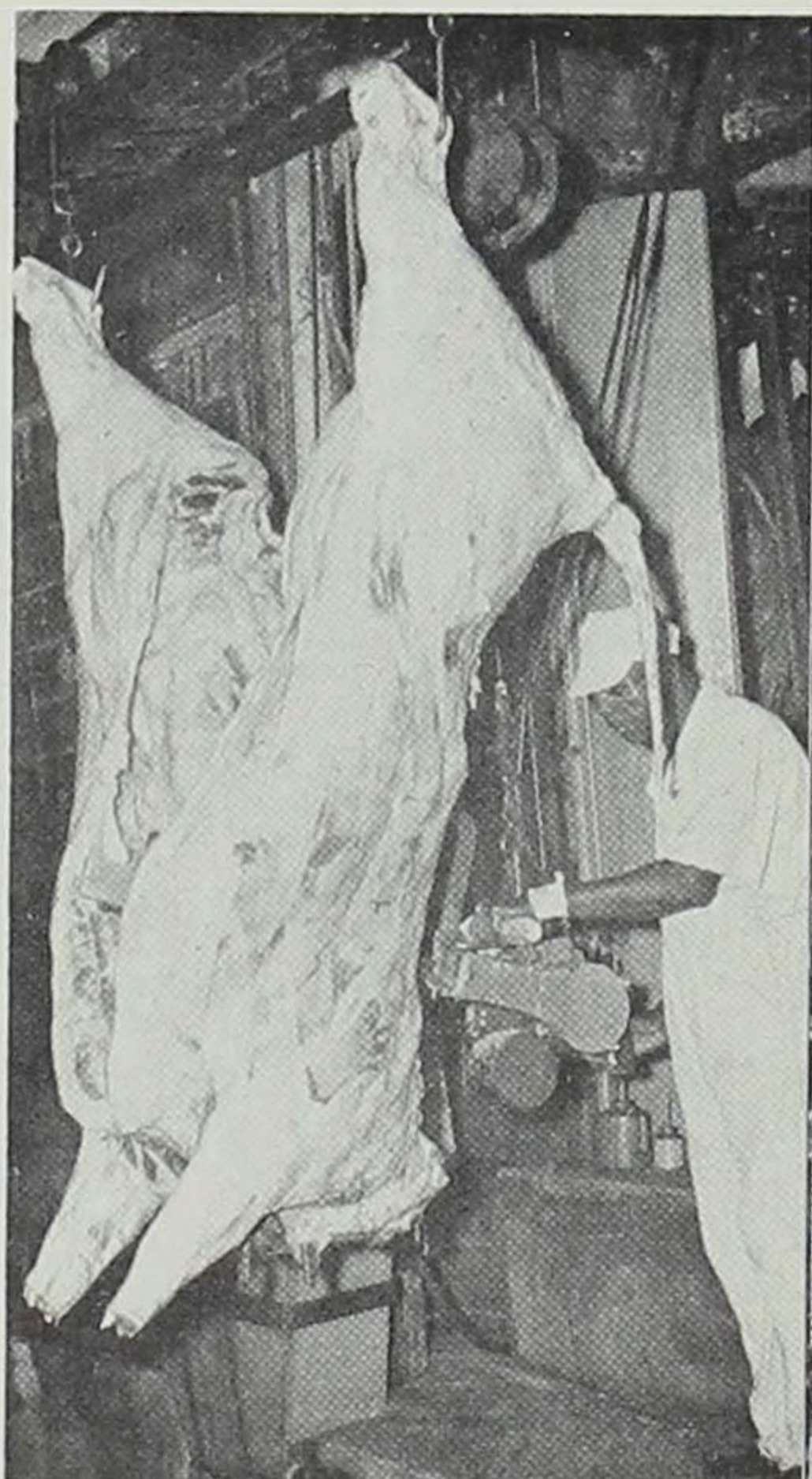


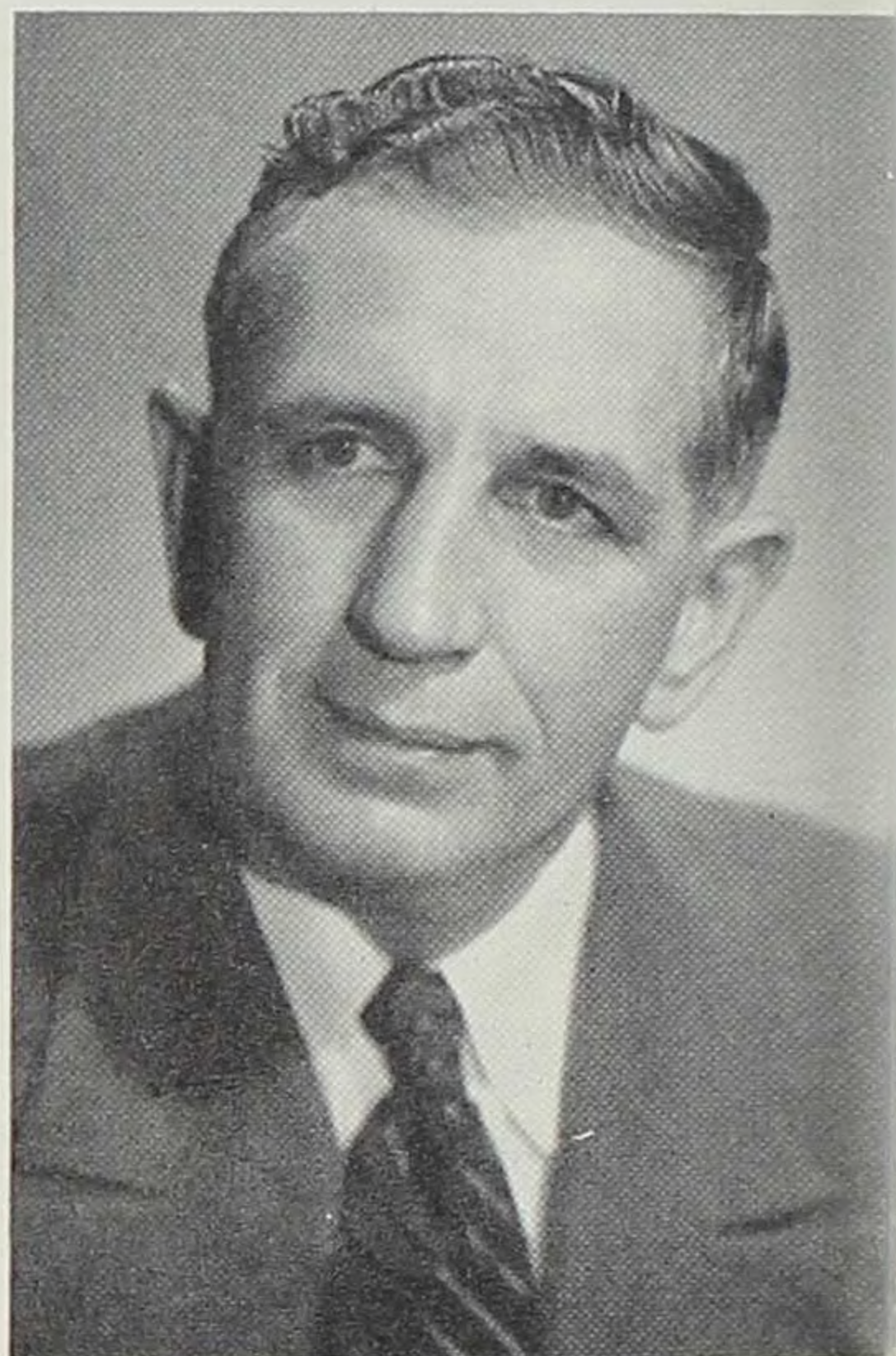
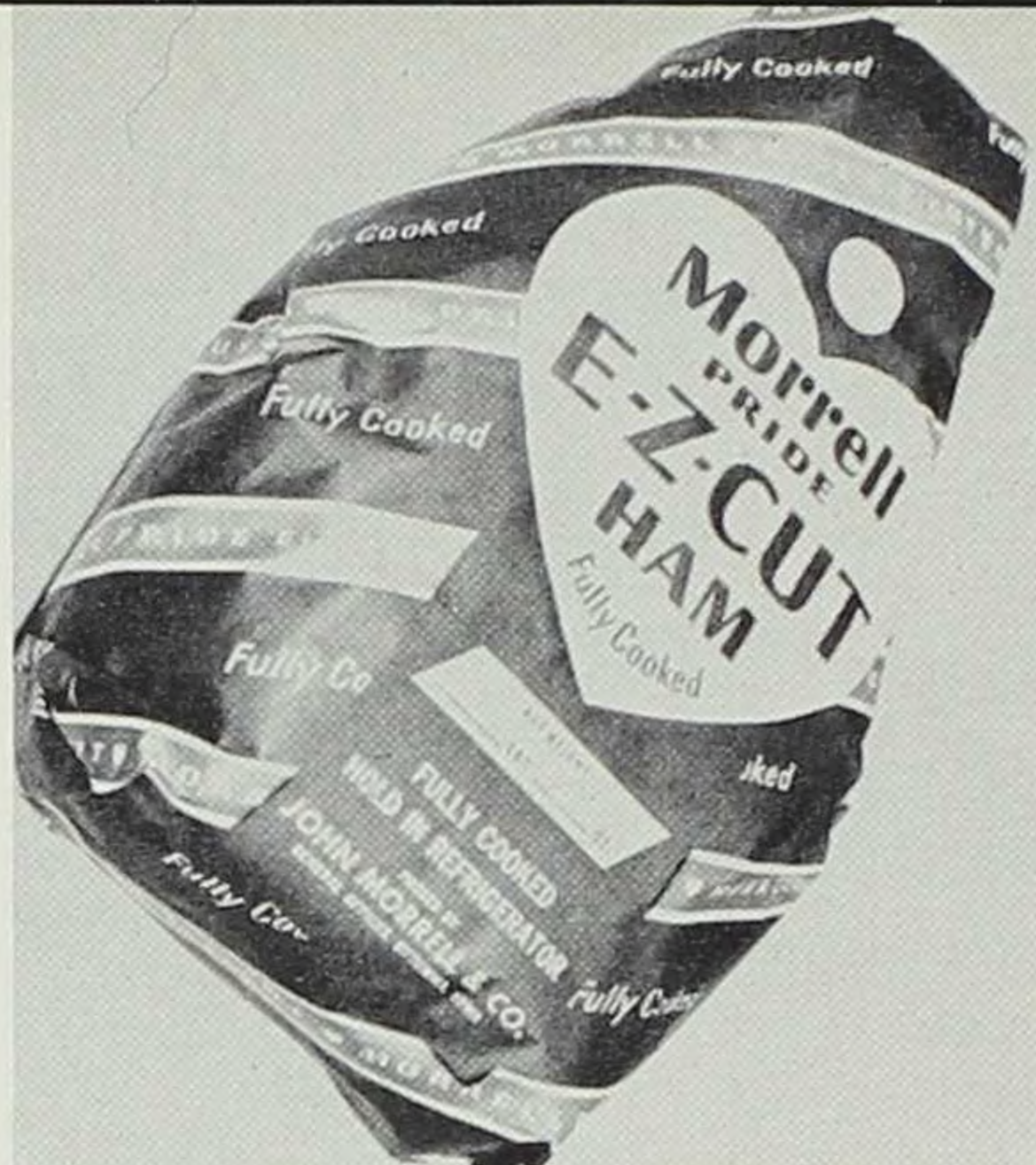
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ARMOUR AND COMPANY: Chicago

Armour, world's second largest meat packer, has two plants in Iowa. Its Sioux City plant, first established in 1901, employs approximately 2,000 workers. In contrast with Sioux City's first meat packing plant, operated by James E. Booge nearly a century ago, which slaughtered and dressed 12 hogs a day, the modern Armour plant has a capacity of 4,800 hogs, 880 cattle, and 1,800 sheep per day. In 1935 the Jacob E. Decker & Sons meat packing plant of Mason City became a division of Armour. This plant kills about 50,000 cattle and a million hogs annually, and with 1,500 employees is Mason City's biggest industry.

ABOVE: Sioux City plant. BELOW (left): preparing frankfurters; (right): cutting a steer down the backbone (both pictures at Sioux City plant).

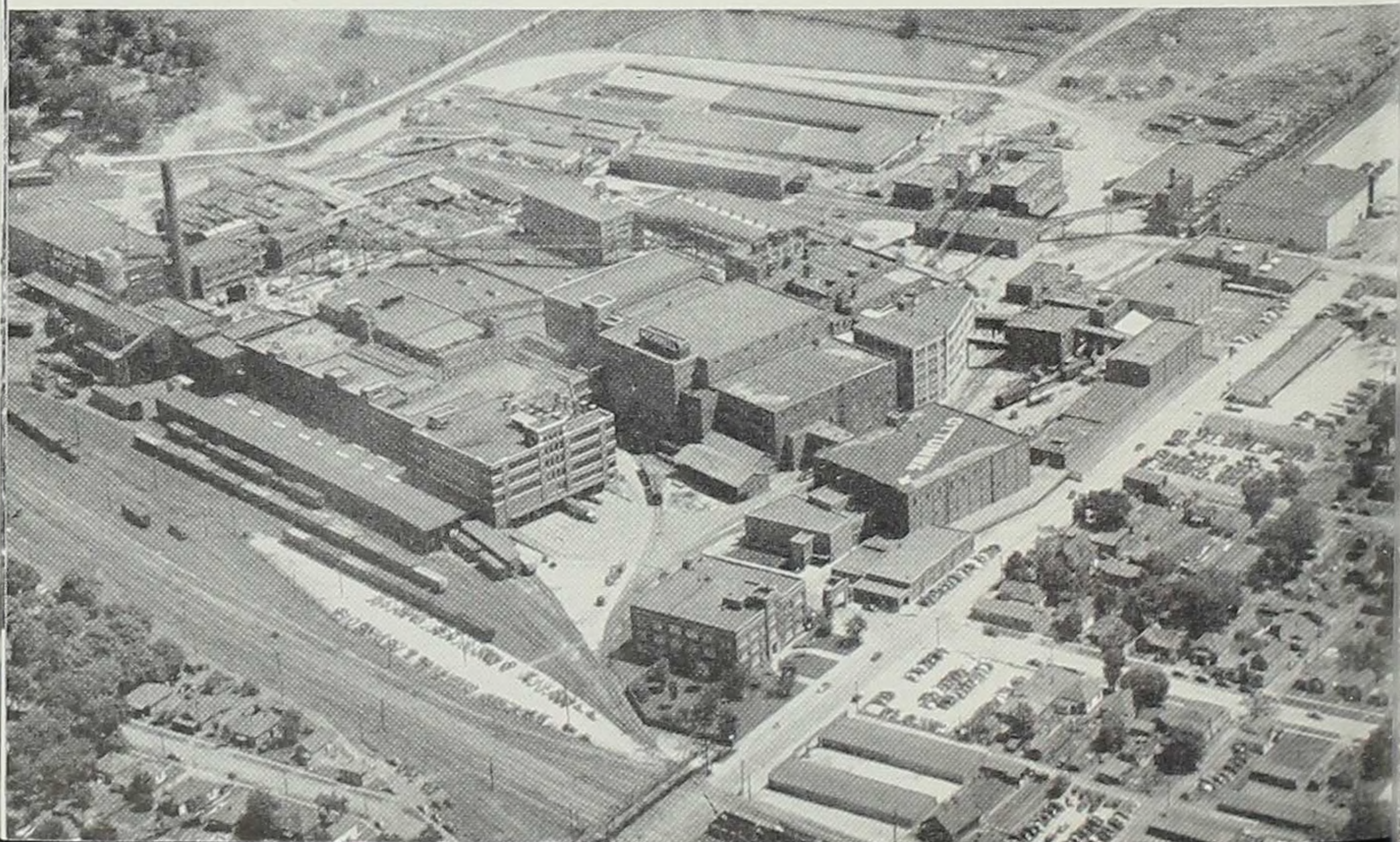


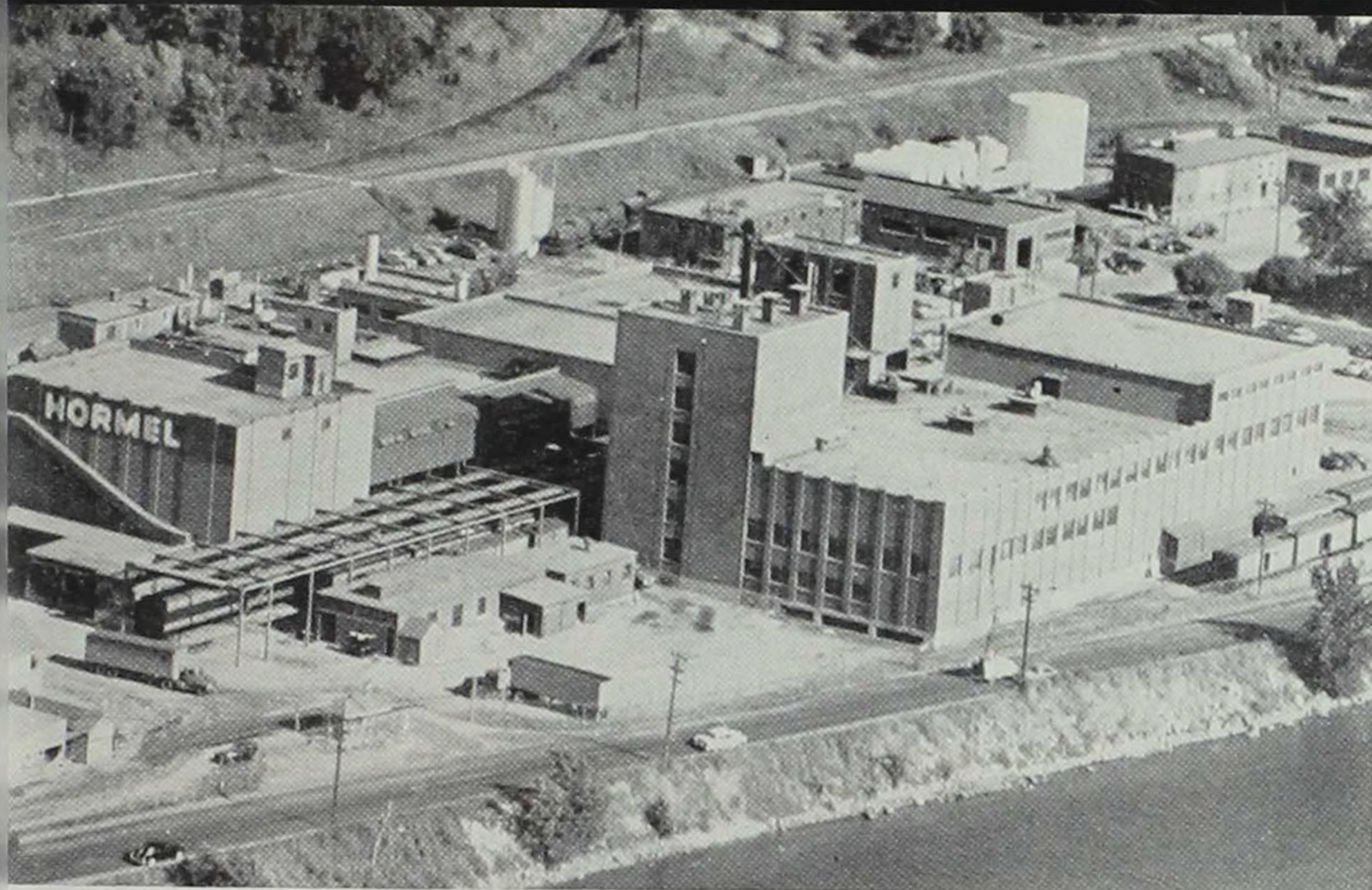


JOHN MORRELL AND COMPANY: Chicago

Founded in England in 1827, Morrell first began operations in Ottumwa in 1877. Today this plant, together with the one at Sioux Falls, remains the center of the company's meat packing operations. Some 3,935 workers were employed in the Ottumwa plant in 1955, with an additional 225 at the recently acquired Hill Packing Company at Estherville. The Morrell payroll to its Iowa employees in 1955 totaled \$19,150,000. The combined slaughter of the two plants was nearly two million head, and on a live weight basis the animals weighed about 650,000,000 pounds. George M. Foster of Ottumwa, descendant of the founders of the company, is chairman of the board. W. W. McCallum is president.

ABOVE (left): a Morrell product; (right): President McCallum. BELOW: the Ottumwa plant.





GEORGE A. HORMEL AND COMPANY: Austin, Minn.

The Fort Dodge plant of the Tobin Packing Company was purchased by Hormel in 1953. Located in one of the best hog producing areas in the country, the Fort Dodge plant is devoted to production of pork for such famous Hormel products as SPAM. Occupying some 12-and-a-half acres of land, the plant employed 1,023 workers in 1955, with a monthly payroll of \$425,779. Hormel has no other plants in Iowa.

ABOVE: the Fort Dodge plant. BELOW: some Hormel products.



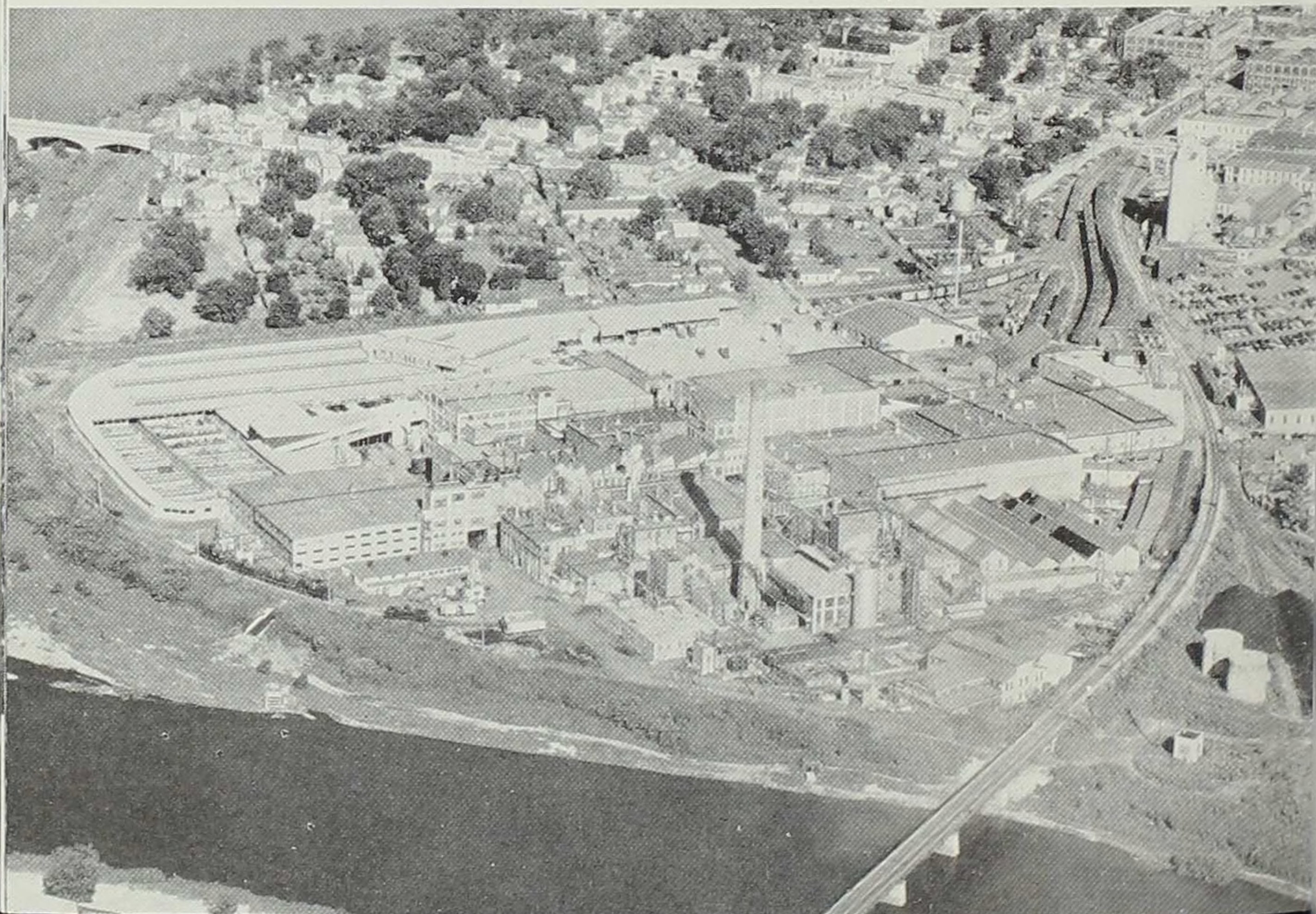


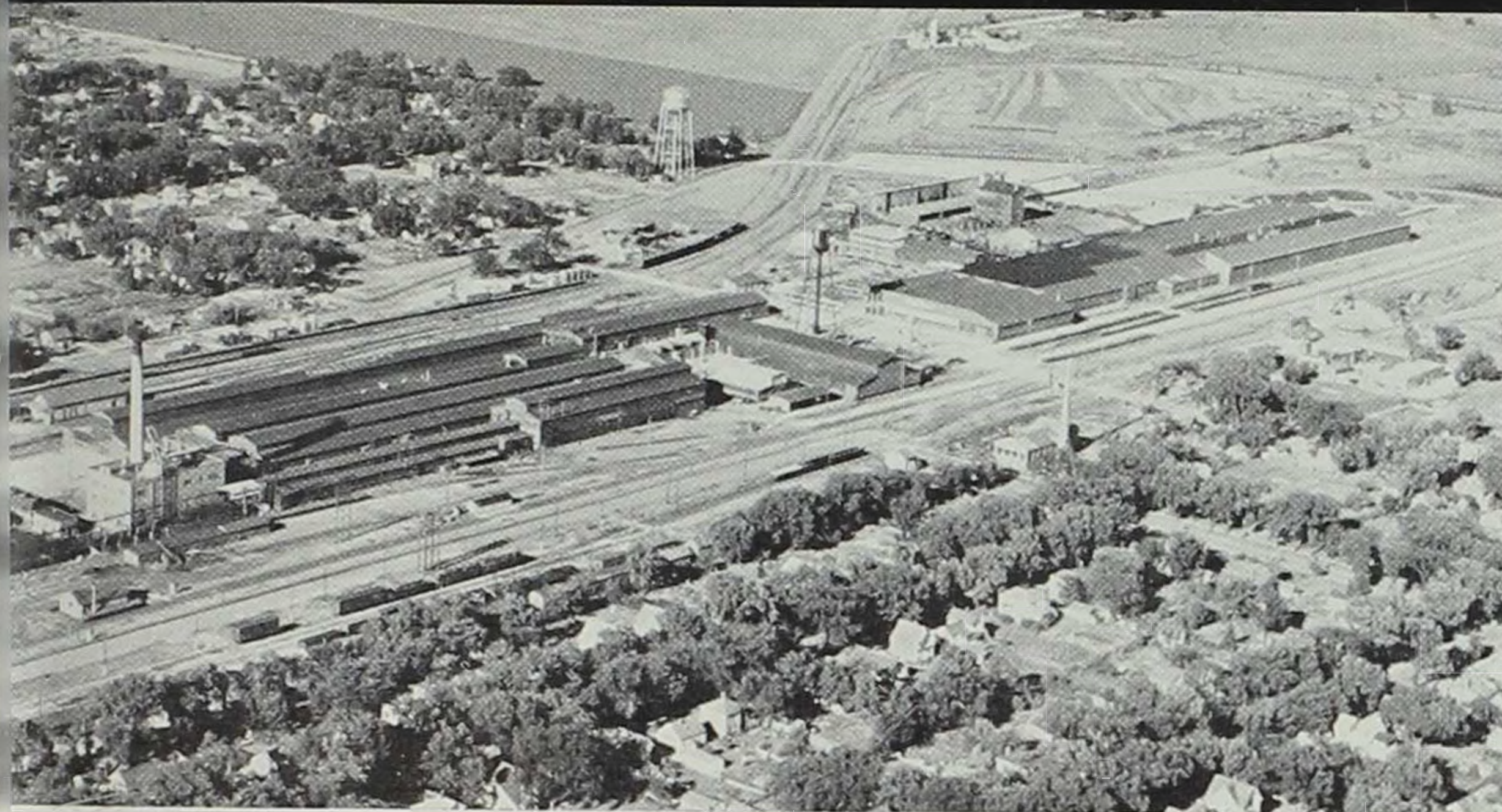
WILSON AND COMPANY: Chicago

After a visit to Cedar Rapids in 1870 David Blakely advised his friend, T. M. Sinclair, a New York meat packer, that the Iowa town would be an excellent location for a pork-packing plant. Upon investigation, Sinclair agreed and in 1871 the firm of T. M. Sinclair and Company was established, quickly becoming Cedar Rapids' leading industry of that period. The firm continued in operation after Sinclair's death in 1881, but as time went on the need was felt for a national marketing system. In 1913, therefore, the company became affiliated with what is now Wilson and Company. The latter took over complete control of the plant in 1930. Wilson, the third largest domestic meat producer, is presently expanding and modernizing the Cedar Rapids plant which employs over 2,600 workers.

ABOVE (left): T. M. Sinclair; (right): an early Sinclair ad. BELOW: Wilson's present-day Cedar Rapids plant.

Courtesy Cedar Rapids Chamber of Commerce

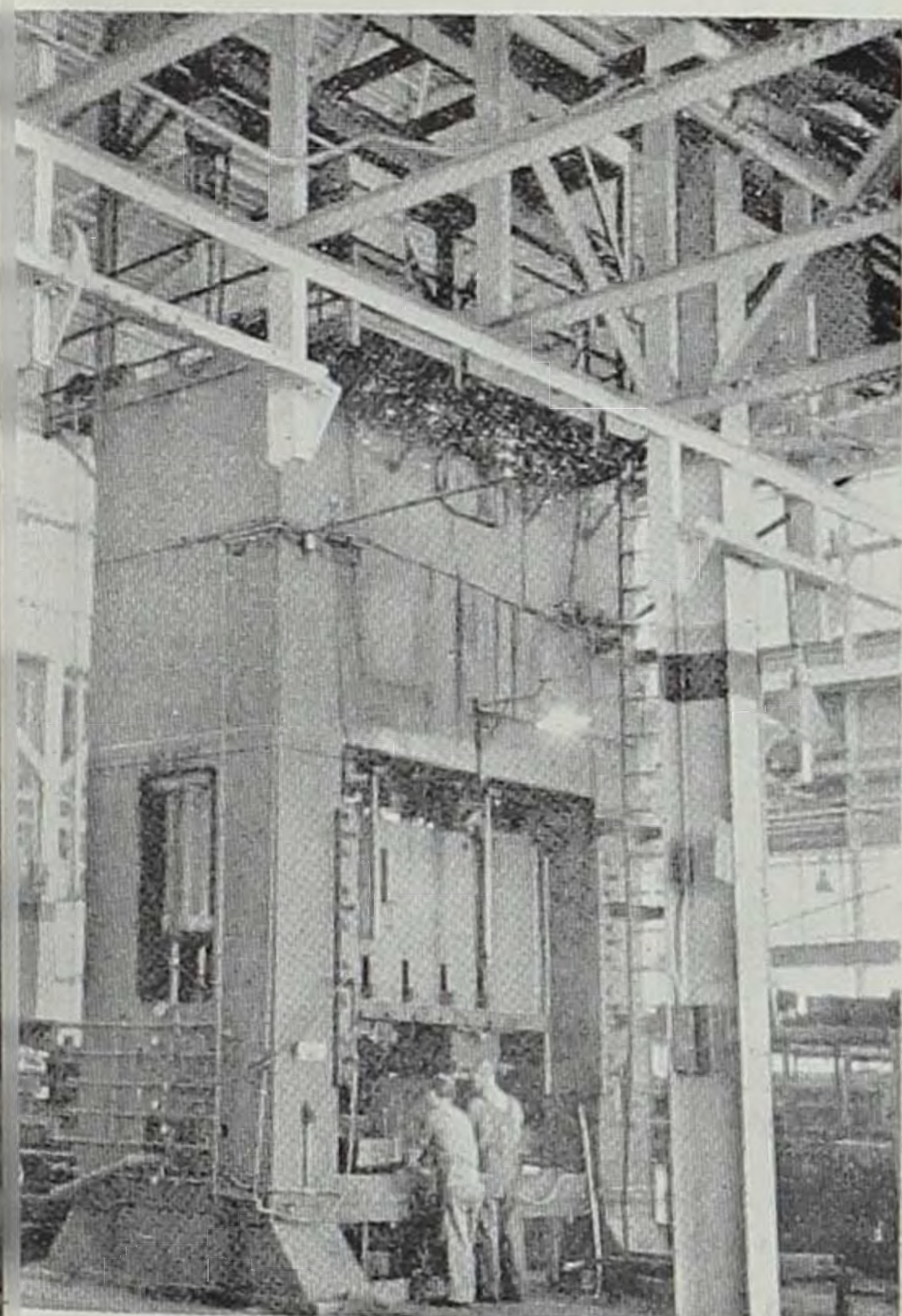


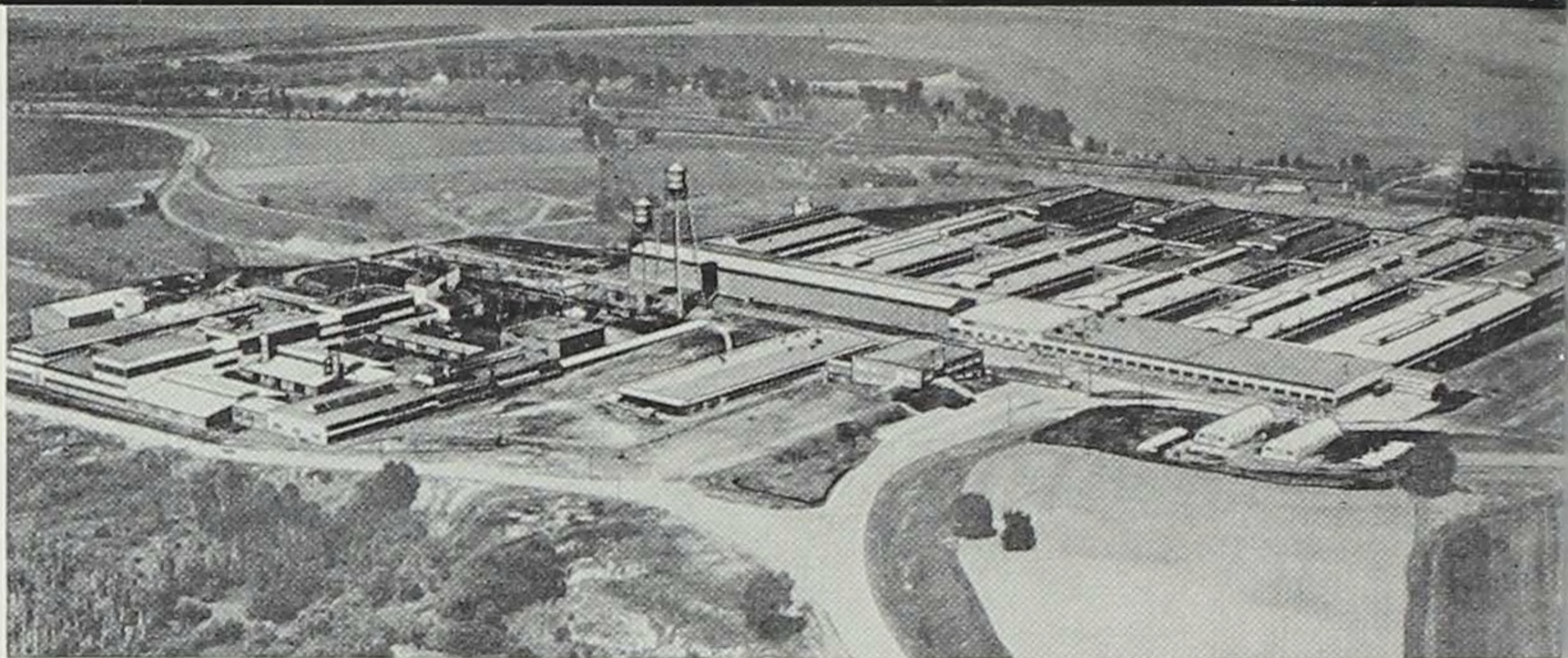


THE OLIVER CORPORATION: Chicago

In 1900 Charles Hart and Charles Parr came to Charles City and began building internal combustion traction engines. The first of these, completed in the winter of 1900-1901, was bought by a Mason City farmer who proved that it was practical for farm use. The following year the Hart-Parr Company produced 15 of the tractors, and the firm steadily prospered. In 1929 Hart-Parr merged with three other agricultural equipment manufacturers to form what is now the Oliver Corporation, the fourth largest producer of farm equipment. The Charles City plant, which originally employed six men and had an approximate monthly payroll of \$750, in 1955 employed 1,800 with a monthly payroll of about \$600,000. The plant, occupying 66 acres, produces wheel-type agricultural and industrial tractors.

ABOVE: Charles City plant. LEFT: large press at plant. BELOW: Oliver tractor.

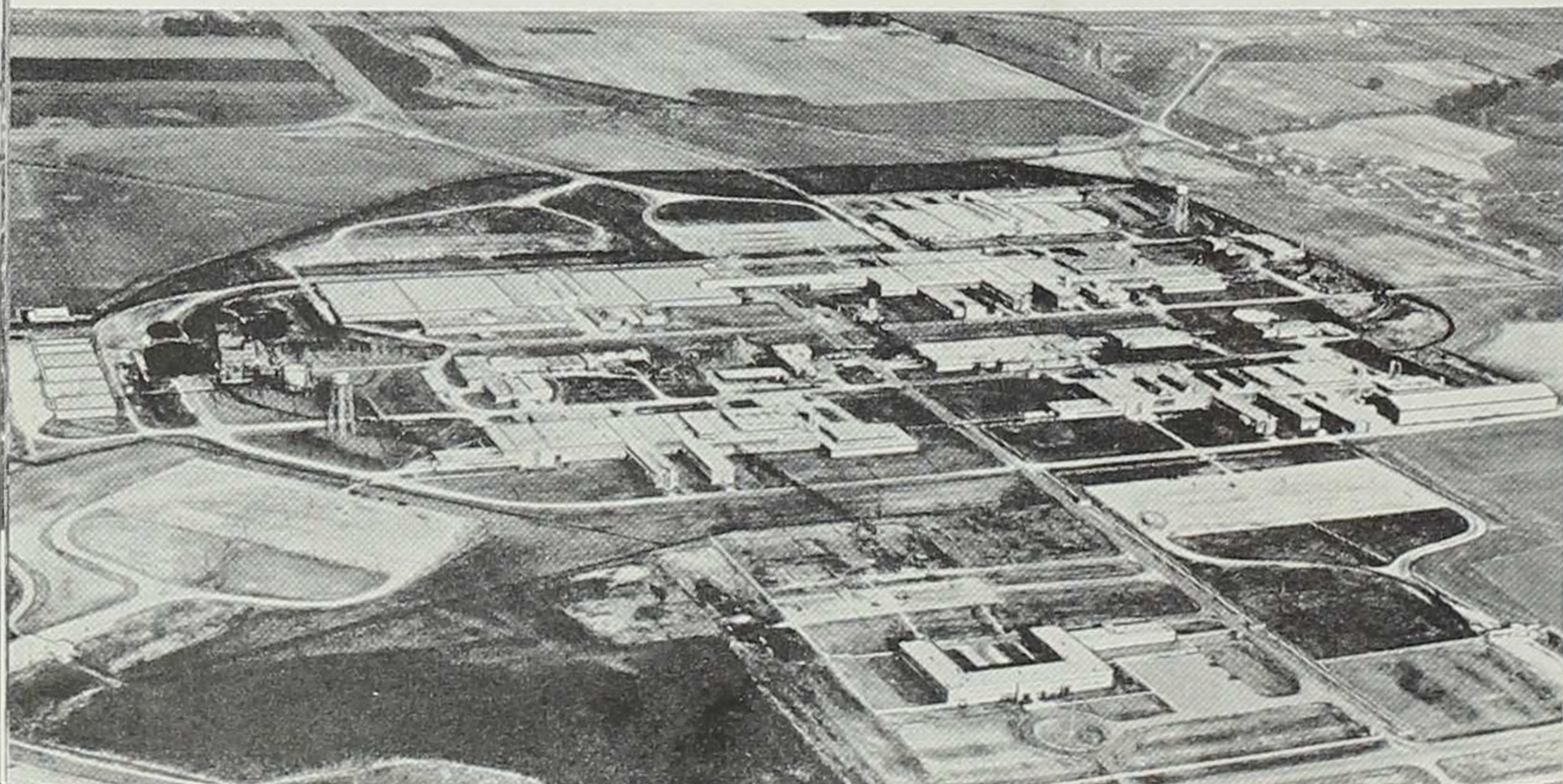
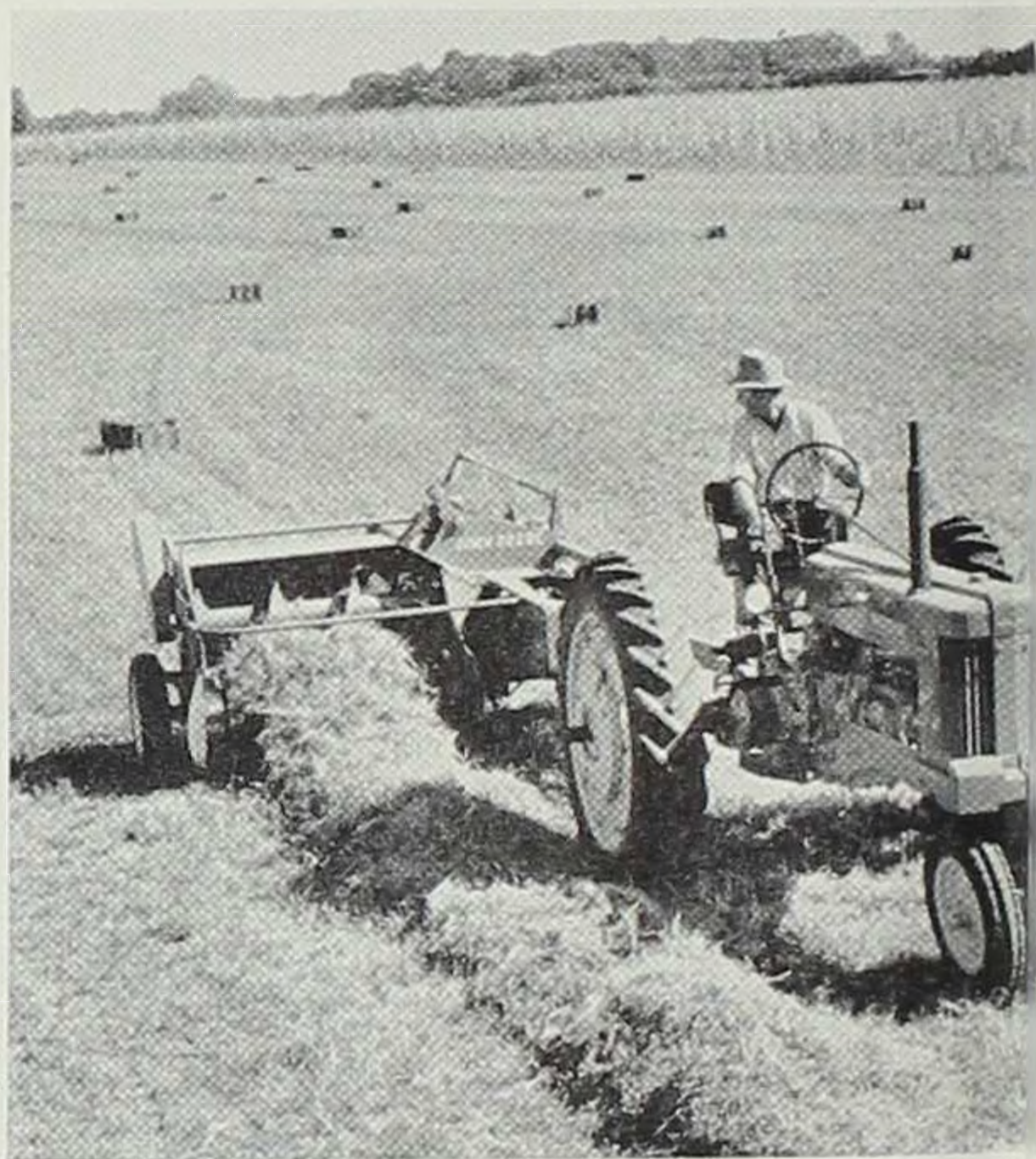


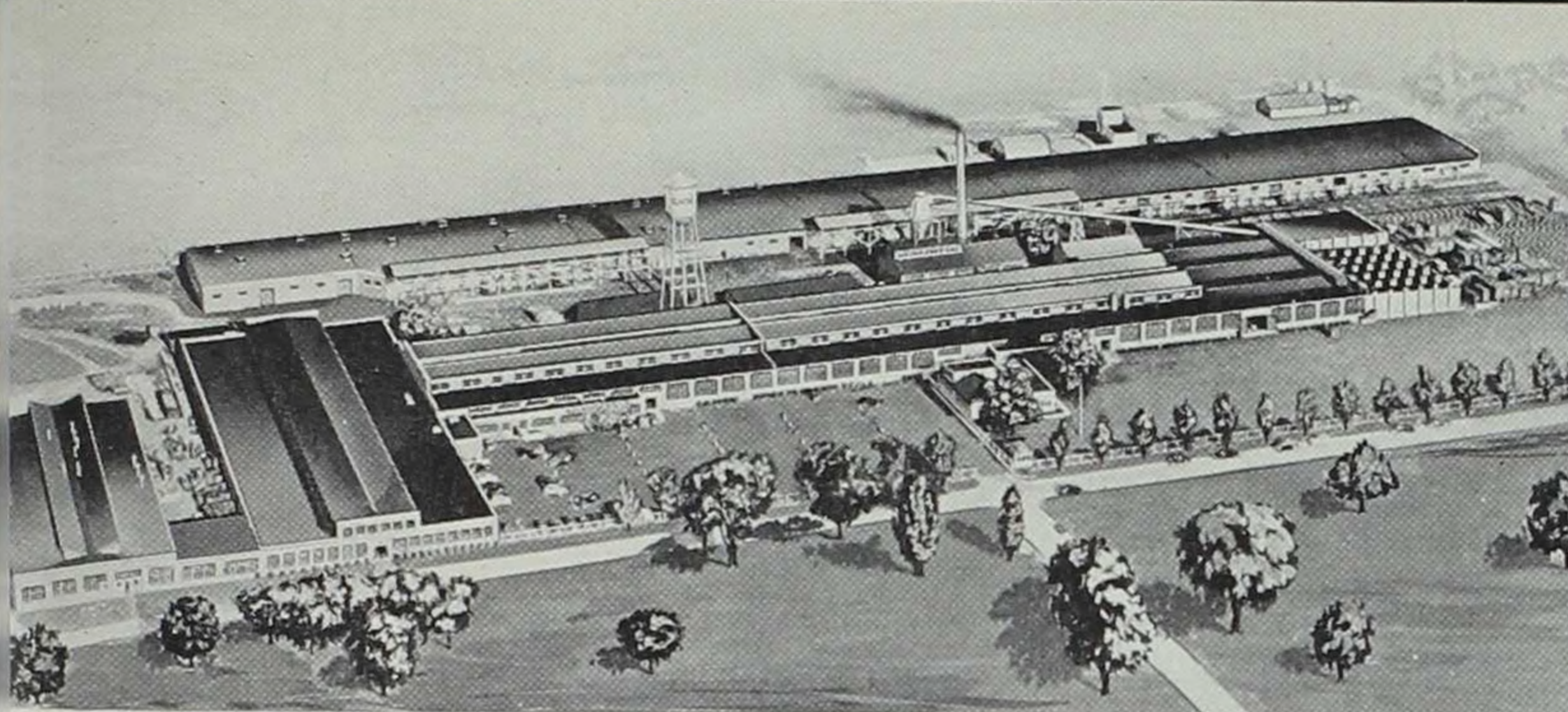


DEERE AND COMPANY: Moline

Deere, the second largest manufacturer of a complete line of farm equipment in the country, has four of its 14 plants in Iowa. With a total of about 9,500 employees in these plants Deere is Iowa's largest industrial employer. The largest of the four is the huge John Deere Tractor Works in Waterloo. Originally the Waterloo Gasoline Engine Plant until Deere purchased it in 1918, it has grown into the largest single-unit tractor factory in the world, employing around 6,000, and producing all of Deere's large-wheeled tractors. In 1947 the new Dubuque Tractor Works began producing Deere's new line of small tractors. The oldest Deere plant in Iowa is its Ottumwa Works which dates from 1900 when it was a part of the Dain Manufacturing Company. It makes hay balers, side-delivery rakes, forage choppers, and other equipment. In 1947 Deere got its fourth Iowa plant, buying the government-owned Des Moines ordnance plant. It now produces corn and cotton pickers, among other equipment.

ABOVE: Dubuque plant. RIGHT: Ottumwa plant hay baler. BELOW: Des Moines plant.

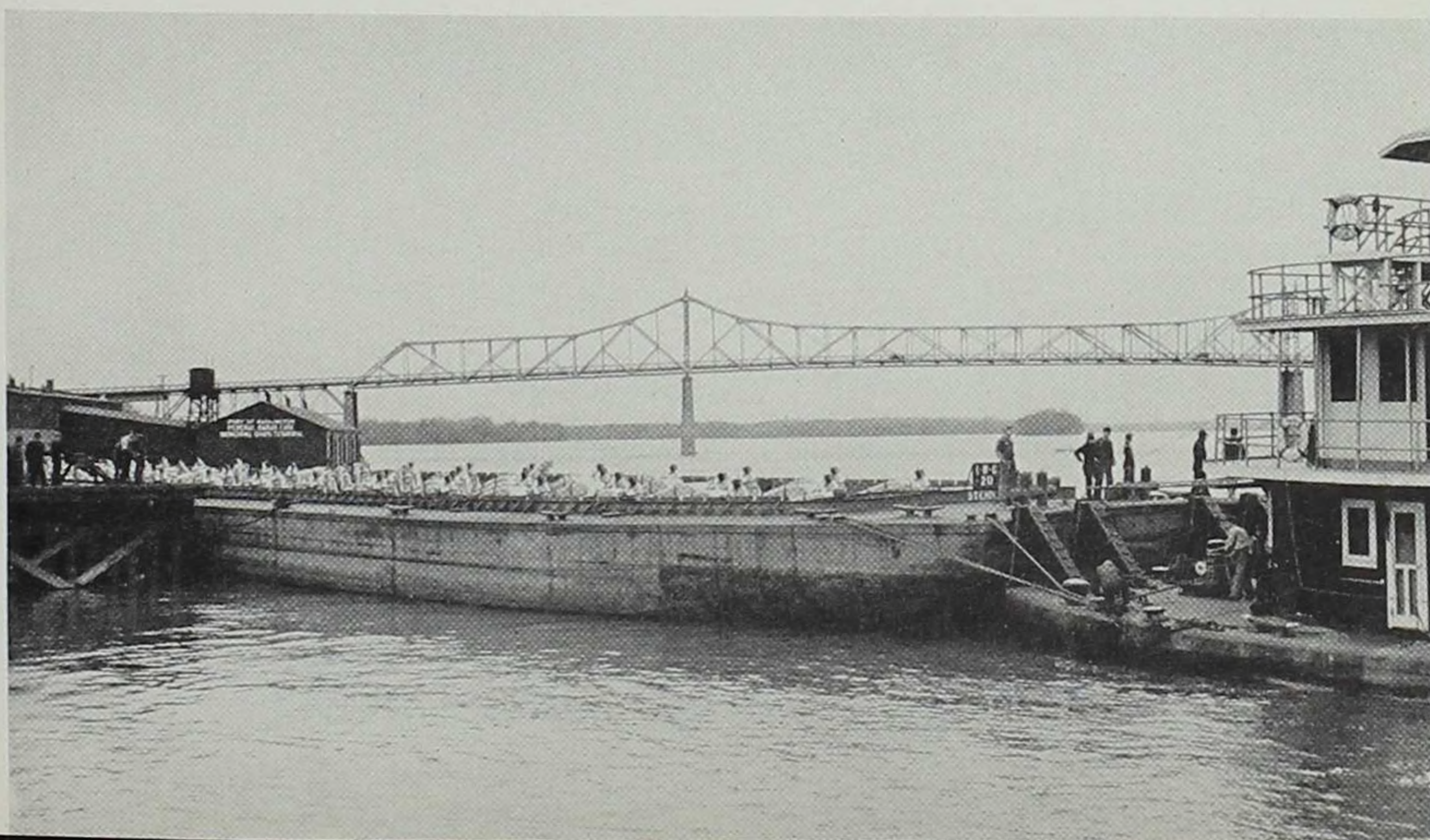




J. I. CASE COMPANY: Racine

J. I. Case, the country's fifth largest farm equipment manufacturer, first entered the Iowa industrial picture in 1937 when it purchased a former furniture factory in Burlington. Here it produces Model "A" and Model "F-2" combines and portable farm elevators. In 1955 the plant employed close to 400 workers. Case's other Iowa plant, at Bettendorf, was acquired in 1947. This plant was hit by a spectacular \$600,000 fire in 1952. Its 1,700 employees produce several types of combines, an automatic self-tying pickup hay baler, harvesters, and corn pickers. In November, 1956, Burlington operations will be transferred to the Bettendorf plant.

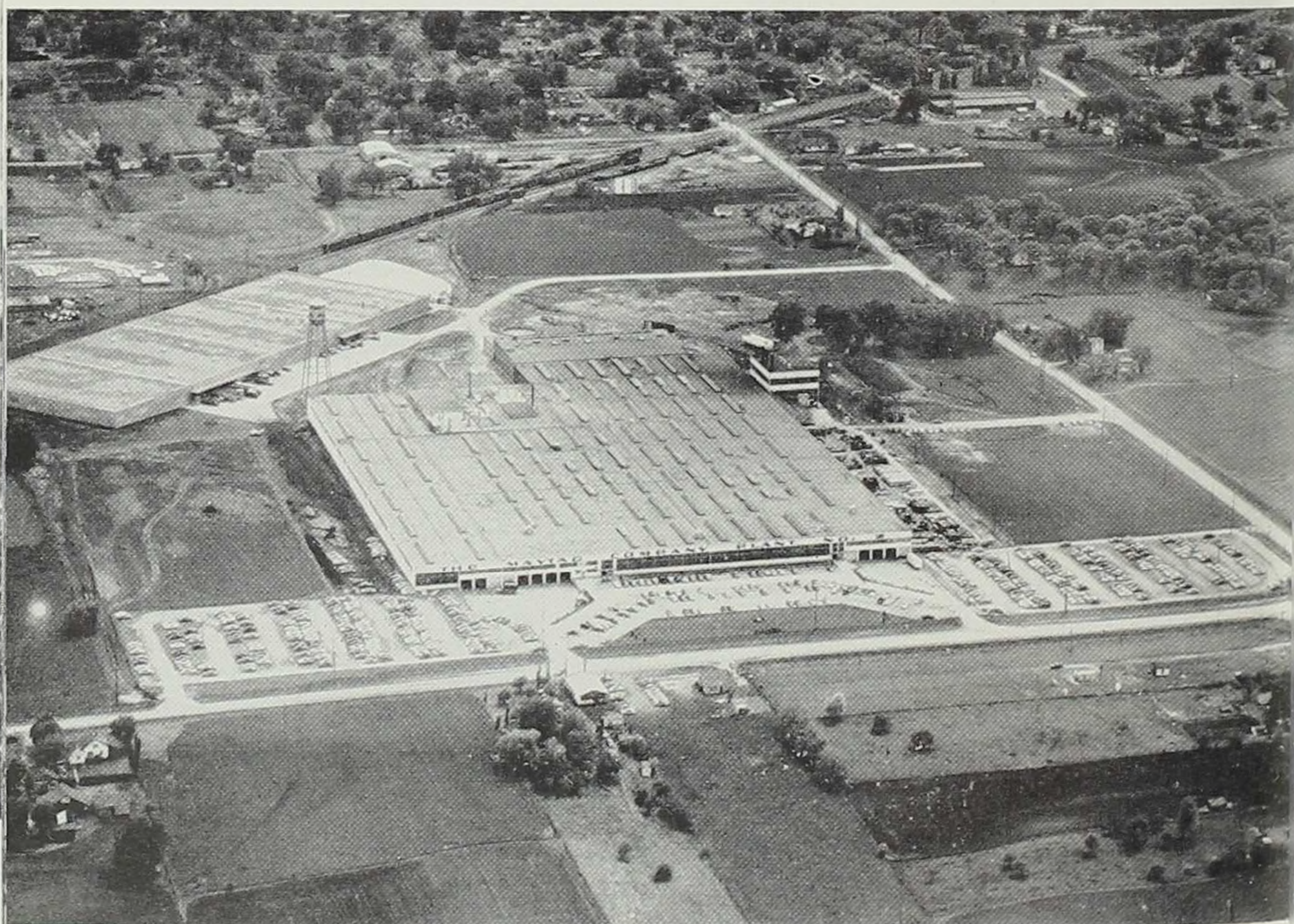
ABOVE: Burlington plant. LEFT: Case products in action. BELOW: products of Burlington plant being shipped out by Mississippi River barge.

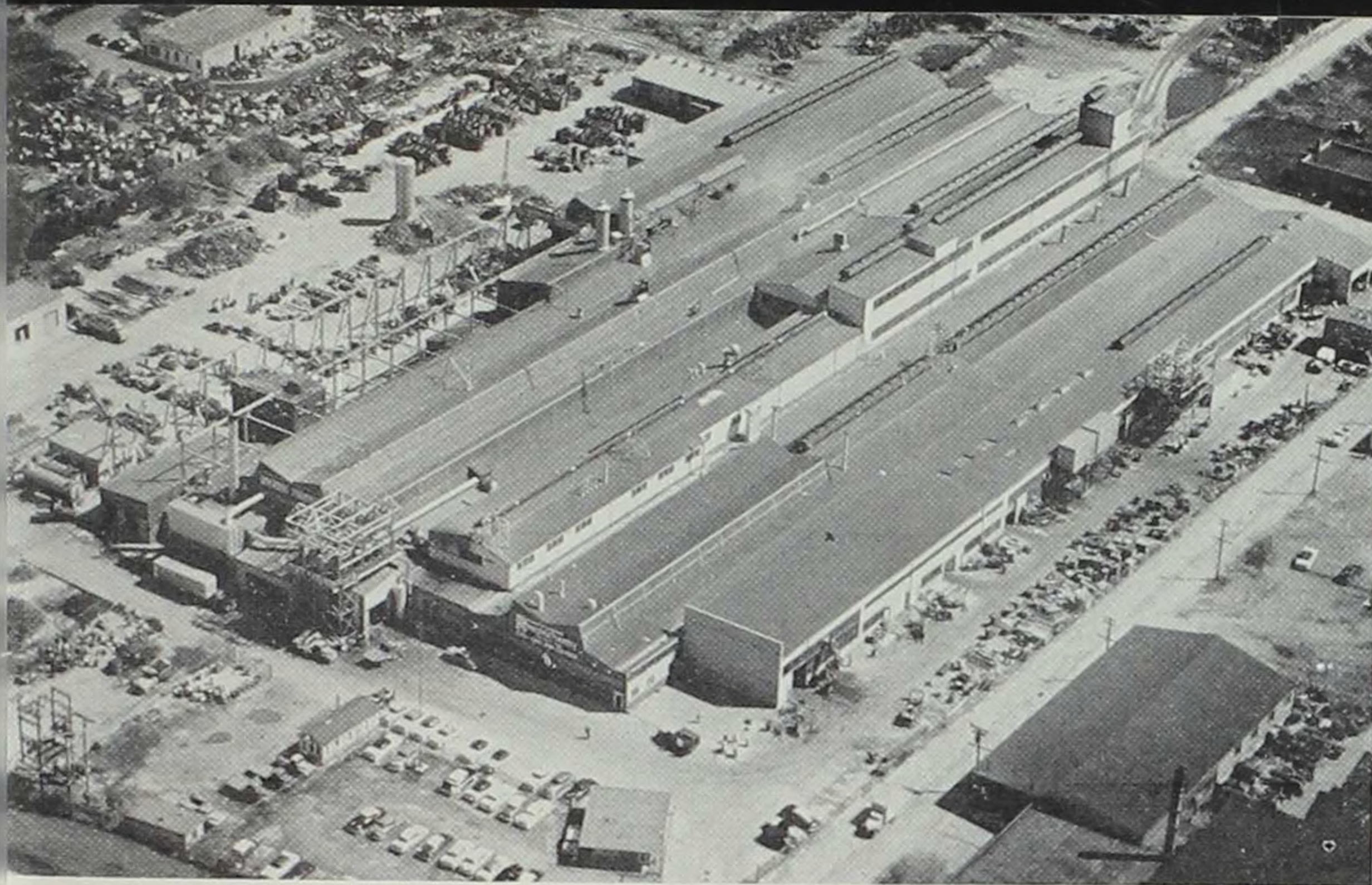


IOWA INDUSTRIES: Other industries

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Maytag Company, Newton, Plant No. 2

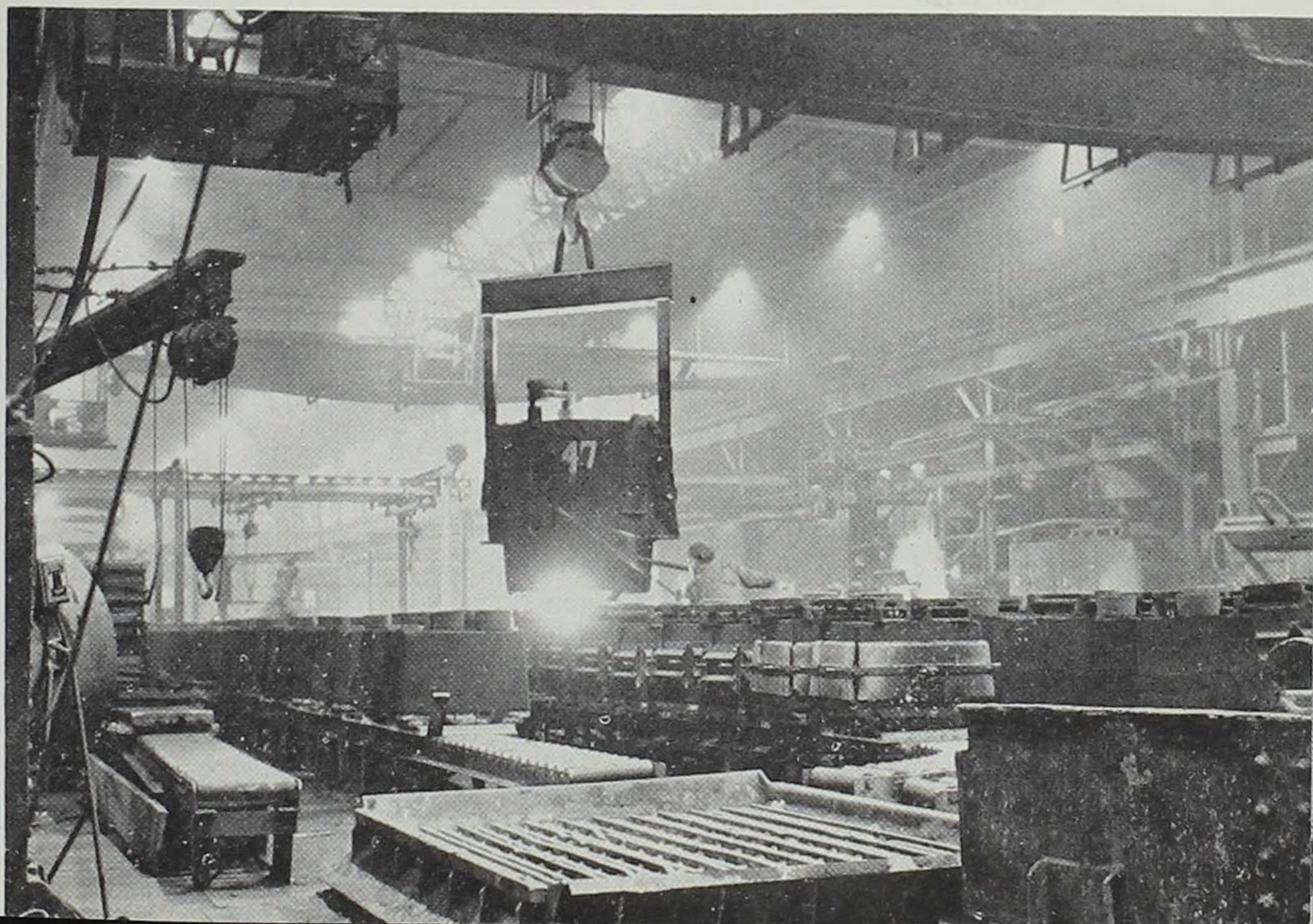


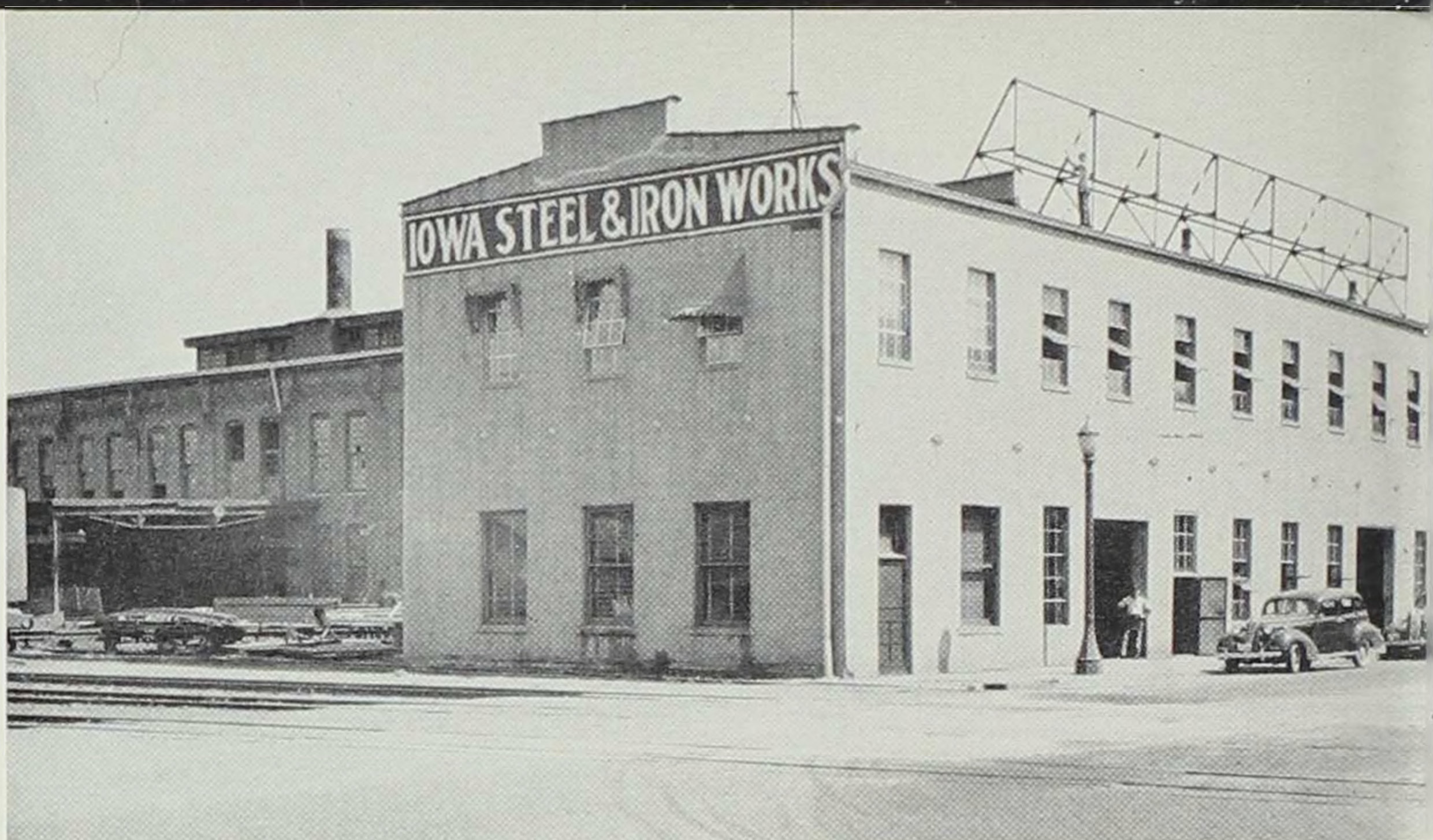


RIVERSIDE FOUNDRY, INCORPORATED: Bettendorf

Founded in 1946 by Russell H. Swartz and Harold S. Brady, Riverside Foundry has grown from a firm employing 75 workers with a monthly payroll of \$20,000 to one which in its best year recently had 850 workers and a monthly payroll of \$360,000. The company is equipped to produce steel and gray iron castings weighing as little as a few ounces or as much as ten tons. Following the conclusion of its defense industry contracts which had accounted for the bulk of its production, Riverside Foundry went through a difficult period of readjustment in 1955, but by 1956 President Swartz declared they had met the challenge and were looking to the future with much greater hopes.

ABOVE: aerial view of plant. BELOW: the pouring floor.



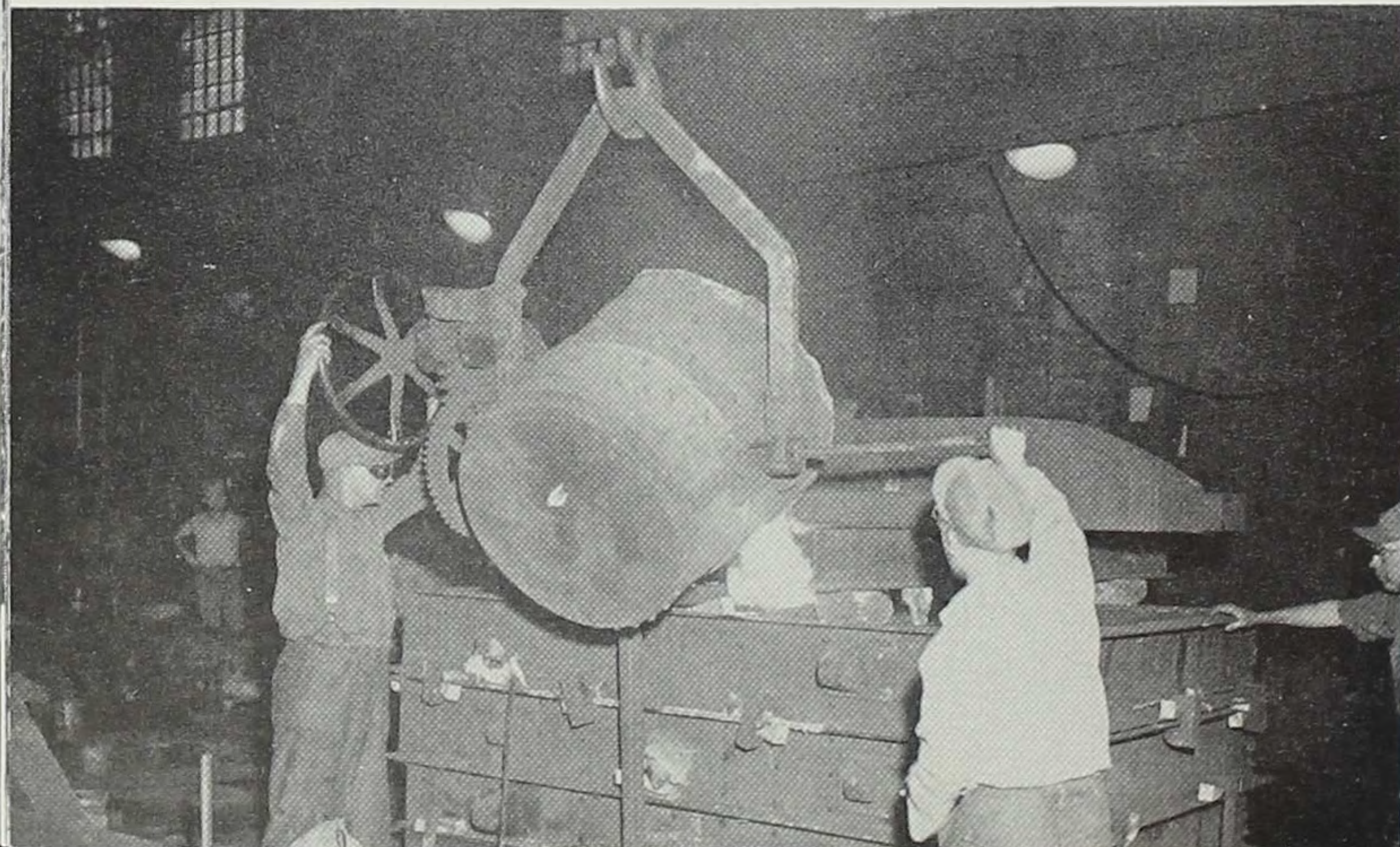


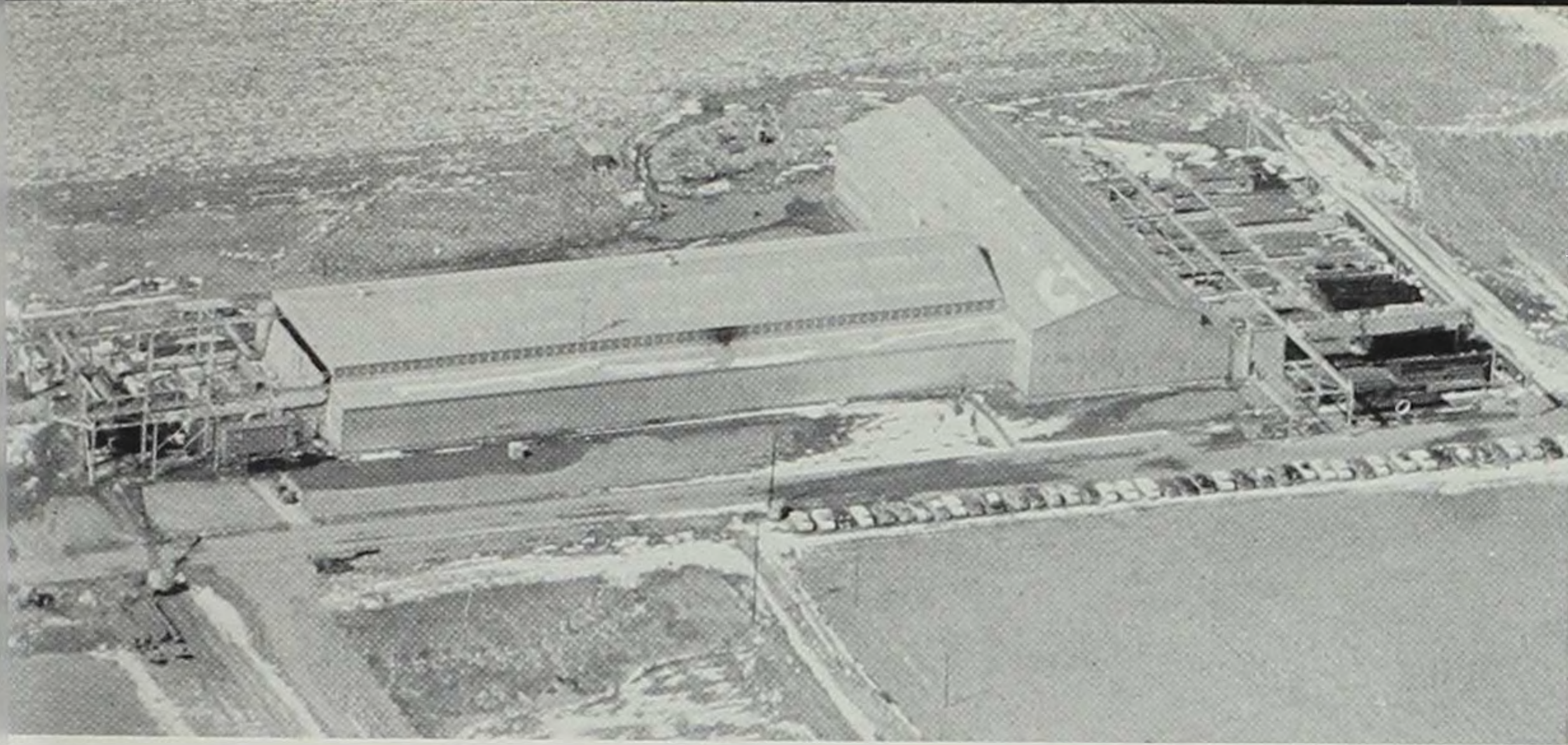
Courtesy Cedar Rapids Chamber of Commerce

IOWA STEEL AND IRON WORKS: Cedar Rapids

Established in 1910, Iowa Steel and Iron employs about 700 workers. It produces gray iron machinery castings and fabricated structural steel. It also specializes in job metal roof decks, steel sashes, and wire mesh. It works closely with its neighbor and affiliated firm, Iowa Manufacturing Company. Howard Hall is the president of Iowa Steel and Iron as he is also of Iowa Manufacturing.

ABOVE: exterior of plant. RIGHT: Howard Hall. BELOW: an operation in the plant.

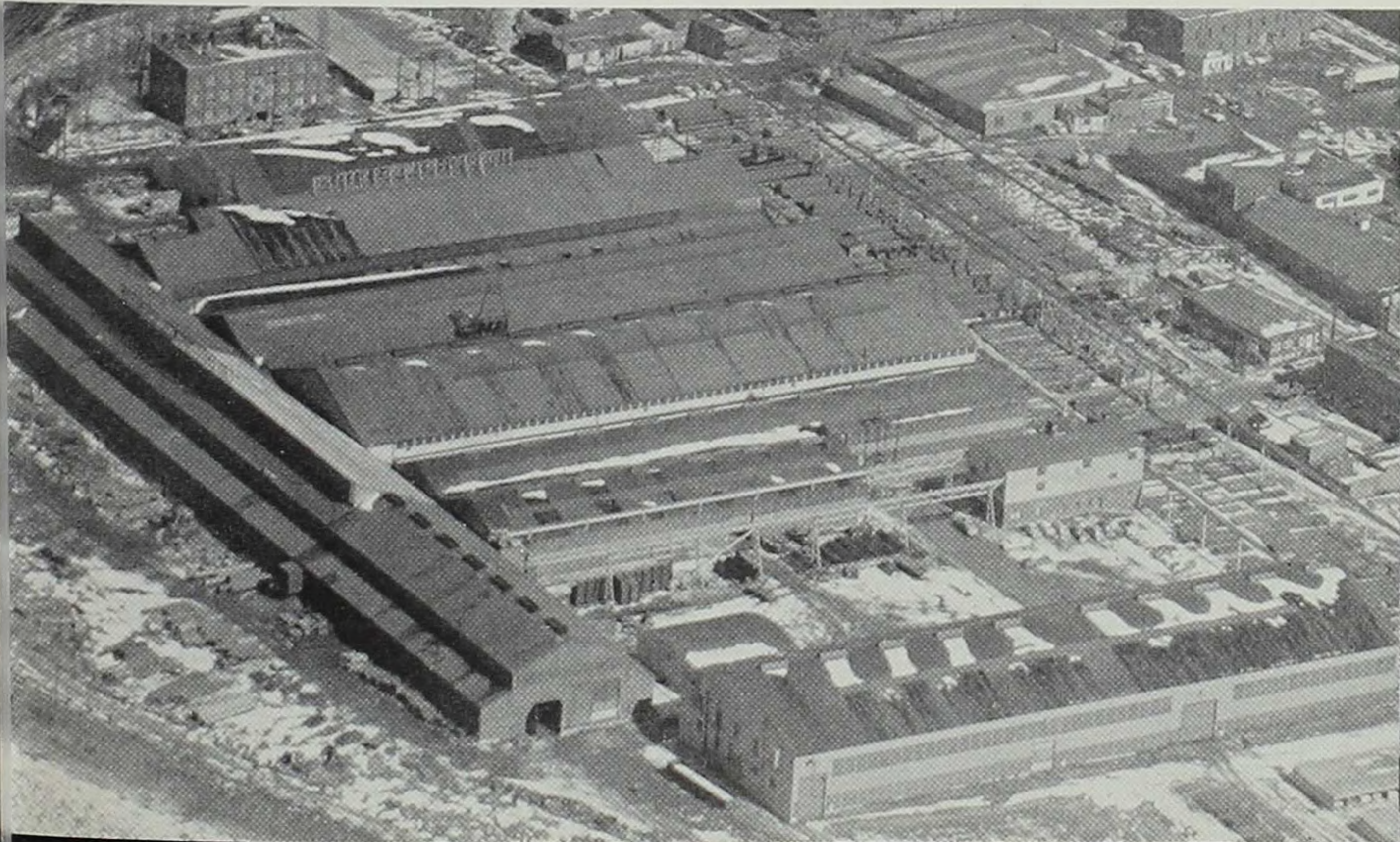


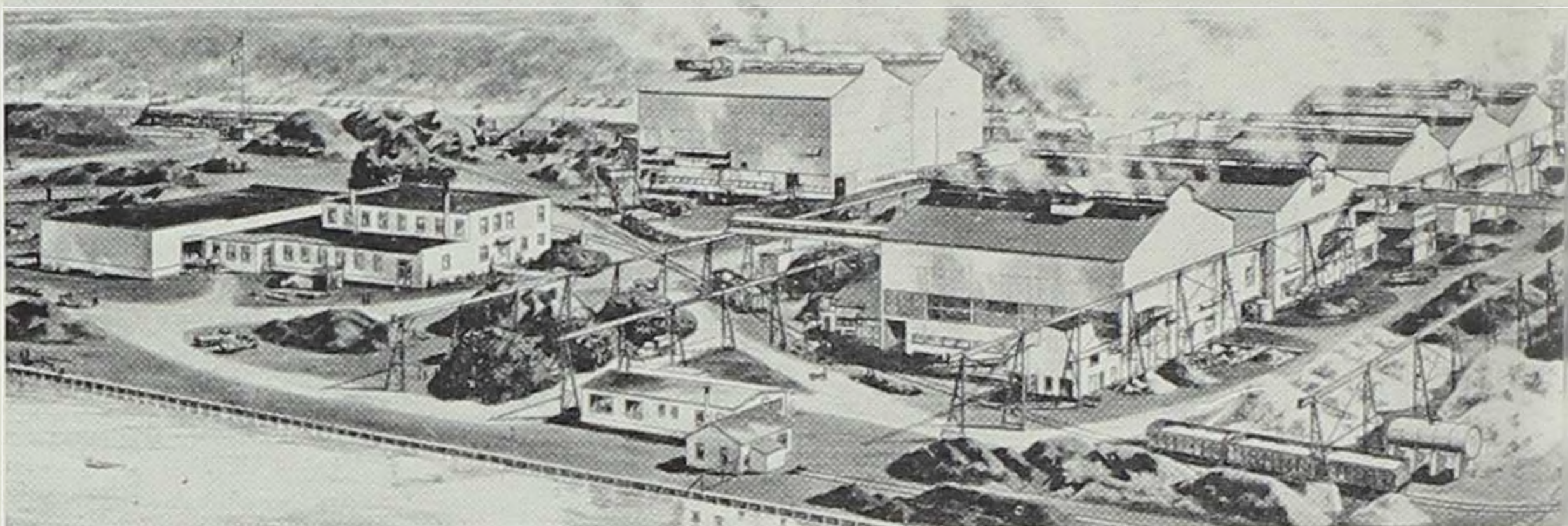


PITTSBURGH-DES MOINES STEEL COMPANY: Pittsburgh

W. H. Jackson and B. N. Moss, two young Des Moines engineers, in 1893 joined forces as engineers and contractors in the waterworks field. In 1900 they combined with E. W. Crellin, forming the Des Moines Bridge and Iron Works, which pioneered in the building of elevated steel water storage tanks. The demand was so great that a plant was built in Pittsburgh, where the company's executive offices were transferred in 1910. The firm took its present name in 1917. The company is one of the nation's largest producers of fabricated steel. The 2,200 tons of structural steel required to build the new Des Moines Veterans Memorial Auditorium were produced by Pittsburgh-Des Moines, as was the huge Ellipsoidal Roof Reservoir at Ottumwa with a capacity of 4,200,000 gallons of water. John E. Jackson, son of the founder, is president of the company. The Des Moines plant has about 450 workers with an annual payroll of \$2,000,000. Since 1940 the value of its output has jumped from \$8,000,000 to over \$40,000,000. With its new Clive plant west of Des Moines the Des Moines Division can handle some 42,000 tons of steel a year, equal to the capacity of the Pittsburgh plant.

ABOVE: the new Clive plant. BELOW: the Des Moines plant.





**KEOKUK ELECTRO-METALS COMPANY:
Keokuk**

Having developed a new technique for producing ferro-alloys on a commercial scale in electric furnaces, G. E. Weissenburger organized the Keokuk Electro-Metals Company in 1915. Since its first furnace was built in 1916 the company has become the world's largest producer of silvery pig iron. From an original force of 40 men with a monthly payroll of \$3,224 the firm by 1955 was employing 1,032 with monthly wages totaling \$383,077. Occupying over 48 acres of land the company is increasing its production capacity by 30 per cent during 1956-1957. Since the founder's death in 1937 his son, G. L. Weissenburger, has been president.

ABOVE: partial view of plant. RIGHT: G. L. Weissenburger. BELOW: night and day the furnaces operate.





year 'round touch of beauty
with the Monco

**Patio
Planter**

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modern

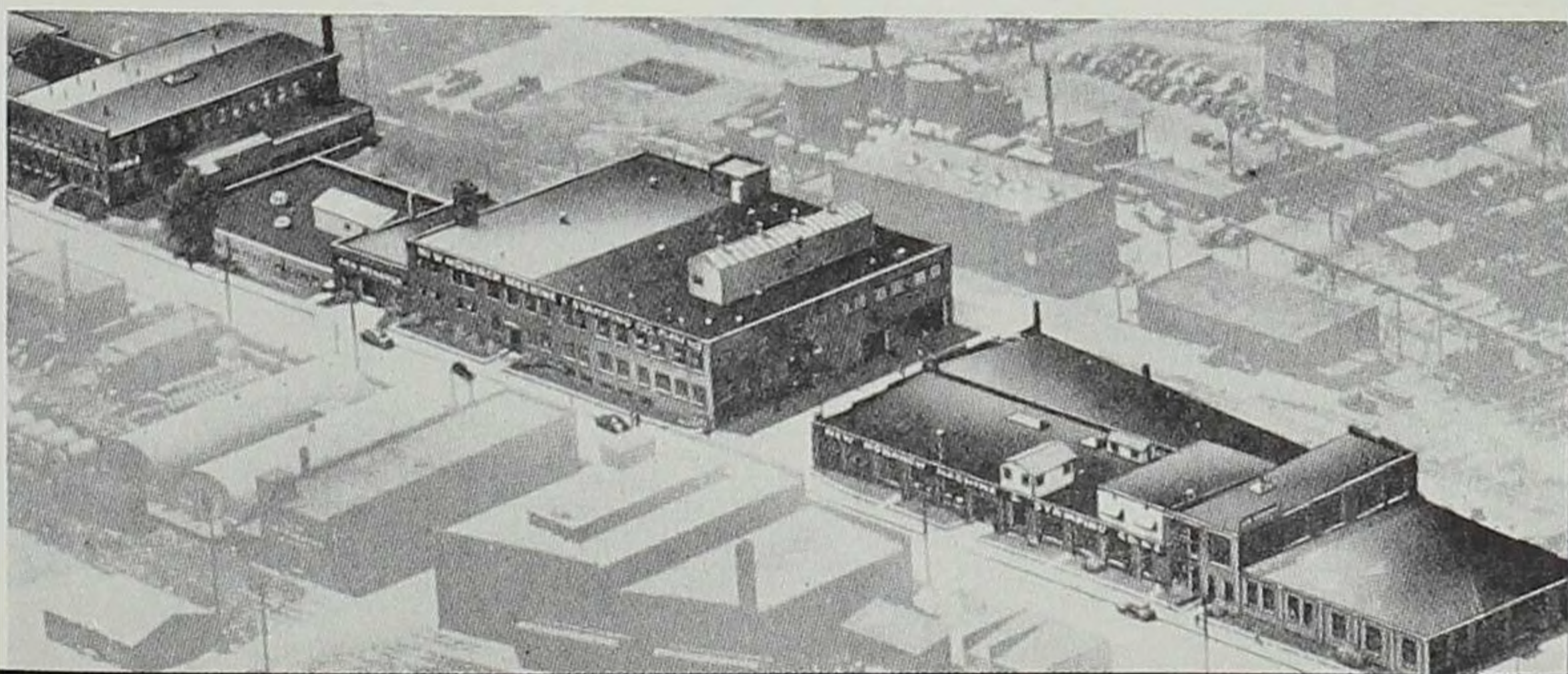
Create beauty with modern
wrought-iron finish patio
planters... a planter that
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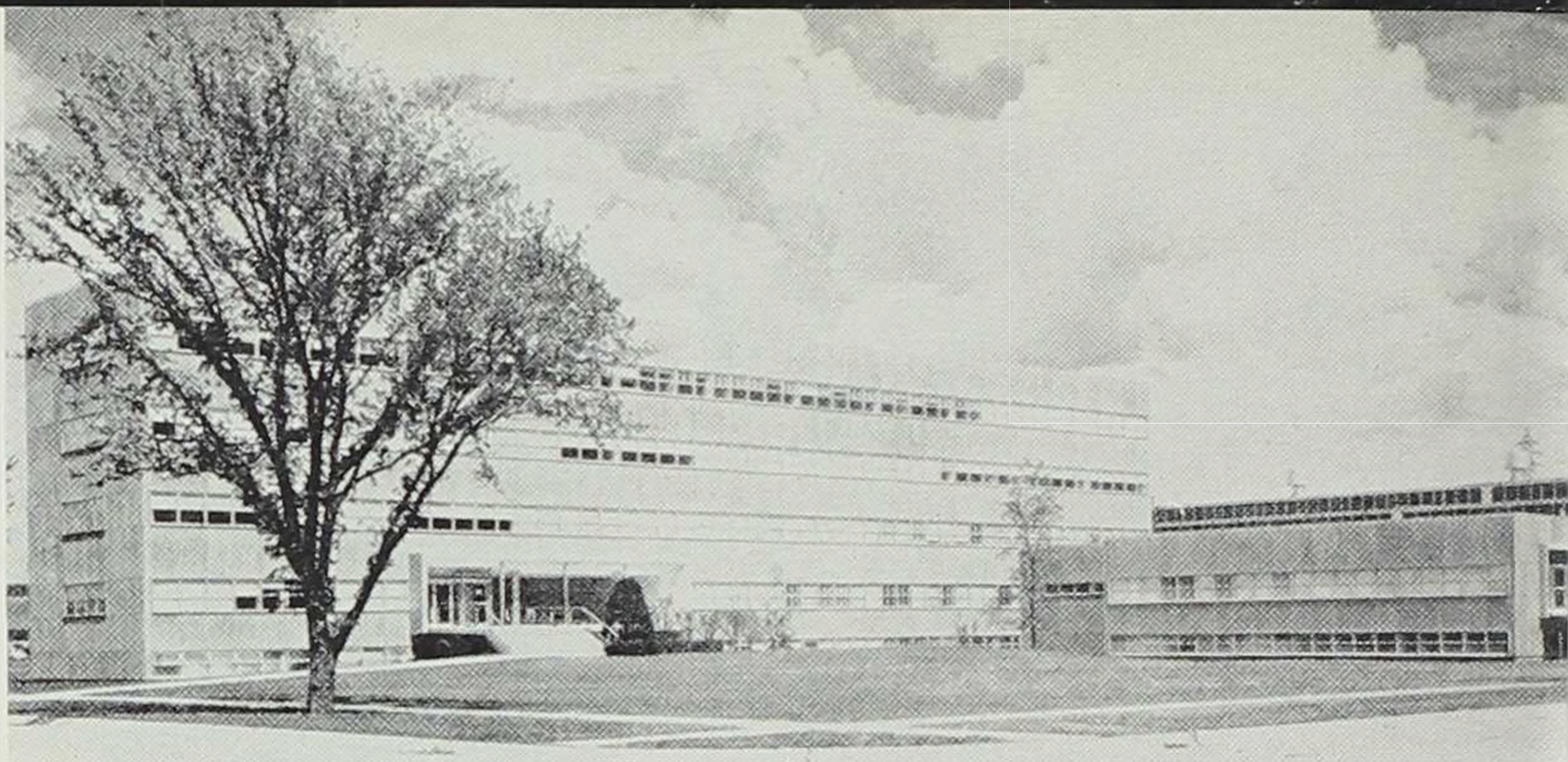
NEW MONARCH Machine & stamping co.

NEW MONARCH MACHINE AND STAMPING COMPANY: Des Moines

From a small machine shop established by S. E. Anderson in 1911 in Des Moines with three employees, New Monarch has grown to be one of the largest and best equipped stamping plants in the Midwest, occupying six buildings and in the peak year of 1953 employing 500 workers with a monthly payroll of \$100,000 and an annual business of \$5,000,000. Among its products are steel basement windows, toy tractors, silo chutes, Christmas tree holders, Patio Planters, and Bull Dog Floor Clips. Its defense contracts have included production of cartridge storage cases and rocket fins. W. H. Brenton is chairman of the board, O. L. Dykstra the president.

ABOVE (left): S. E. Anderson; (right): W. H. Brenton. LEFT: ad for Patio Planters. BELOW: plant.

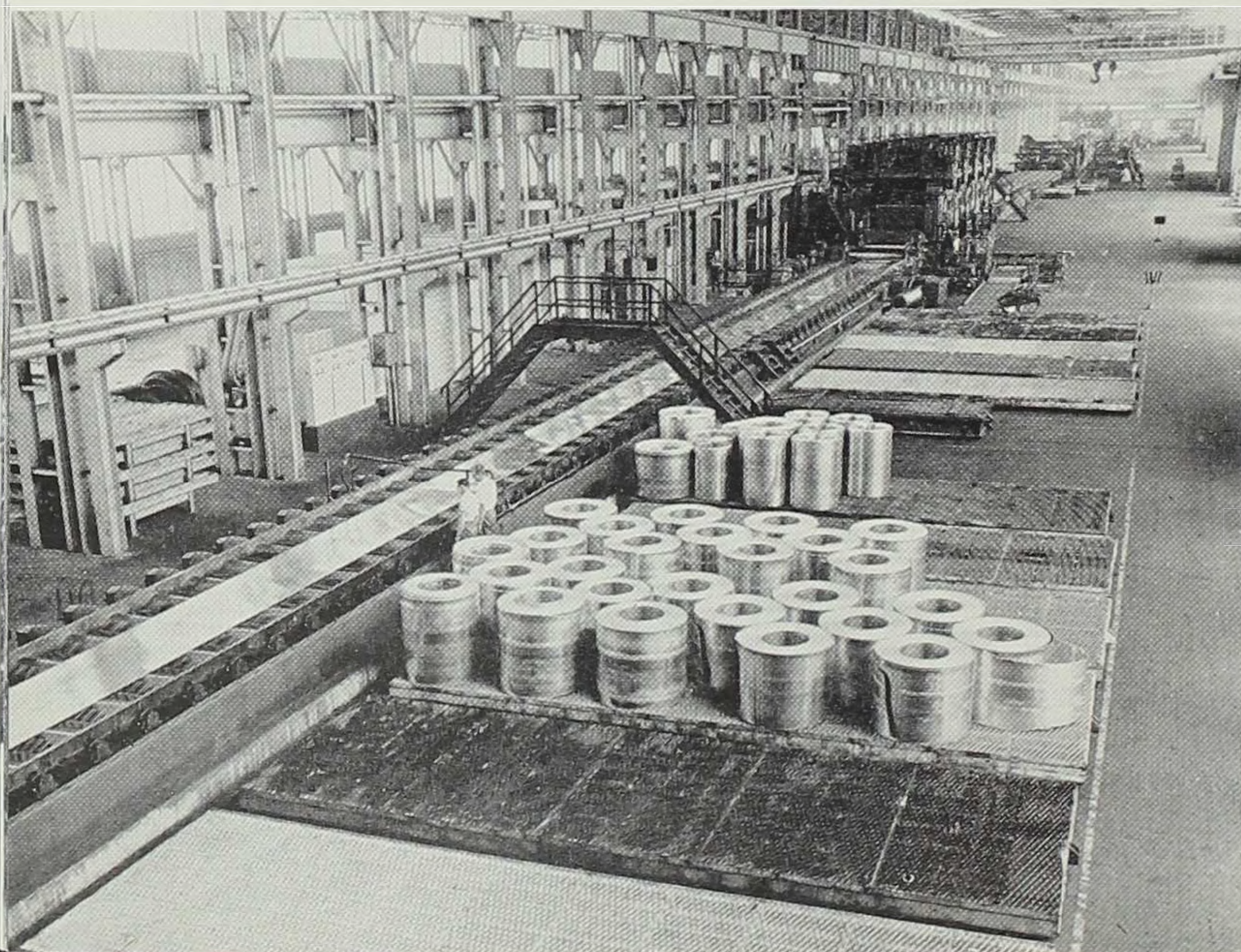


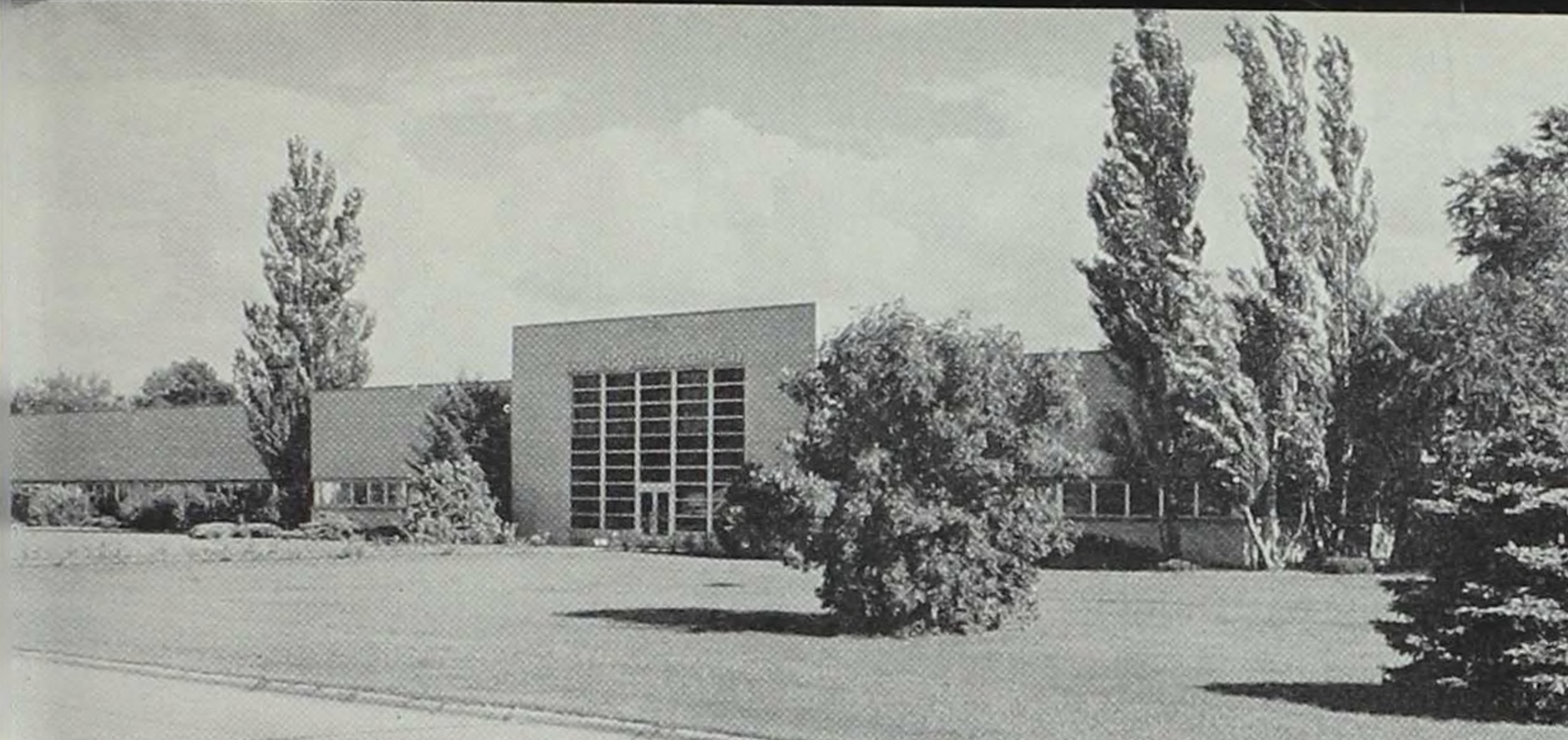


ALUMINUM COMPANY OF AMERICA: Pittsburgh

One of the greatest additions to Iowa's industrial economy since World War II has been Alcoa's sheet and plate rolling mill at Riverdale just outside Davenport. This huge industrial unit, located on a 425-acre site, 62 acres of which are under the plant's roofs, first began production in 1948. It produces aluminum sheet in much larger coils than was ever before continuously strip rolled, and can make high-quality aluminum plate in larger sizes than any other aluminum plate mill in the world. An expansion program now under way, due for completion in 1958, will cost \$62,000,000. The mill is aptly referred to as "acres of aluminum," a total of 6,250,000 pounds of that metal having been used in building the original plant. The four-story administration building was the world's first multi-storied, all aluminum-walled building. In 1955 the mill employed 2,269 workers with a monthly payroll of \$948,992.

ABOVE: administration building. BELOW: "hot line" operation.

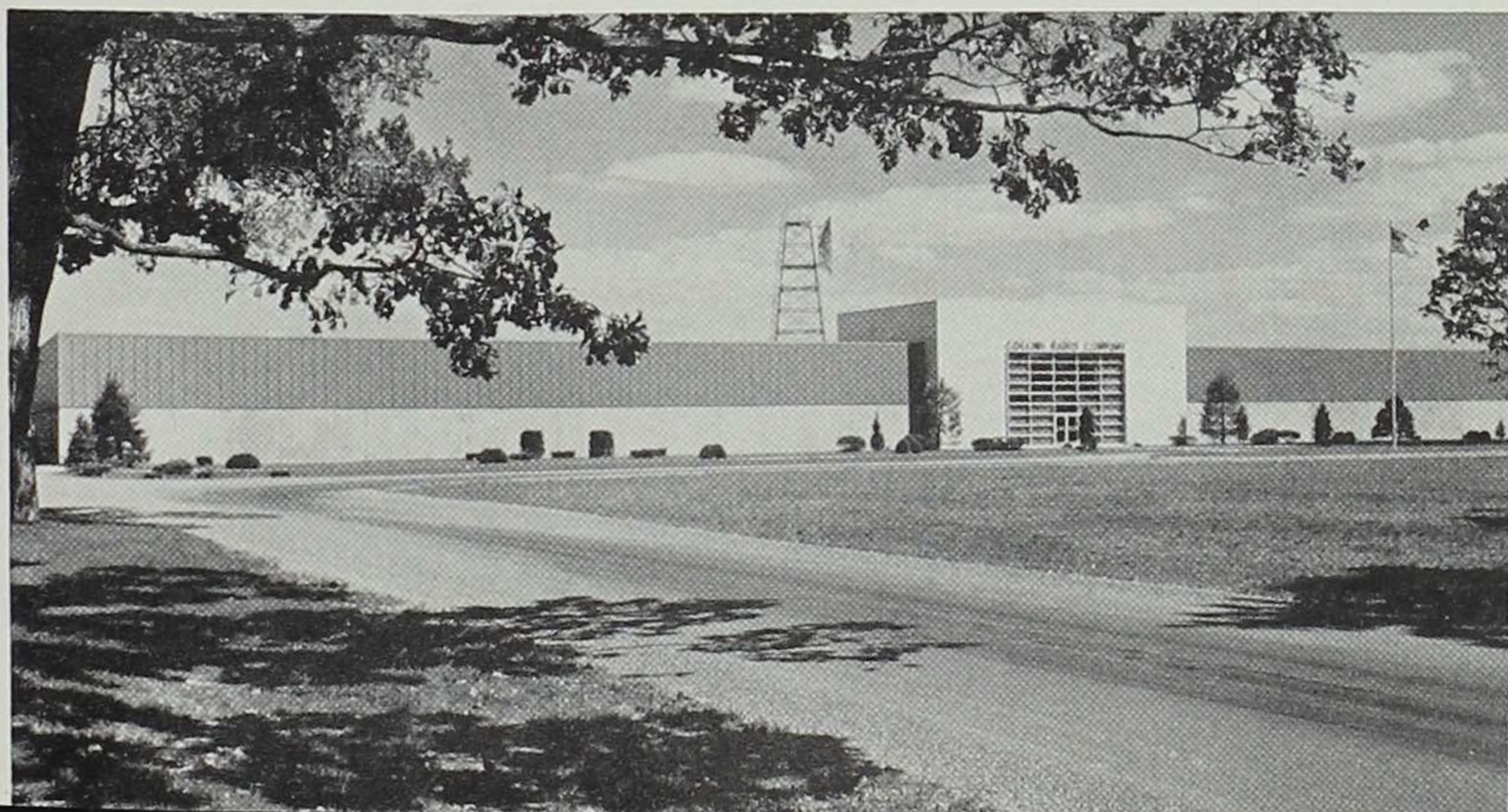


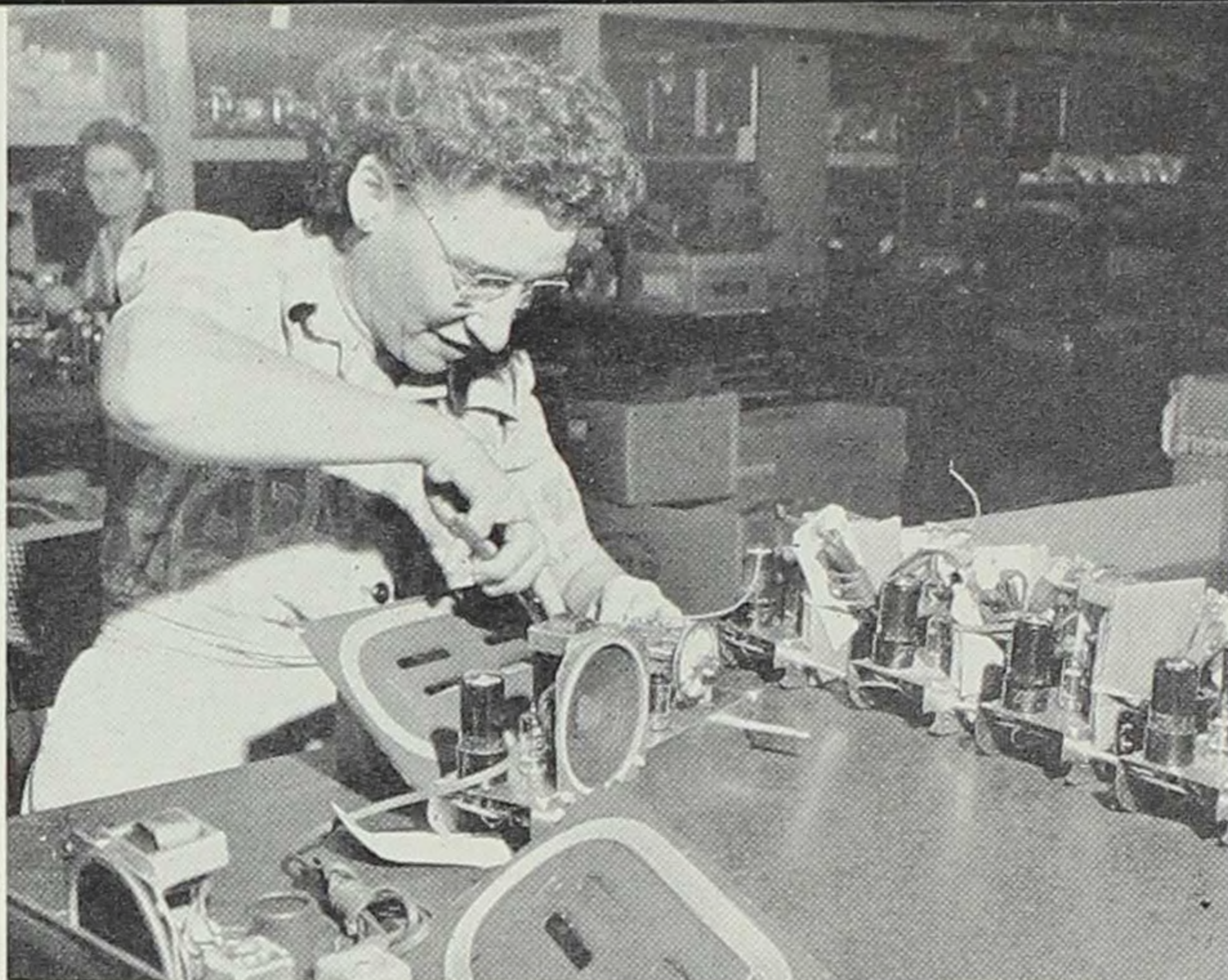


**COLLINS RADIO COMPANY:
Cedar Rapids**

Collins Radio's amazing growth is one of the great stories in Iowa's recent industrial development. Founded in 1933, when the company had one plant in Cedar Rapids with five employees, by 1955 it had 10 plants in Cedar Rapids, and one each in Anamosa, Dallas, Texas, and Burbank, California, and branches in Canada and England. It had over 7,000 employees with 5,200 in Iowa where its monthly payroll was \$2,000,000. In 1933 Collins products were worth \$109,000. By 1955 these products, which include radio communication and navigation equipment, broadcast transmitters, aircraft instruments, and amateur communication equipment, were valued at \$108,000,000. Collins equipment plays a vital role in national defense and in civilian air transportation and radio communication. The president and founder is Arthur A. Collins, heading a company whose stockholders have increased in number from 1,400 in 1954 to 3,500 in 1956.

ABOVE: main plant, Cedar Rapids. LEFT: Arthur A. Collins. BELOW: engineering building, Cedar Rapids.





Courtesy Sioux City Journal-Tribune

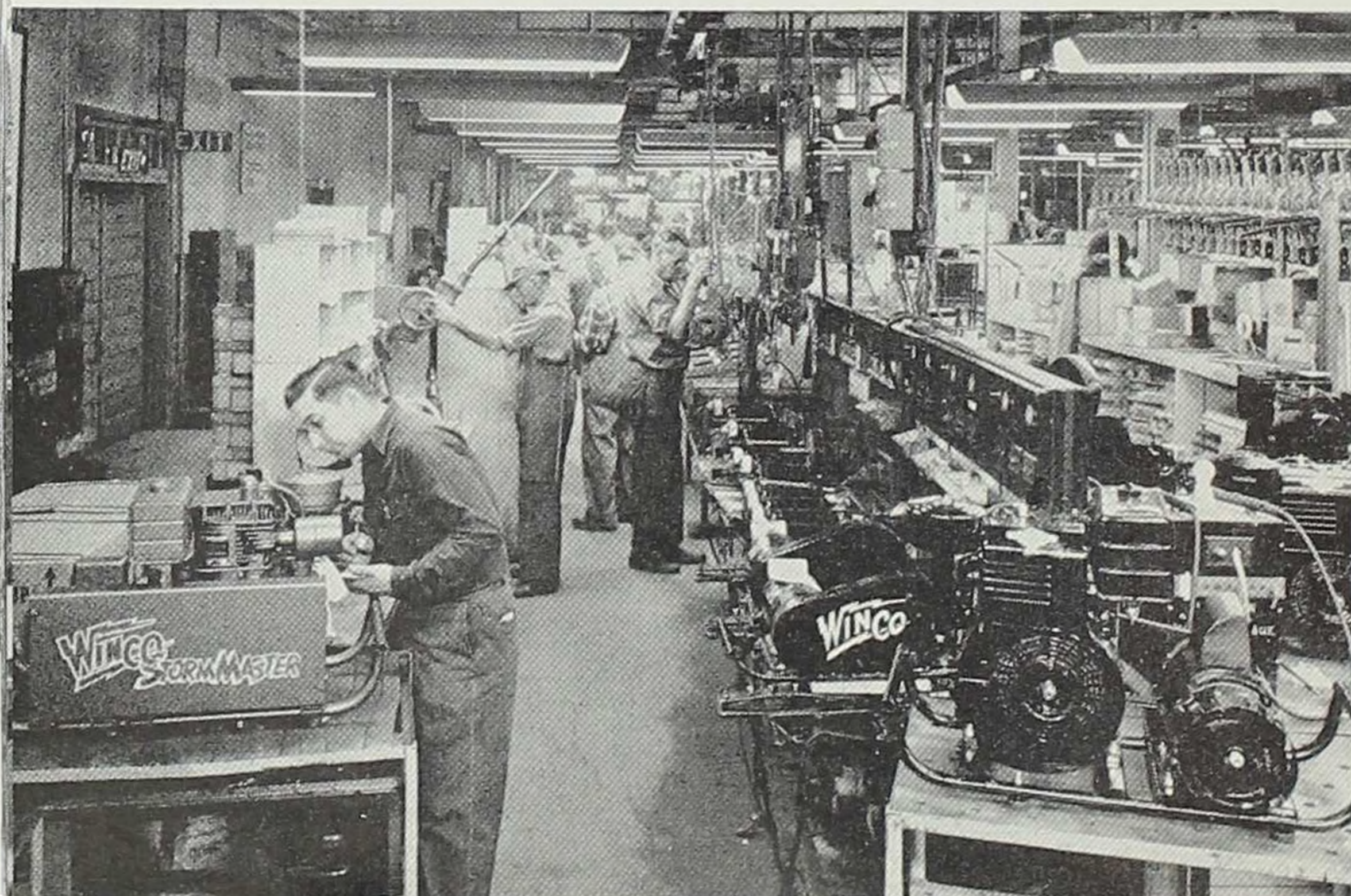
WINCHARGER CORPORATION: Sioux City

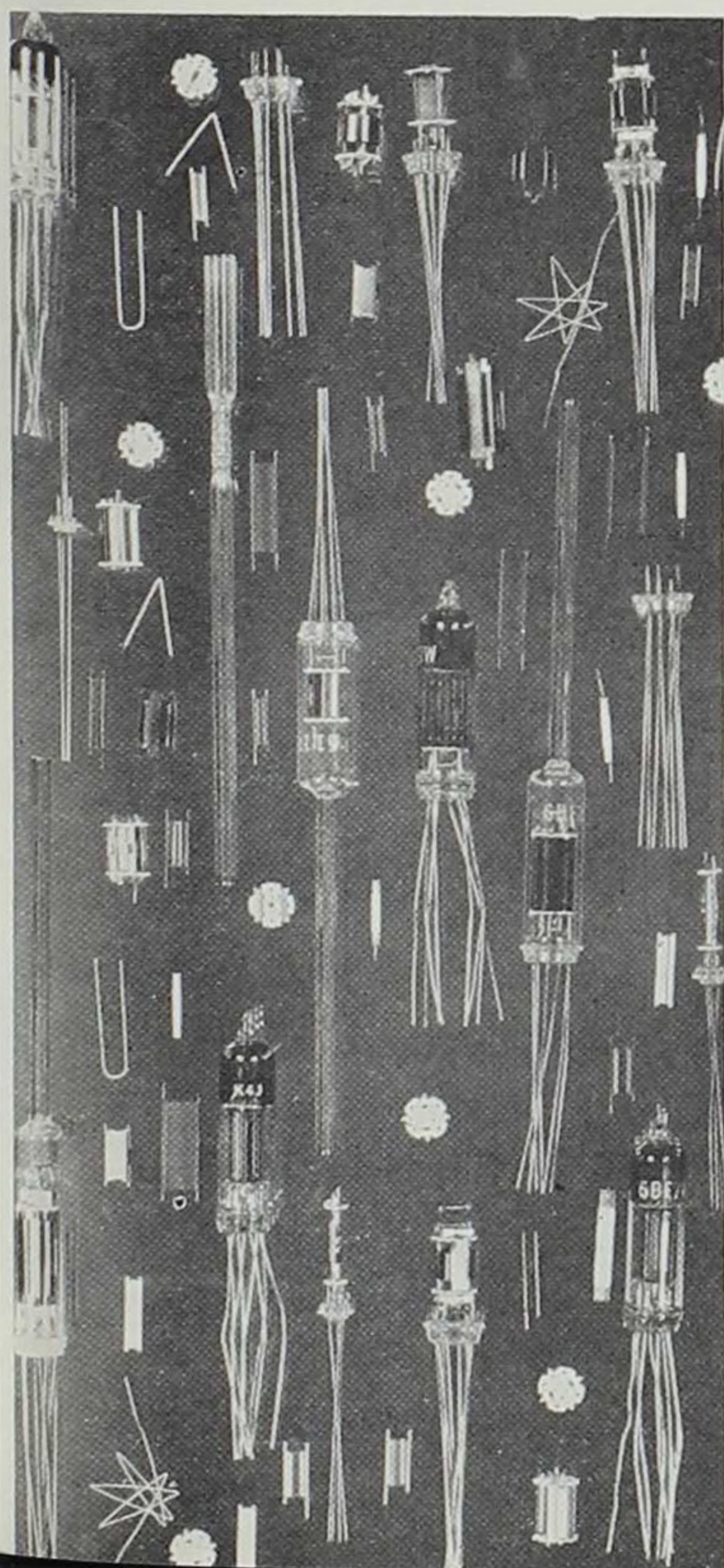
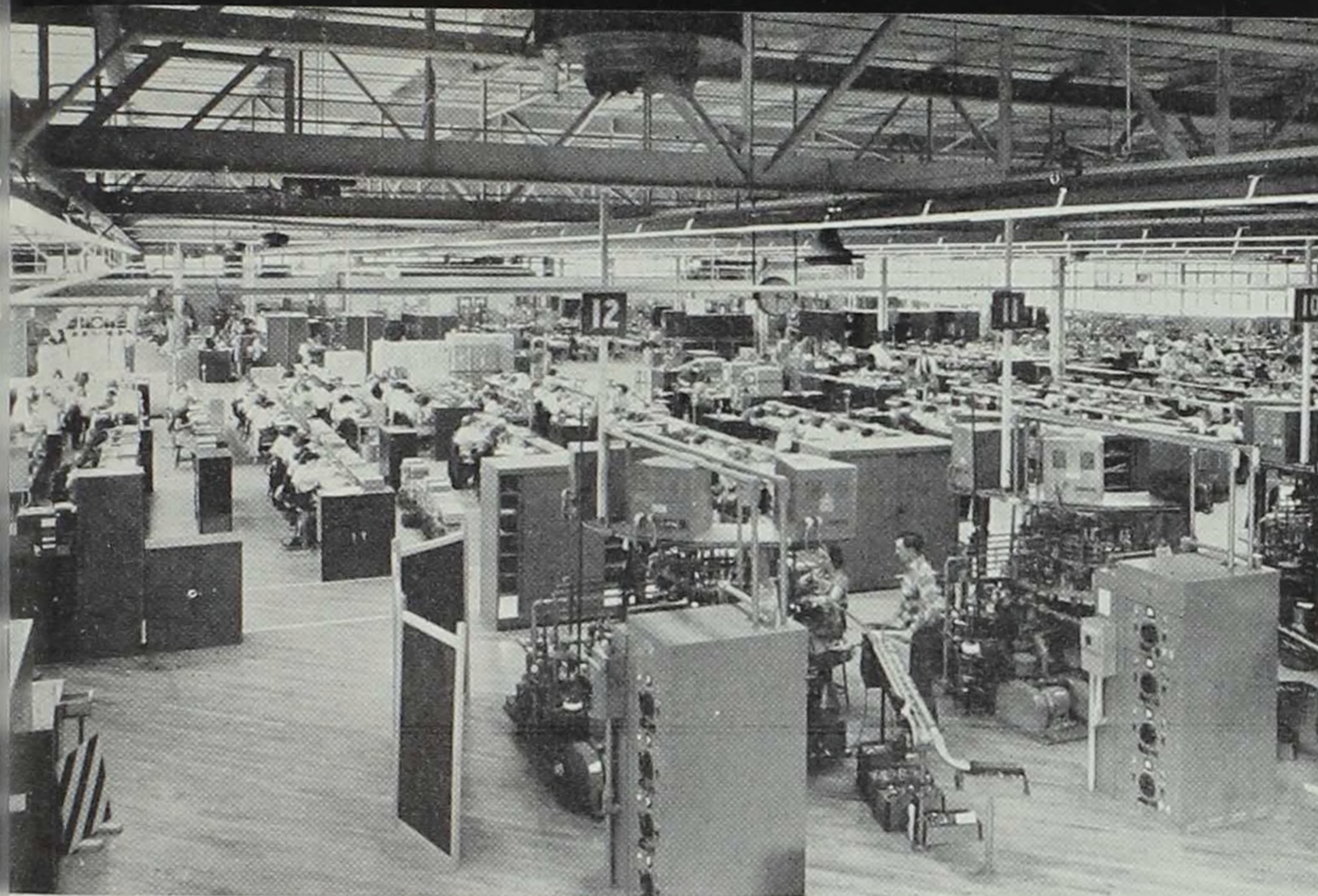
Wincharger Corporation was founded in 1934 in Sioux City by two brothers, John and Gerhard Albers. It is now a subsidiary of the Zenith Radio Corporation, but the Albers brothers are still with the company. The Sioux City firm manufactures dynamotors, universal motors, engine-generators, antenna towers, and Zenith Radios. Its plant is 152,000 square feet in area, to which will soon be added new office space of about 12,000 square feet. The plant employs 800 men and women.

ABOVE: woman working on radio unit. RIGHT: checking products. BELOW: final inspection of engine generators.



Courtesy Sioux City Chamber of Commerce

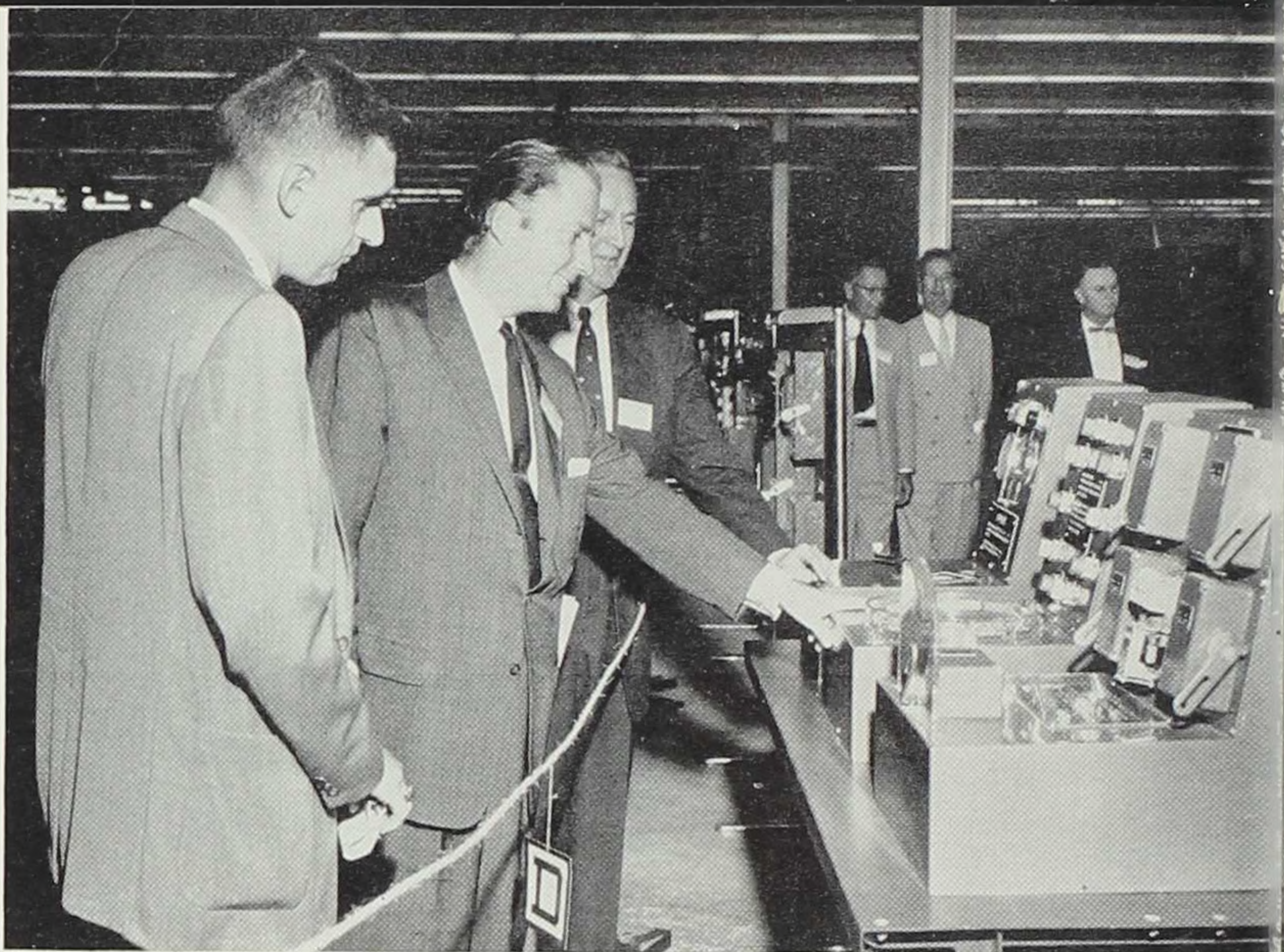




SYLVANIA ELECTRIC PRODUCTS, INCORPORATED: New York

Sylvania hired the first workers for its new Burlington plant in 1951. The 200,000-square foot structure was dedicated in 1952. By 1956 employment had reached 1,160, of whom 85% were women. The monthly payroll is \$400,000. The plant produces premium sub-miniature electronic tubes which are of vital importance for guided missiles, radar, tanks, and many other military uses, as well as having many industrial and commercial applications. Production of the tiny tubes is a painstaking process, 10,000 electrical measurements being required for each lot, while assembly, processing, and testing involve 62 different steps.

ABOVE: portion of interior of Burlington plant. LEFT: some of the plant's products.



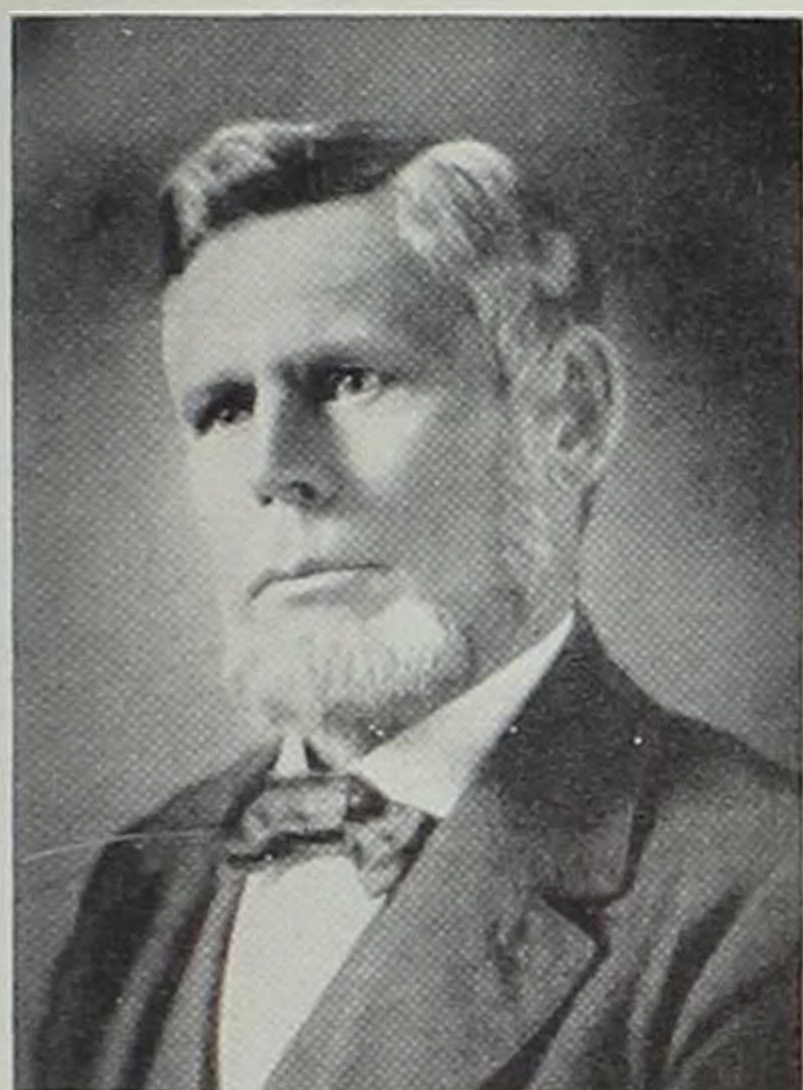
SQUARE D COMPANY: Detroit

One of the most recent additions to Iowa's industrial picture is the Square D plant at Cedar Rapids. On a 54-acre site where corn was growing in 1953, a modern, one-story factory had been built and put into operation by September, 1955. As part of its program to attract industries to the city, the Cedar Rapids Chamber of Commerce's civic planning committee had held an option on this land for eight years before Square D, the leading manufacturer of electrical control and distribution equipment, purchased it. The new plant produces circuit-breakers, voltage testers, and related products, and also assembles switchboards and lighting and power panelboards. Its employment stands at 450 with an annual payroll of more than \$1,500,000.

ABOVE: an inspection tour during the new plant's open house in September, 1955. BELOW: the Cedar Rapids plant.

Photos courtesy Cedar Rapids Gazette





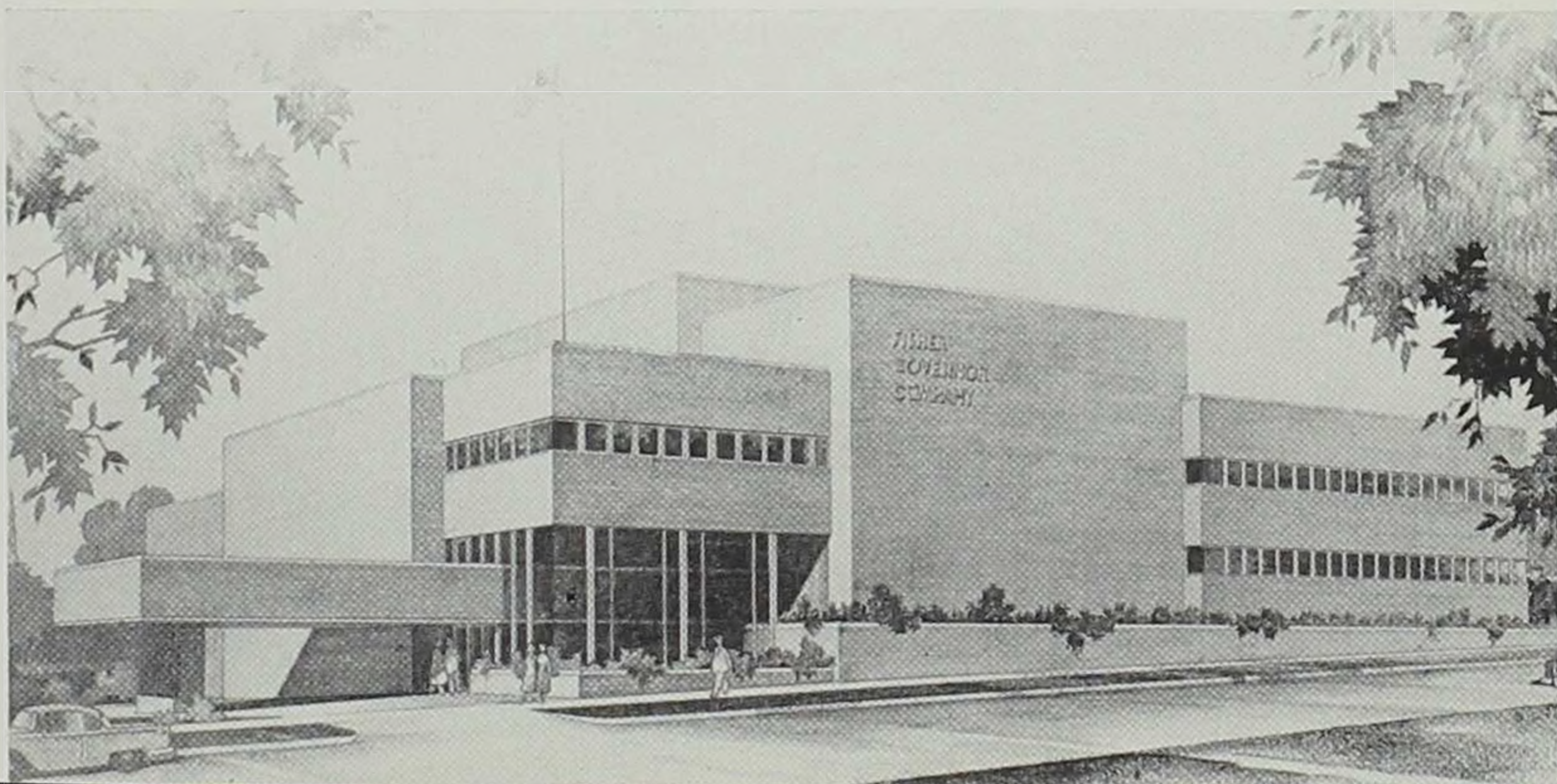
**FISHER GOVERNOR COMPANY:
Marshalltown**

Founded in 1880 by William Fisher, the Fisher Governor Company has since become the world's largest maker of industrial pressure control valves, liquid level controllers, and bottle gas regulators. The Type 1 Constant Pressure Pump Governor which Fisher patented in the 1880's is still in the company line, basically unchanged in design. As late as 1912 the company had only 14 employees, but as a result of national advertising and the discovery of new industrial uses for its products it has grown until it employs 1,200 workers and has a monthly payroll of \$520,000. During World War II Fisher Governor manufactured thousands of instruments for the atomic bomb project, working with materials unheard of industrially and under unusual conditions. The founder's grandson, J. W. Fisher, is now president.

ABOVE: original plant. LEFT (top): William Fisher; (bottom): J. W. Fisher. BELOW: Office building completed in 1955.



Fabian Bachrach

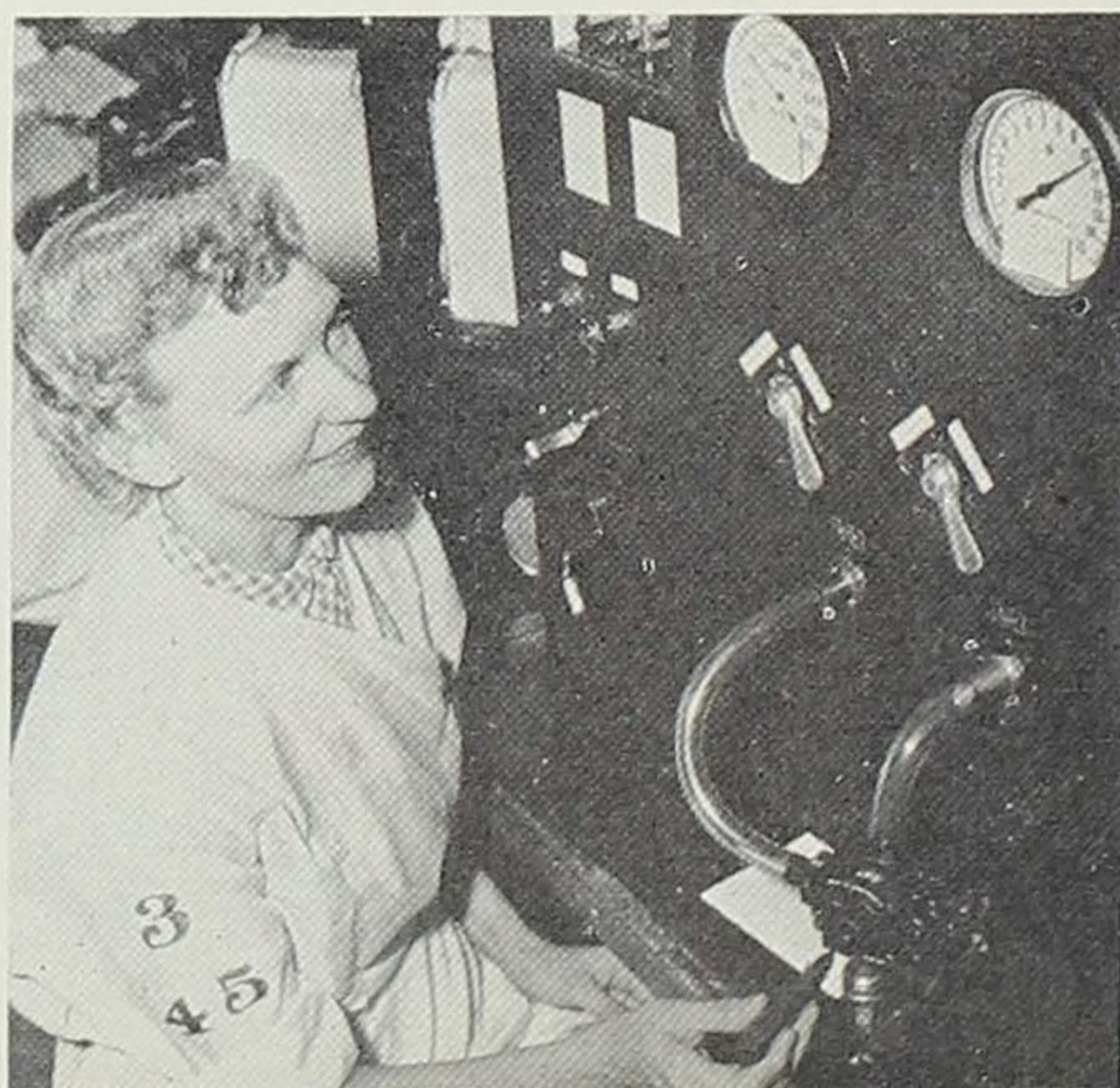
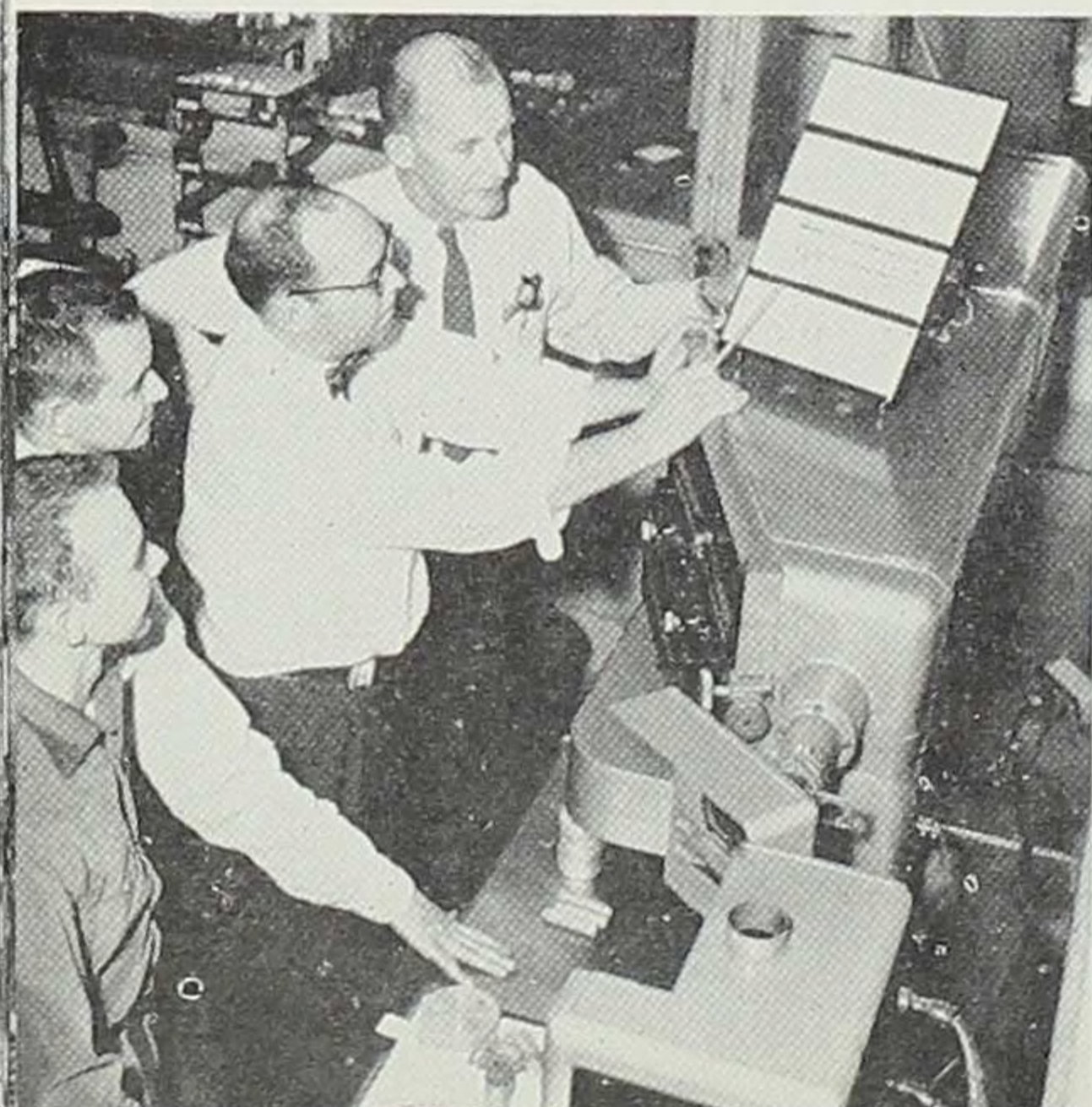
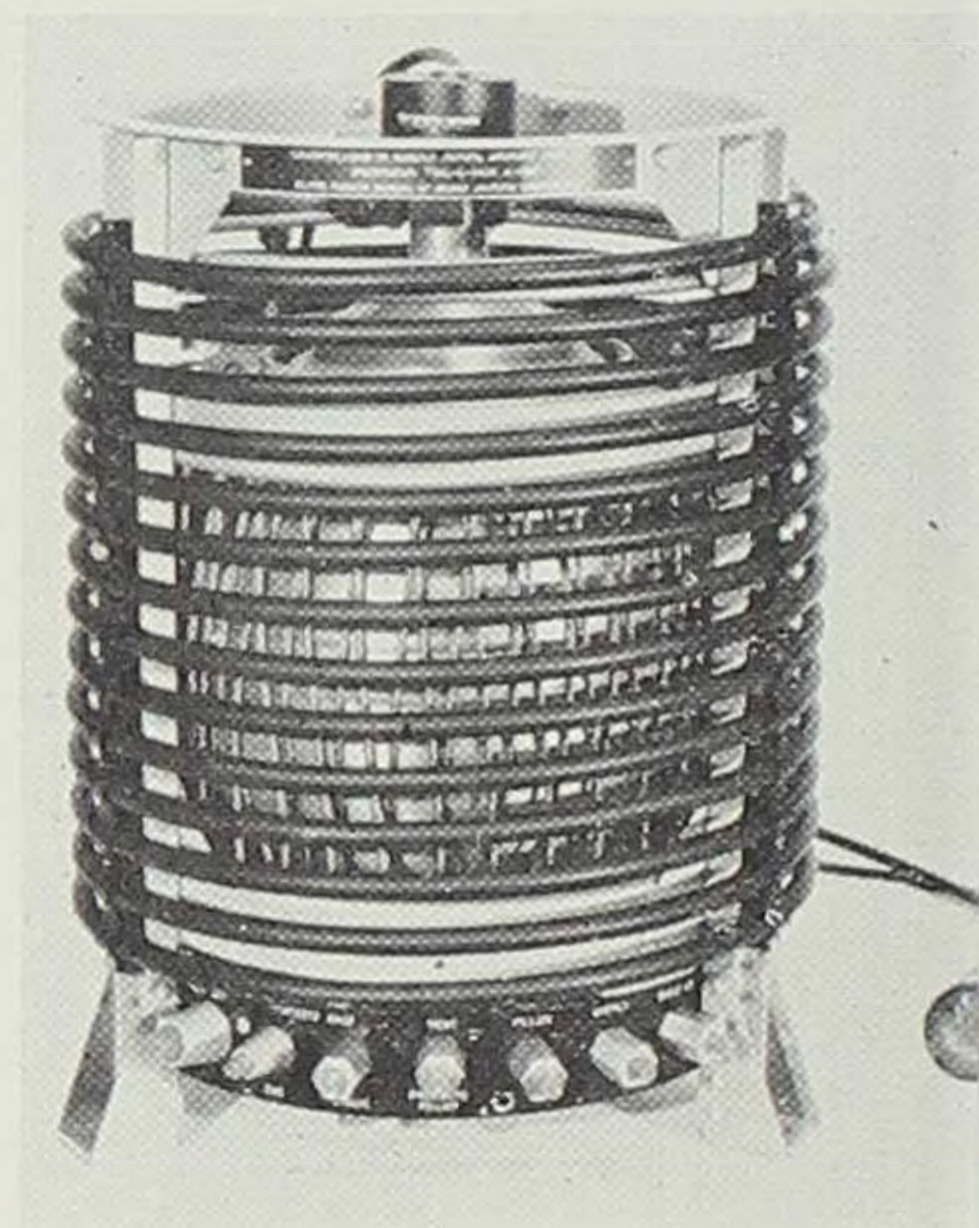


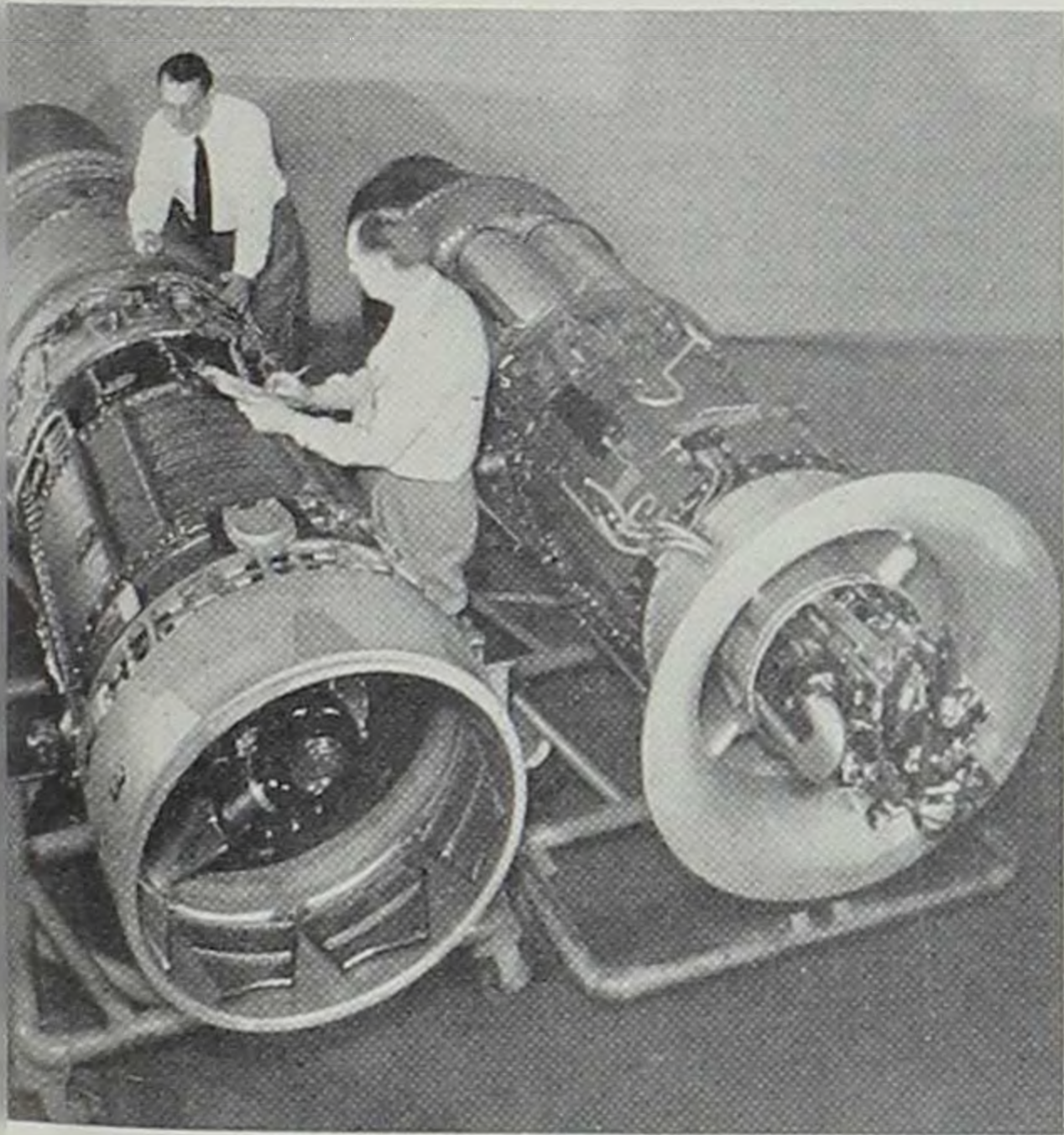
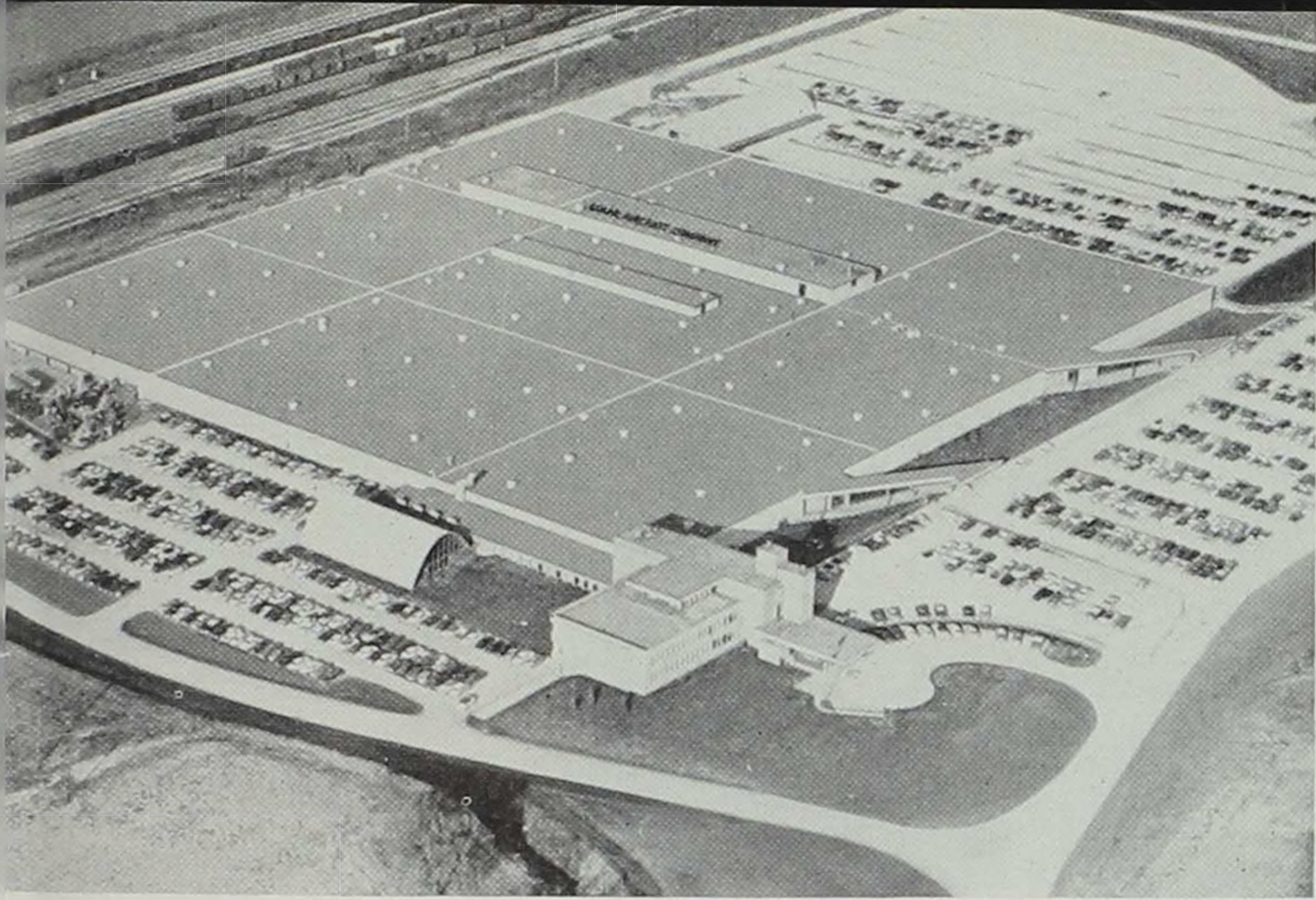


BENDIX AVIATION CORPORATION: Detroit

The Pioneer-Central Division of Bendix Aviation was established with the purchase in 1950 of the Victor Animatograph plant at Davenport. Of the division's 16 major products, 14 are for aircraft. These include oxygen regulators, liquid oxygen systems, fuel flowmeter systems, and flight instruments. For industrial use in general Pioneer-Central produces ultrasonic cleaning systems. Starting with 1,000 employees, the division has now doubled that figure with a monthly payroll in excess of half a million dollars. Workers commute daily from as far away as Galesburg, Illinois, and Maquoketa, Iowa. In 1955 Pioneer-Central began a student industrial research program for advanced science students at St. Ambrose College.

ABOVE: flight instrument assembly. RIGHT: liquid oxygen converter. BELOW (left): student researchers receive instructions; (right): testing a regulator.



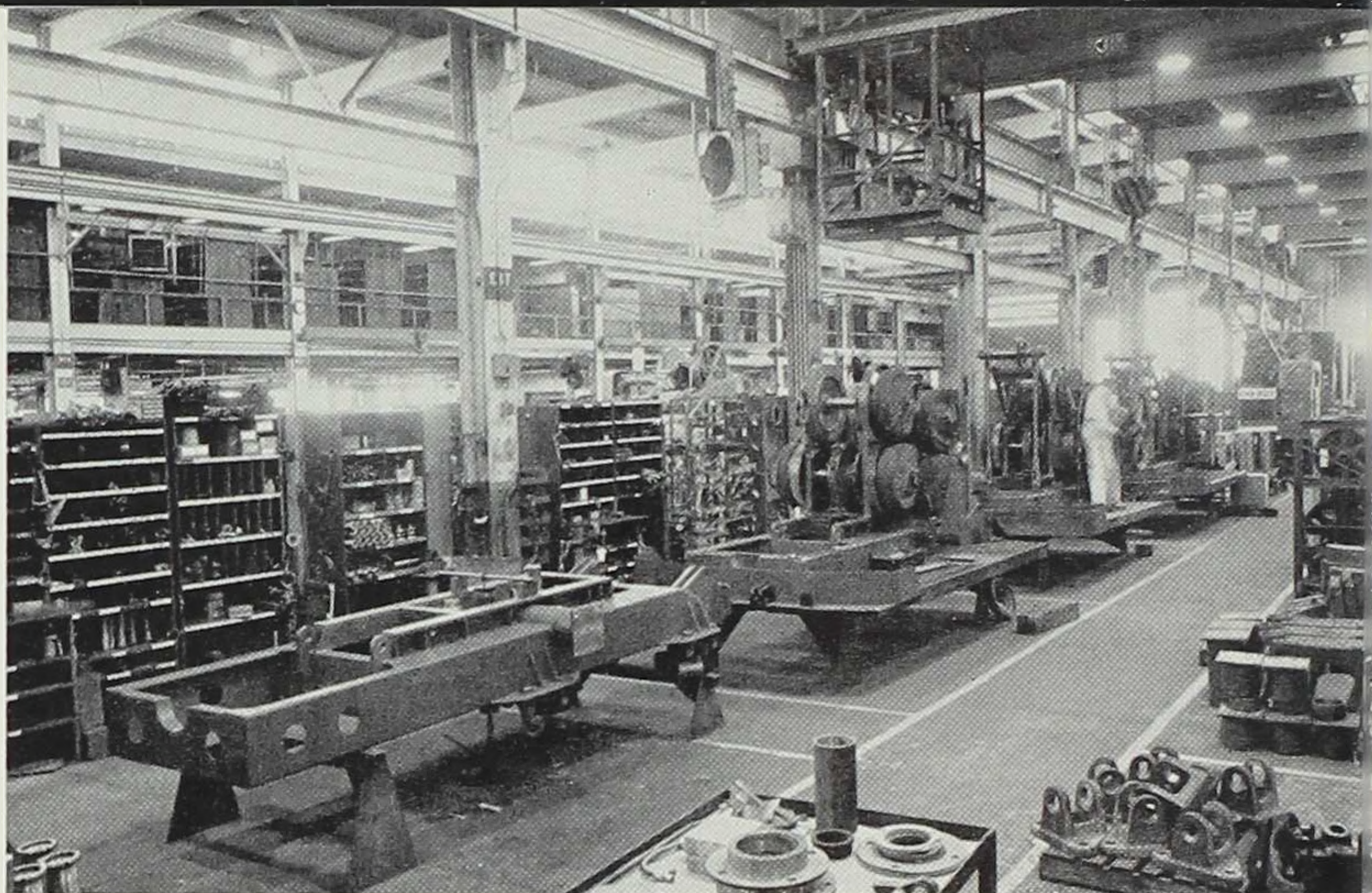


**SOLAR AIRCRAFT COMPANY:
San Diego**

In 1942 Solar began operations in Des Moines at the old Ford plant. In 1951 it began building its Wakonda plant at Des Moines which cost almost \$30,000,000. The Ford plant was sold to the Des Moines school board. The city's largest industry, Solar employed an average of 2,500 workers in 1955 with an annual payroll of almost \$14,000,000. Since 1944 the plant has been a major supplier of jet engine parts. Sales currently are running about \$31,000,000 a year. Solar and government-owned production facilities at the plant are worth \$23,000,000.

ABOVE: air view, Wakonda plant. LEFT: jet engine. BELOW: plant cafeteria.

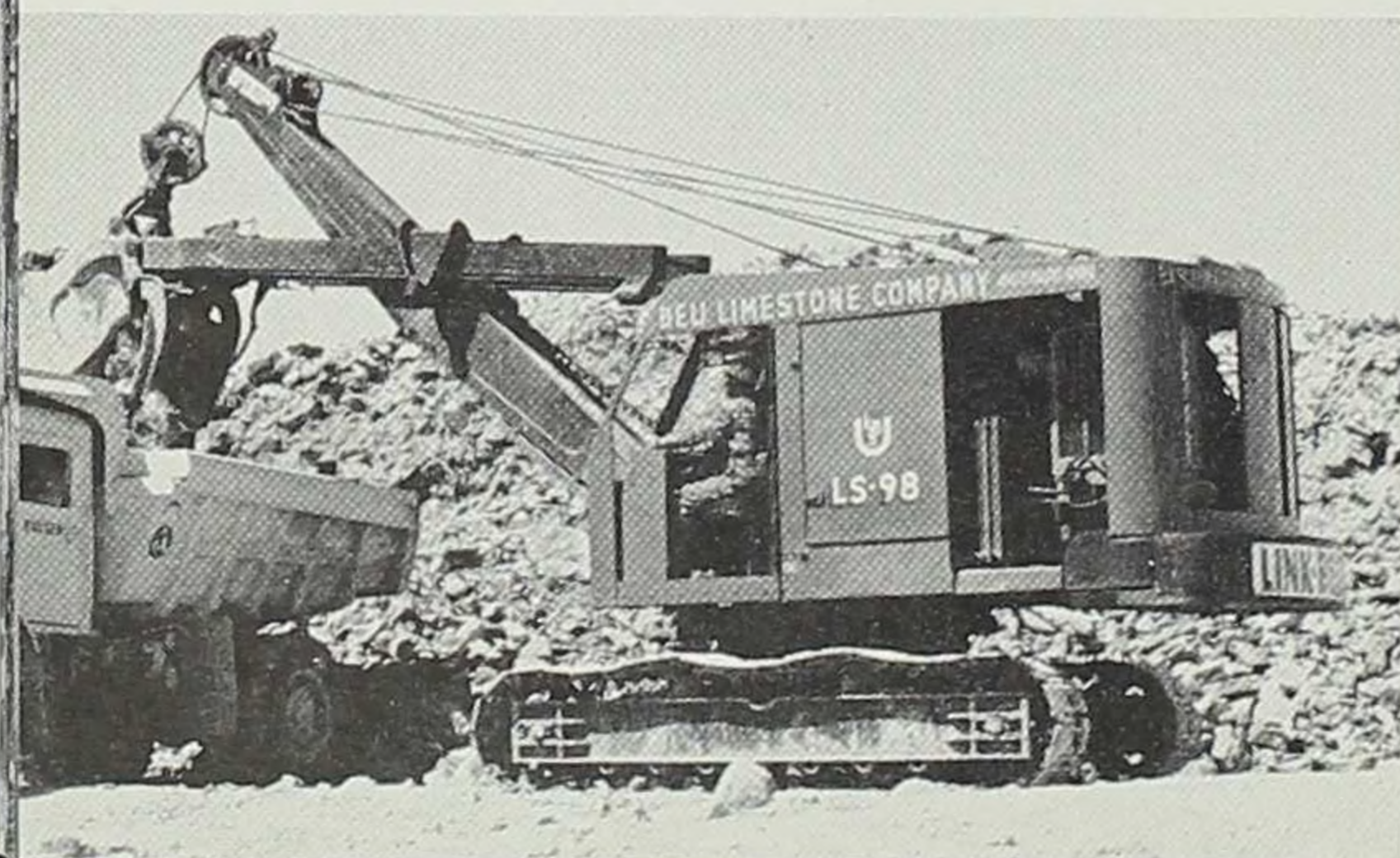


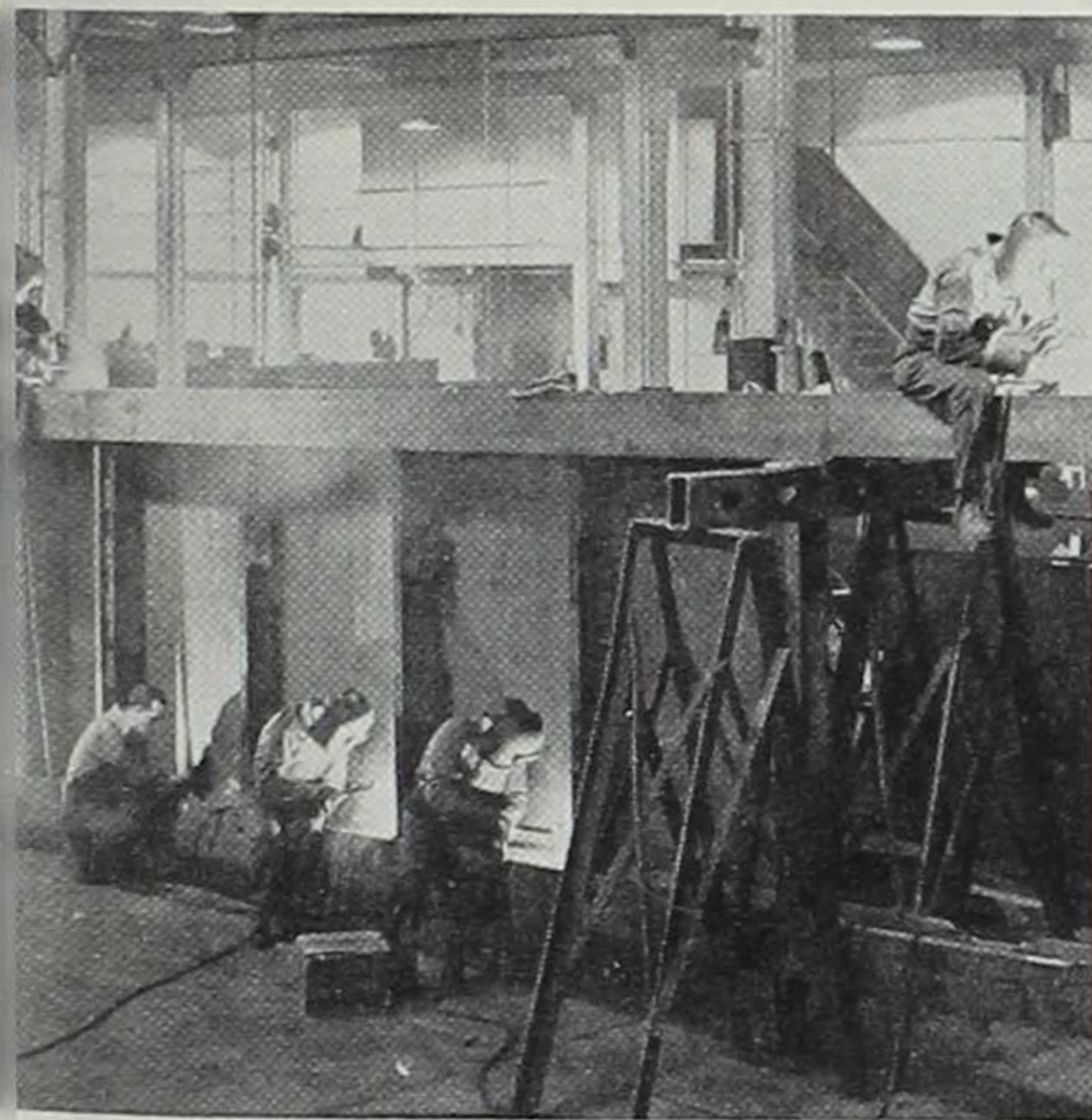


LINK-BELT COMPANY: Chicago

The Link-Belt Speeder Corporation of Cedar Rapids, a wholly-owned subsidiary of the Link-Belt Company, was formed in 1939. It was a result of the merger of the Speeder Machinery Corporation of Leon, Iowa, which dated from 1923, and the shovel and crane division of the Link-Belt Company. The Cedar Rapids plant has about 900 employees with an annual payroll of about \$4,500,000. Its chief products are crawler and rubber-tired mounted crawler cranes and shovels. President of the corporation is D. W. Lehti.

ABOVE: part of the plant's assembly line.
BELOW (left): new heavy-duty shovel loading lime stone; (right): dragline digging gravel from gravel pit.

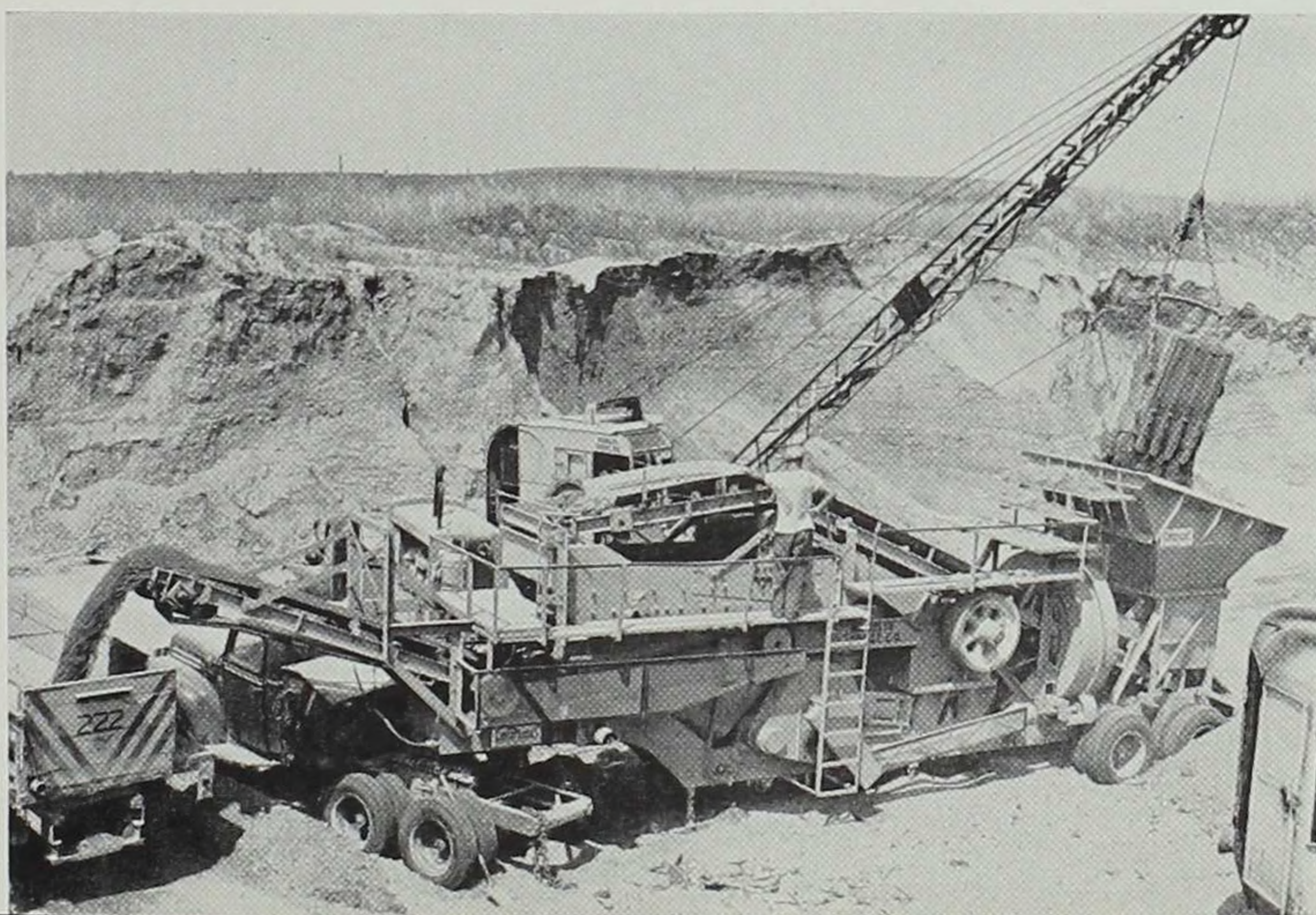


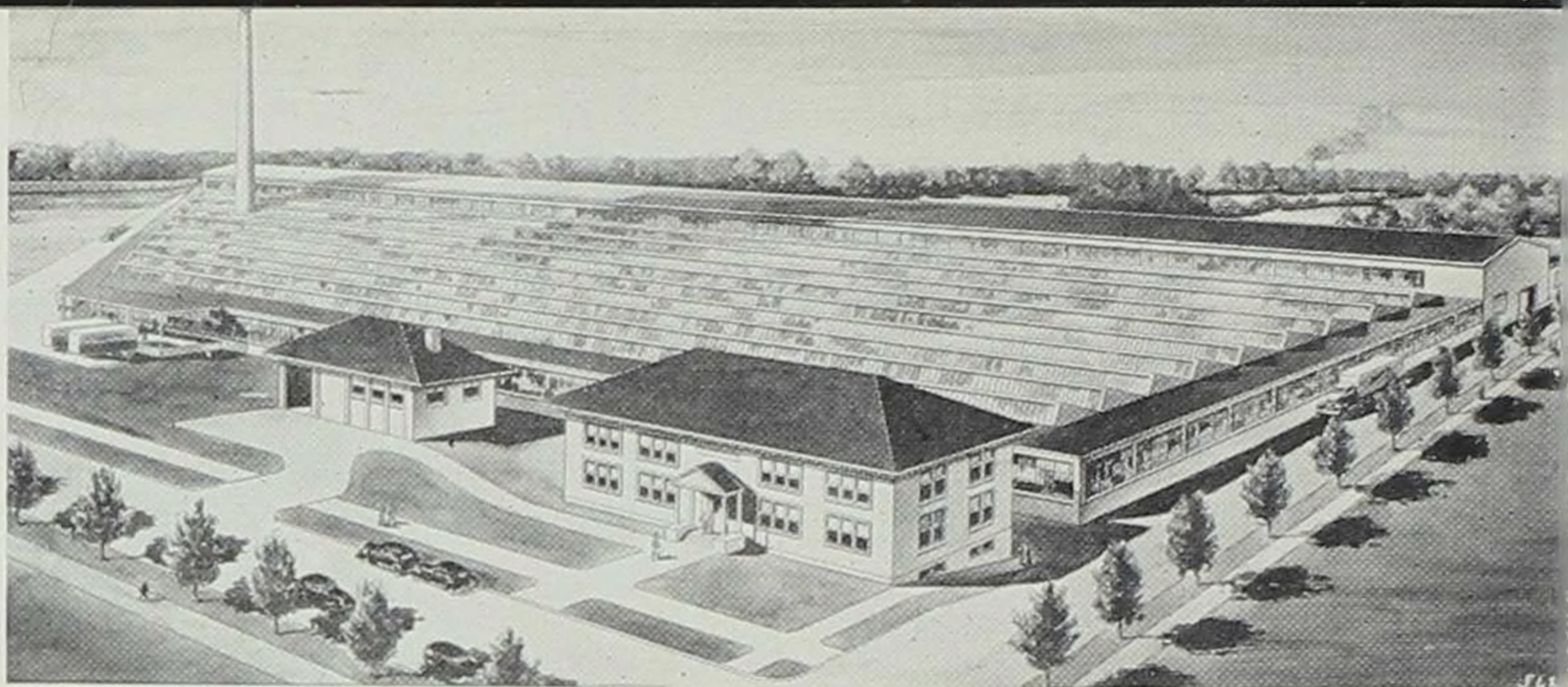


IOWA MANUFACTURING COMPANY: Cedar Rapids

Iowa Manufacturing's president, Howard Hall, in 1923 purchased the property of the Bertschey Engineering Company in Cedar Rapids. From this small plant of 12,158 square feet, the company has grown into one of almost 600,000 square feet, and has become the world's largest producer of portable crushing, screening, and washing equipment. These products are used in 55 foreign countries as well as throughout the United States. In World War II 80% of all portable crushing and screening plants used by the Allies were built by Iowa Manufacturing. Today it has 1,700 employees.

ABOVE: the product on the drawing board. LEFT: making the product. BELOW: product in action.

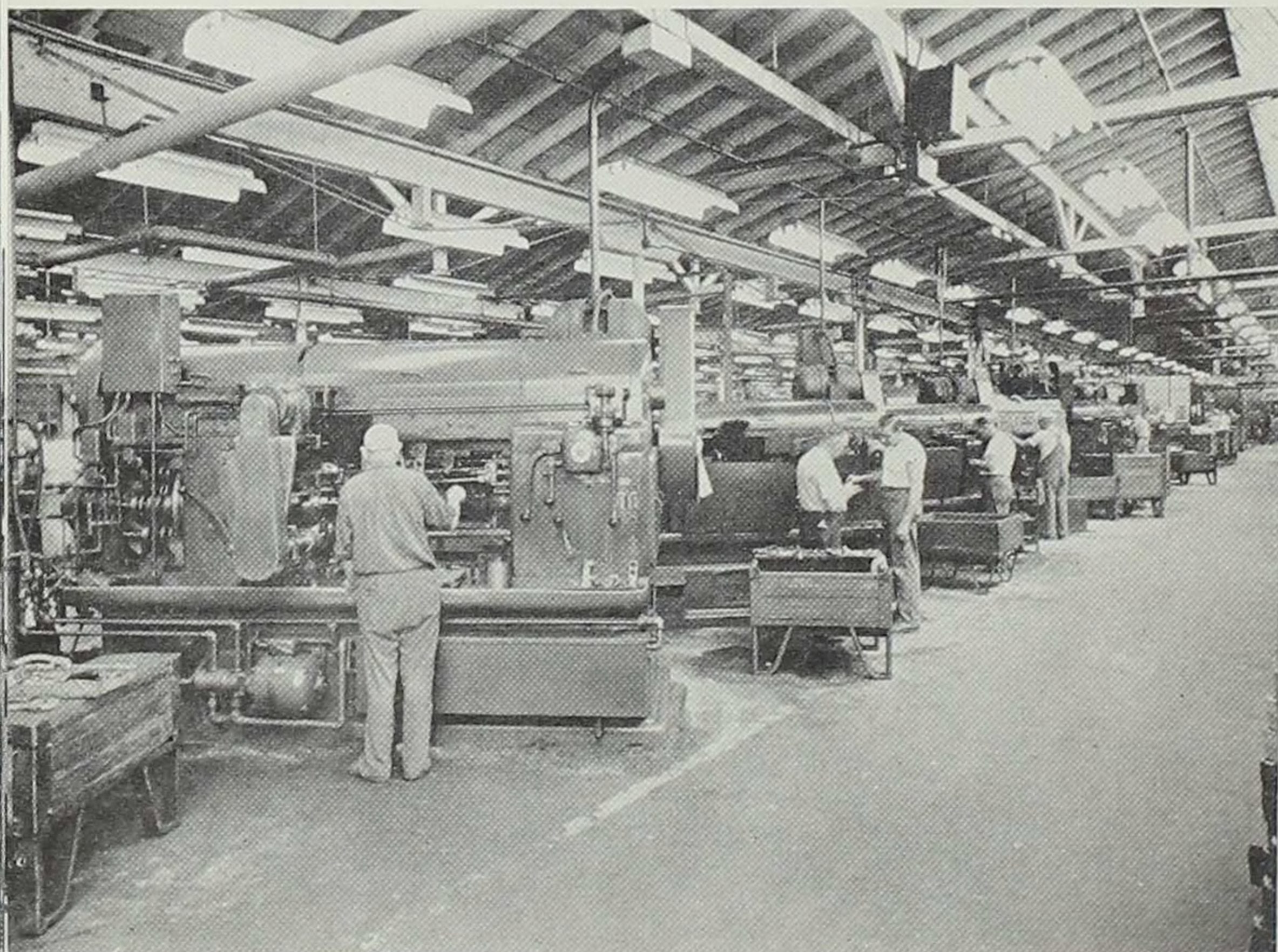
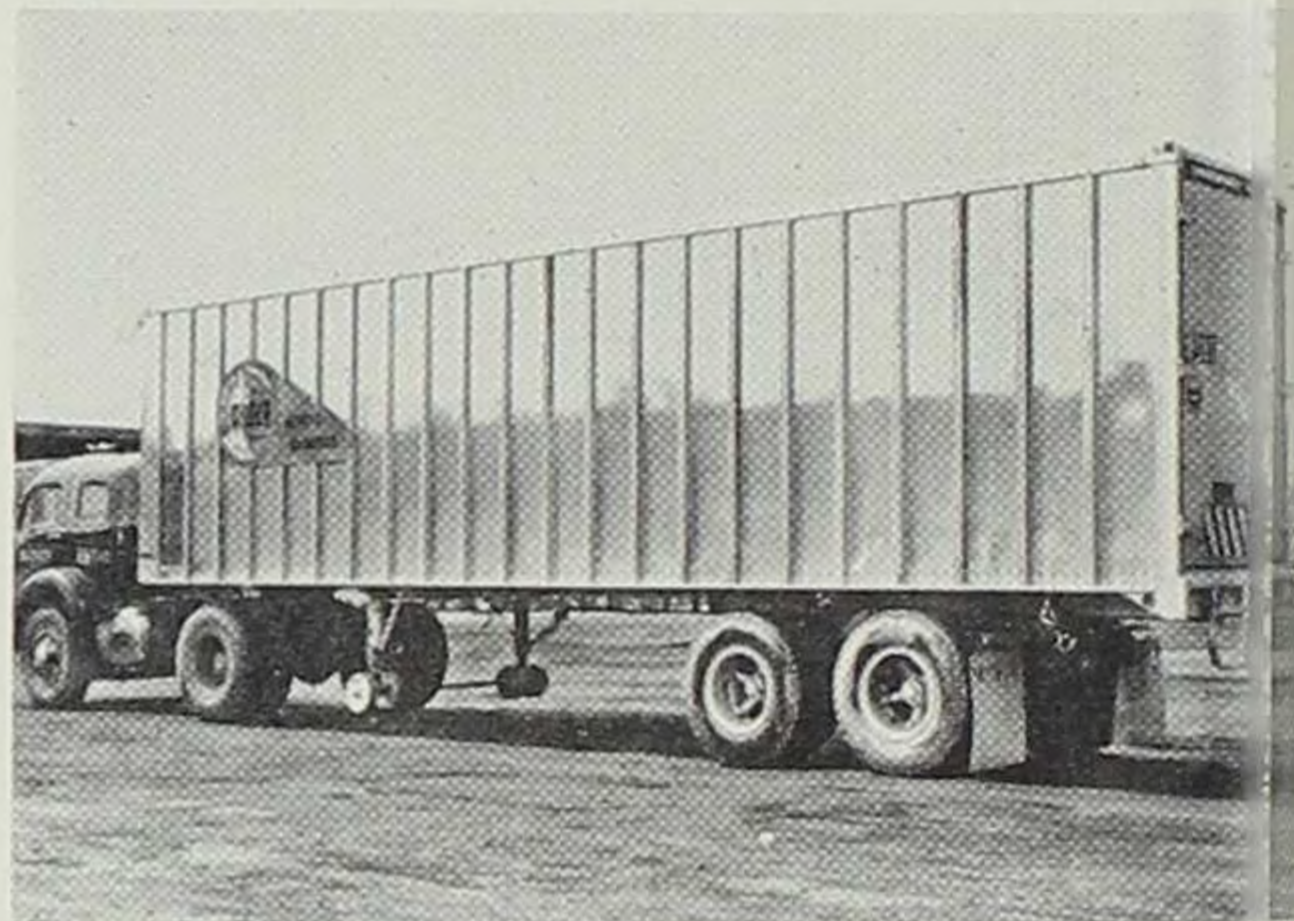




FRUEHAUF TRAILER COMPANY: Detroit

Next to agriculture, the motor transportation industry employs more workers than any other industry in the country. The world's largest manufacturer of truck trailers, Fruehauf began operations at its Cedar Rapids plant in 1943. Here 600 employees produce machine parts for the nine Fruehauf assembly plants as well as supplying these parts for the 78 sales and service branches of the company located throughout the country. Situated on 8 acres of land, the plant contains about 197,000 square feet of floor space.

ABOVE: Cedar Rapids plant.
RIGHT: Fruehauf trailer. BELOW:
portion of plant interior.





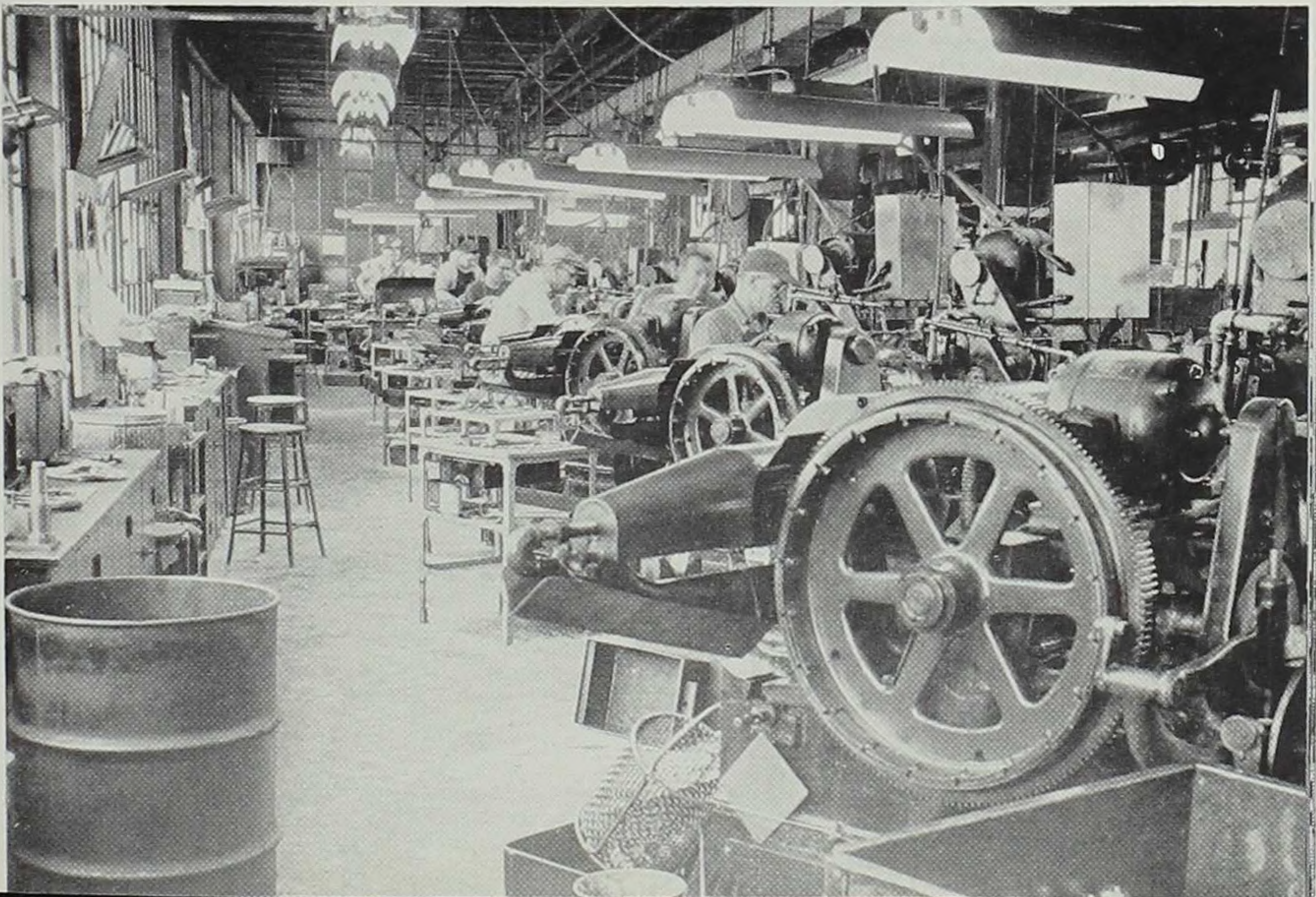
Courtesy Sioux City Chamber of Commerce

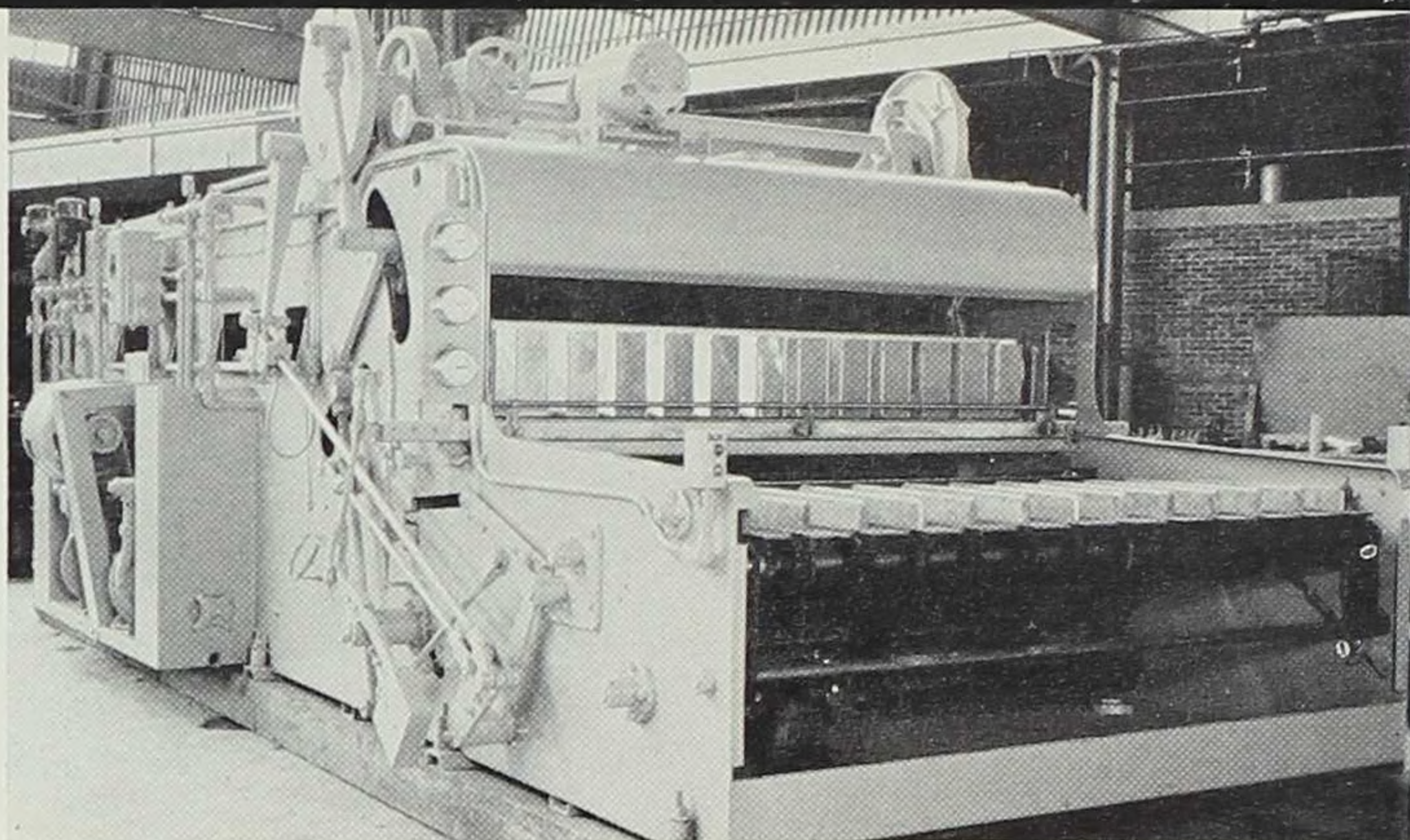
ALBERTSON AND COMPANY, INCORPORATED: Sioux City

In 1914, Oscar F. Albertson, a Swedish immigrant who had worked as tool-maker for a number of manufacturers in the Midwest, joined with Harold A. Jacobsen to form Albertson and Company in Sioux City. Starting with one employee in a small shop, the company now has two large plants employing over 500 workers. The portable electric tools which the company manufactures under the trade name of Sioux Tools are known the world around. From the start Oscar Albertson has been the firm's president, and Harold Jacobsen vice president and general manager. The two men's sons are also prominently associated with the company's affairs.

ABOVE: plant exterior. BELOW: part of the plant interior.

Courtesy Sioux City Journal-Tribune

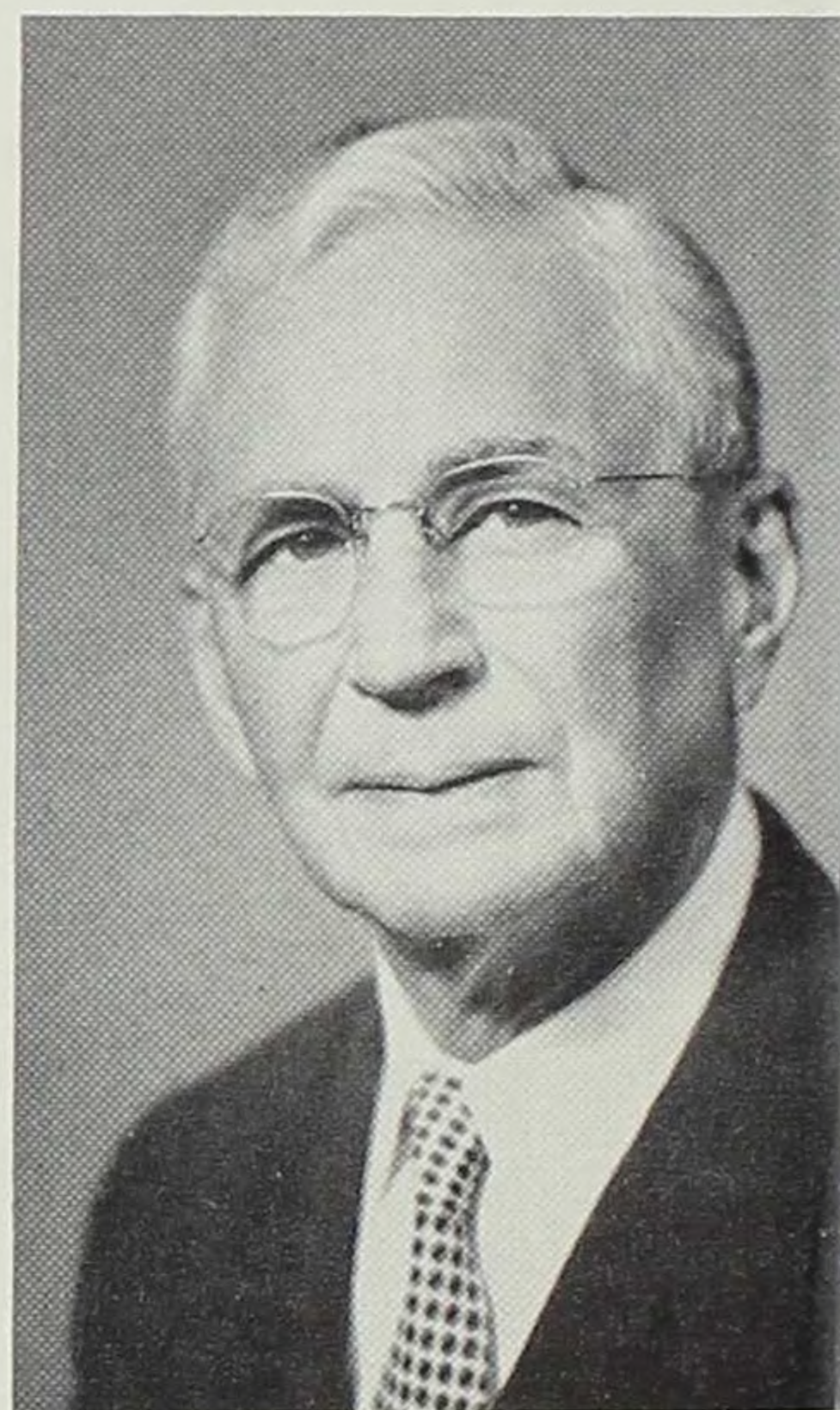




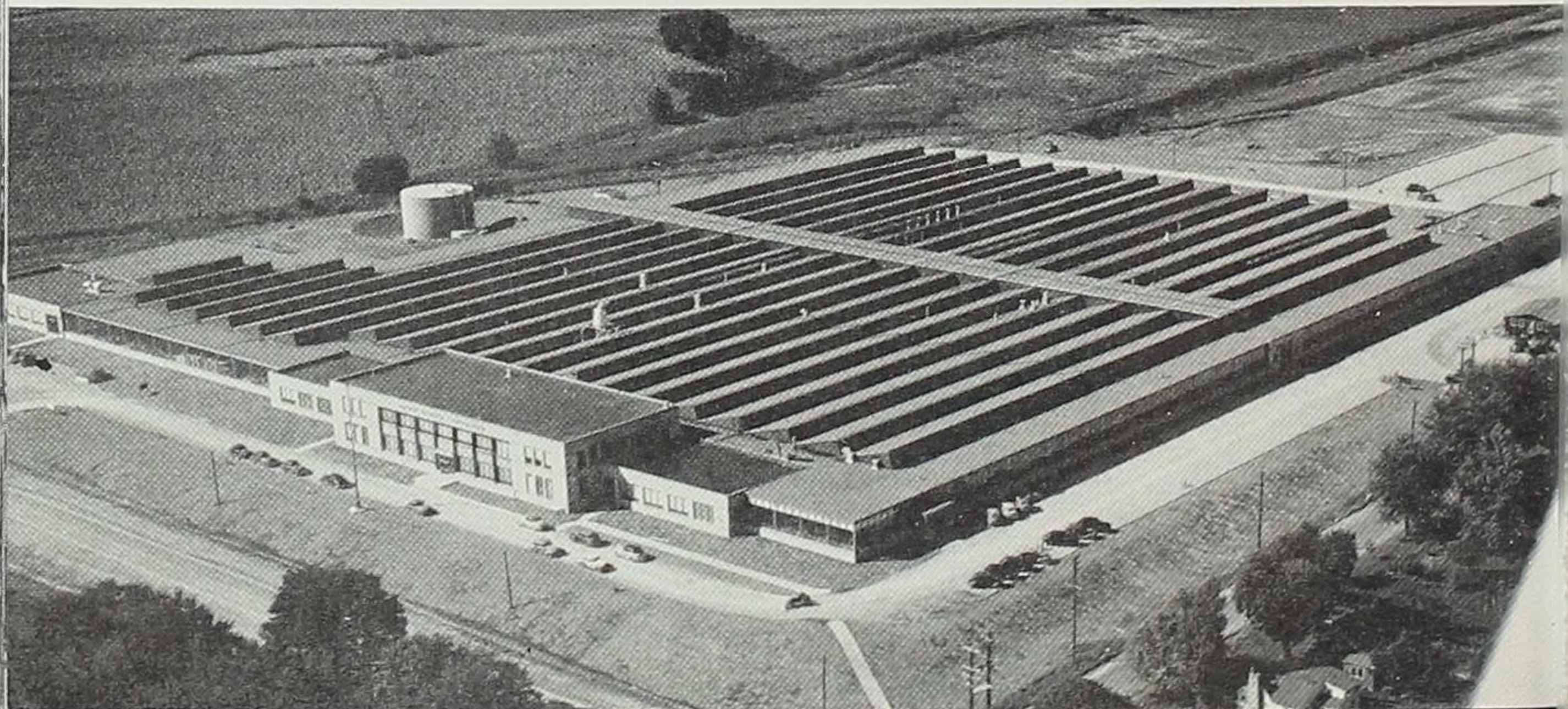
CHERRY-BURRELL CORPORATION:
Chicago

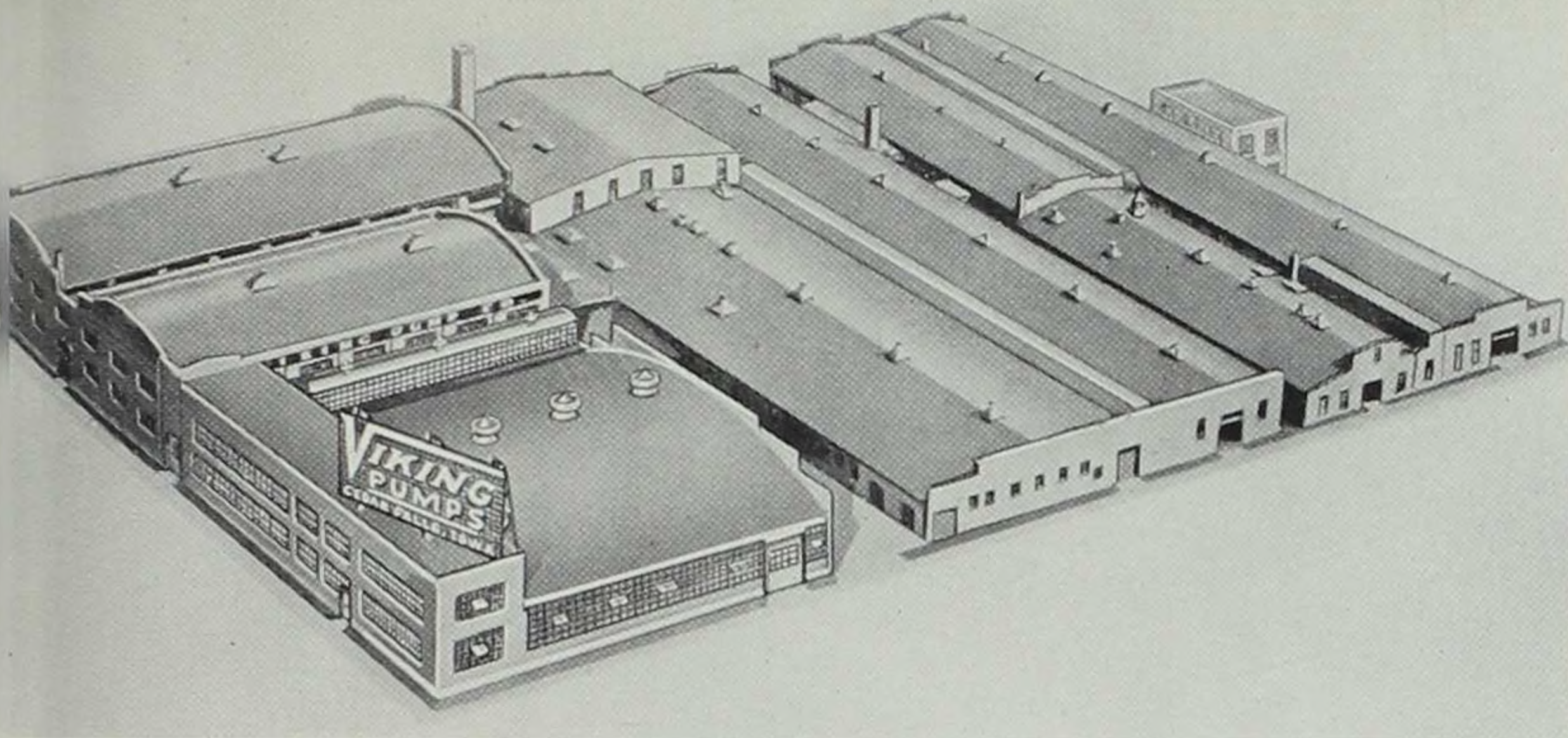
The J. G. Cherry Company of Cedar Rapids, founded in 1880, was merged with four other firms in 1928 to form the present corporation. It is a leader in the production and distribution of dairy, food, farm, brewing, beverage, and chemical equipment and supplies. In 1955 it employed 1,575 workers of whom over 400 worked at the Cedar Rapids plant. This modern, \$3,000,000 unit was constructed between 1945 and 1948 and has a total floor area of 400,000 square feet. Chairman of the board is Howard H. Cherry, Sr., son of J. G. Cherry, while the latter's grandson, John G. Cherry, is president.

ABOVE: a bottle washer. RIGHT: Howard Cherry, Sr. BELOW: Cedar Rapids plant.



Courtesy Cedar Rapids Chamber of Commerce

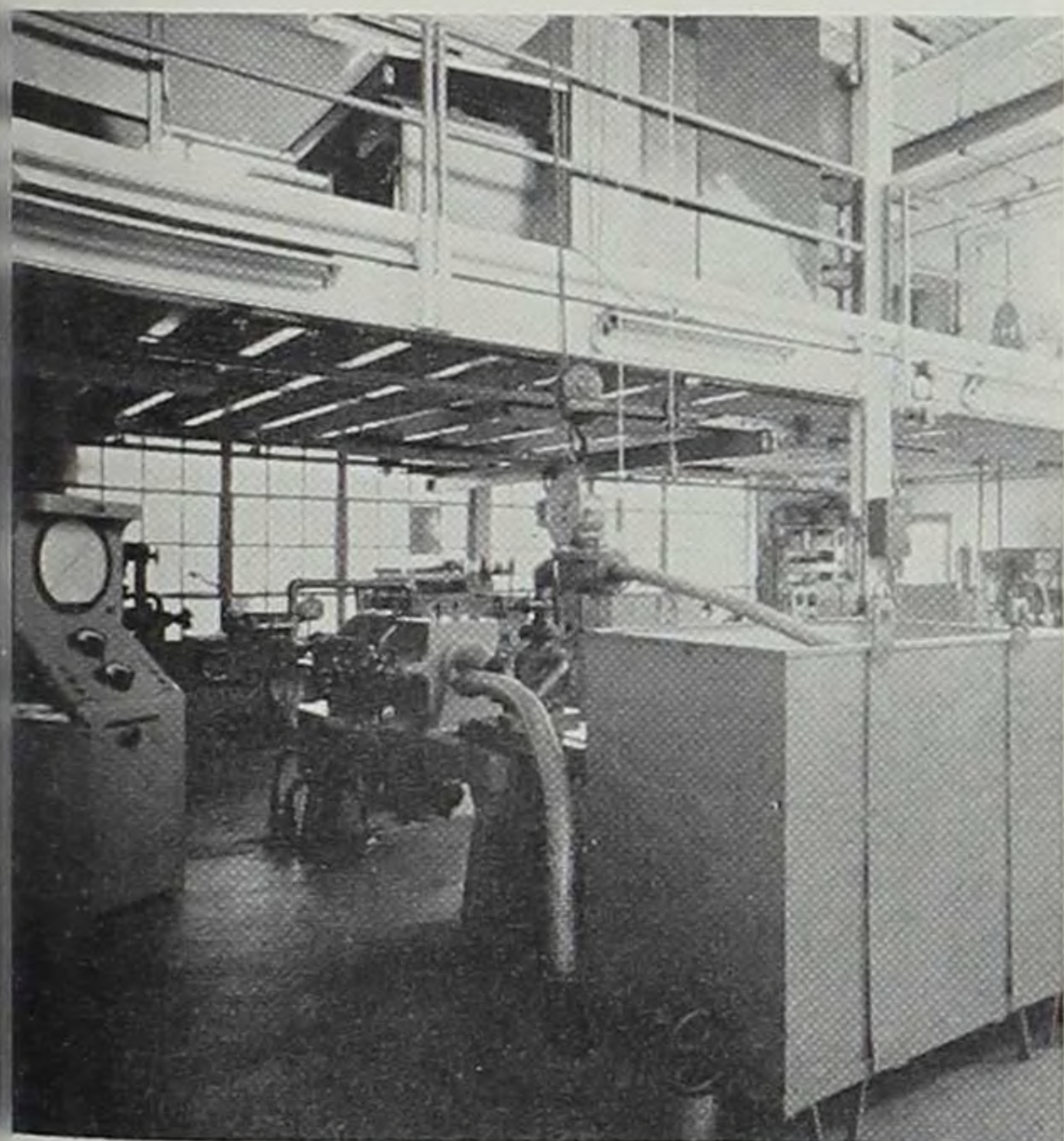




VIKING PUMP COMPANY: Cedar Falls

Viking Pump was organized in 1911 to manufacture a rotary pump which Jens Nielson had invented in 1904. The first year the Cedar Falls firm employed two men, who received \$100 a month, and produced about 50 pumps which were sold for a total of \$2,000. By 1955, its peak year, the company had 473 workers, a monthly payroll of \$125,000, and an annual production valued at \$5,000,000. It is the largest manufacturer of rotary pumps in the world. Its 1,250 stockholders own 200,000 shares of common stock. Robert C. Wyth is the president.

ABOVE: manufacturing plant. LEFT: part of Viking Pump's research facilities. BELOW: pumps ready for shipment.

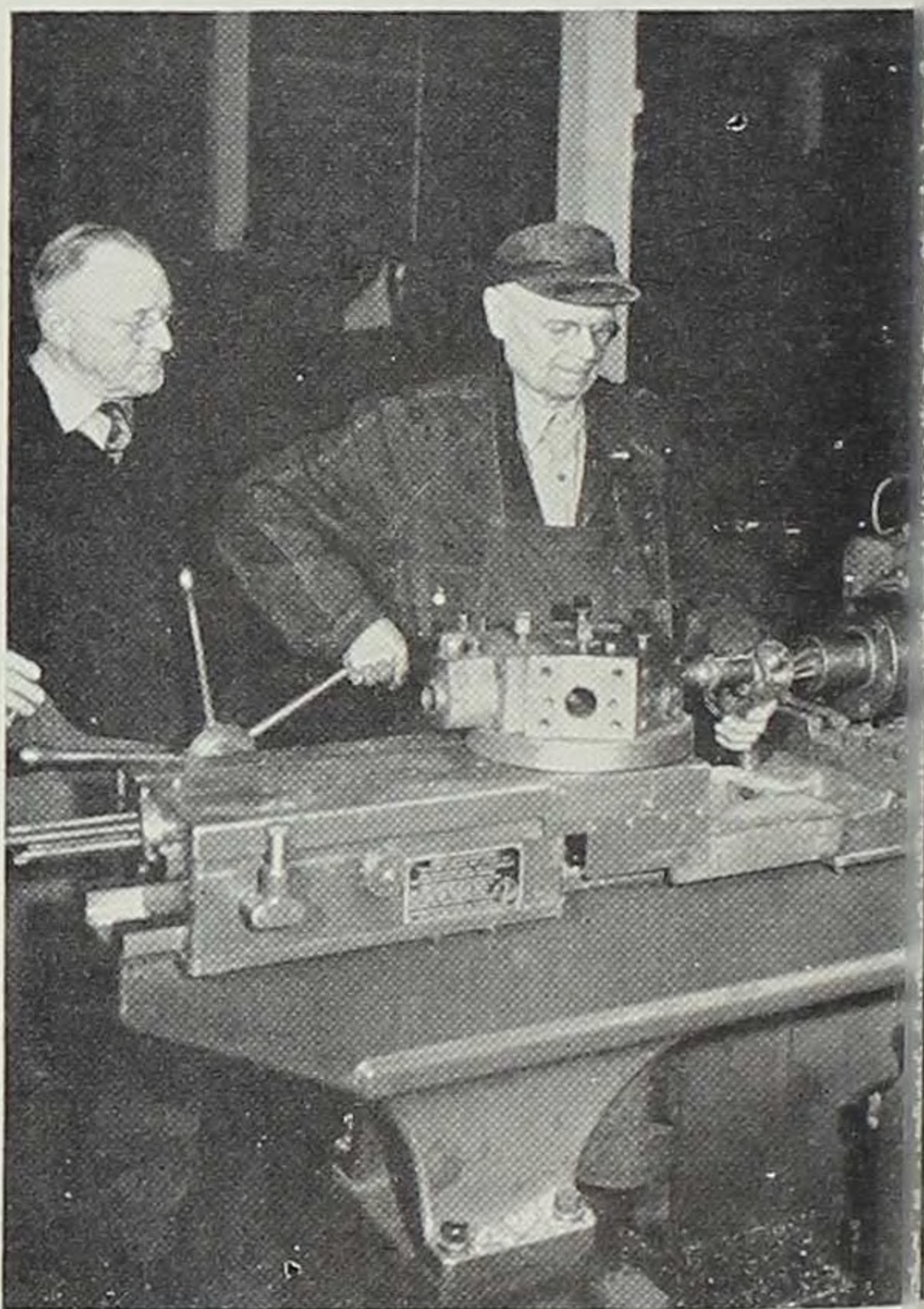
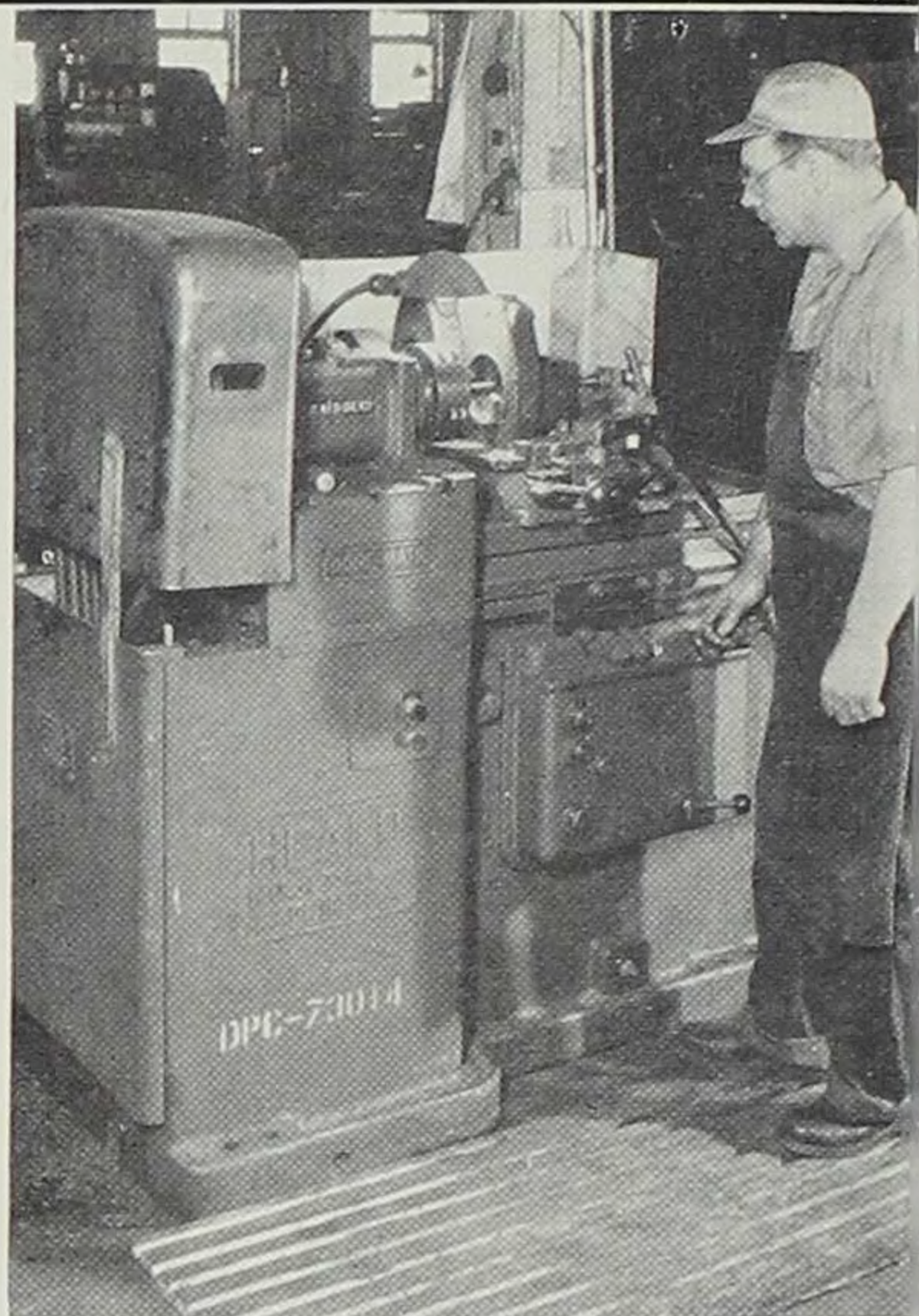


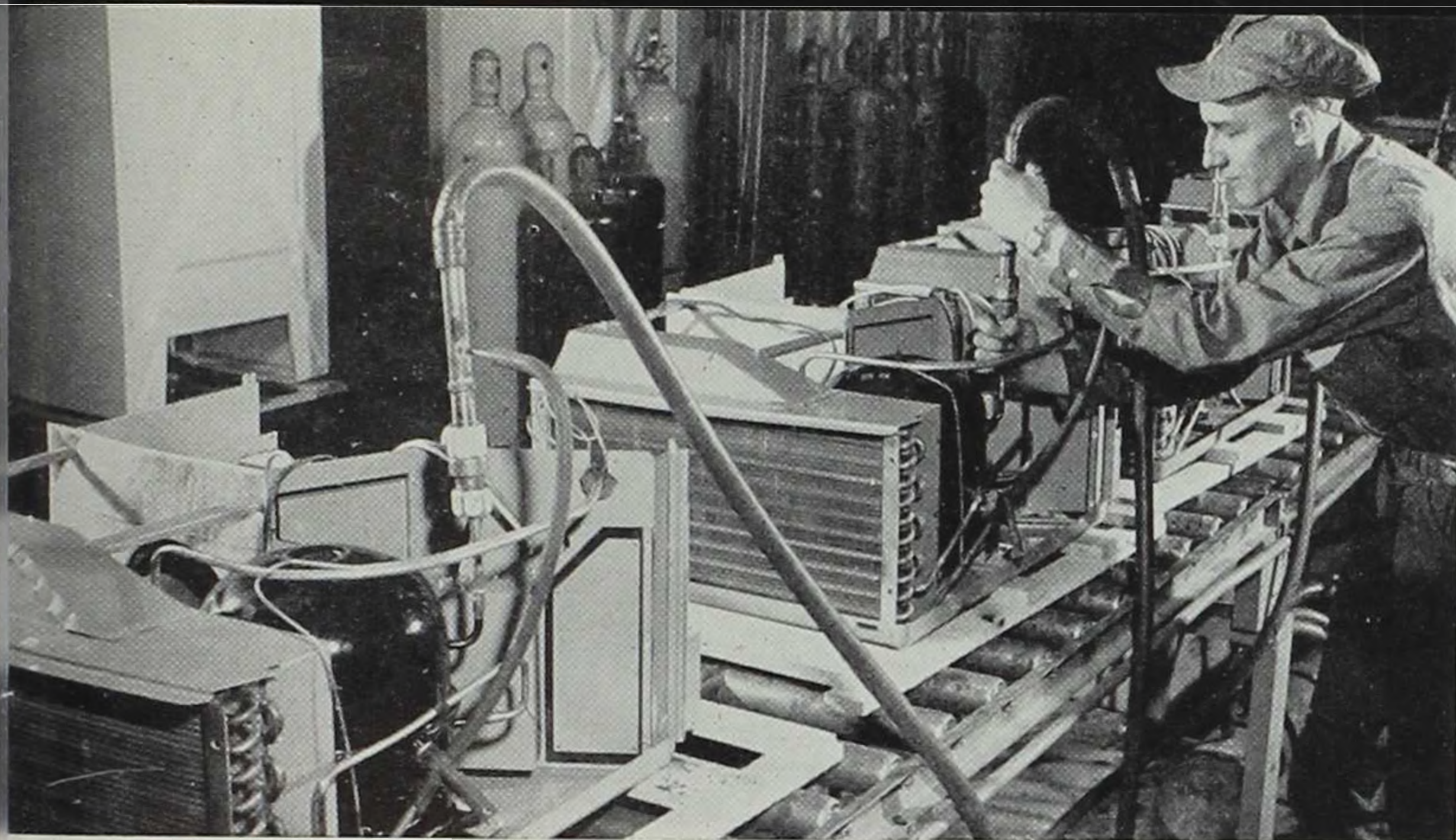
A. Y. McDONALD,
PLUMBER,
 Gas and Steam Fitter,
 Steam Boat, Distillery & Brew-
 ery Work.
 Bath Tubs, Water Closets, Pumps,
 Kitchen Sinks, &c,
 Copper and Sheet Iron Work of Every Description.
Cor. Main and Seventh Sts., Dubuque, Iowa.

A. Y. McDONALD MANUFACTURING COMPANY: Dubuque

One hundred years have passed since A. Y. McDonald set up his small plumbing shop in Dubuque. Today Delos L., John M., and A. Y. McDonald IV, manage the company. Its Dubuque plant now covers 5½ acres and employs 540 workers while another 500 are employed at the 19 branch houses which distribute McDonald products throughout the Midwest. In addition to the plumbers' goods for which the company has always been famous, three other distinct lines of products are manufactured. These include: automatic electric pumps and water systems, and farm hand pumps; special oil handling equipment and accessories for the petroleum industry; and floor, roof, and shower drains for home and industry.

ABOVE: ad from 1861 Dubuque City Directory. RIGHT (top): boring and facing body of a jet pump; (bottom): experienced workmen account for McDonald's reputation for high quality work. BELOW: final inspection of McDonald pumps.





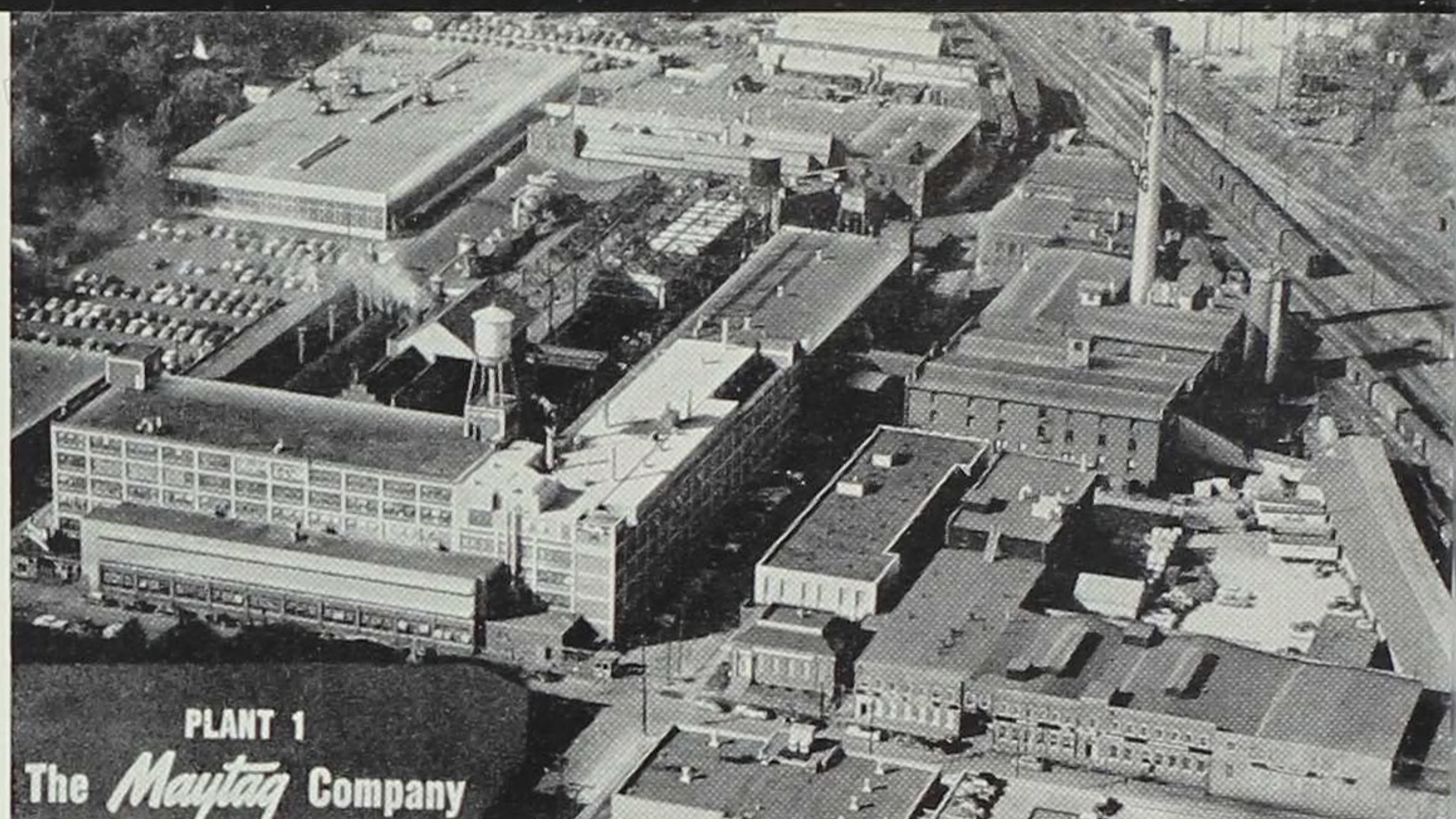
AMANA REFRIGERATION, INCORPORATED:

Amana

In 1934 George Foerstner and two workers at Amana built and sold a beer cooler. He then took over the Middle Amana Woolen Mill plant and began making meat cases and coolers. In 1936 Foerstner sold out to the Amana Society, continuing as manager of a plant which soon became the country's largest builder of cold storage locker plants. In 1945 Amana entered the home freezer market, being the first to produce upright freezers. By 1950 the plant had outstripped its backing, and the Amana Society therefore sold out to private investors headed by Howard Hall of Cedar Rapids. The plant has been continually expanded since that time, Amana being the largest single manufacturer of freezers in the world. It has also entered the air conditioning field. From a \$50,000 business it has grown to one doing a \$20,000,000-a-year business employing 1,150 workers in 1955. Howard Hall is president, George Foerstner vice president and general manager.

ABOVE: assembly line for air conditioners. LEFT: George Foerstner. BELOW: final test of freezers.

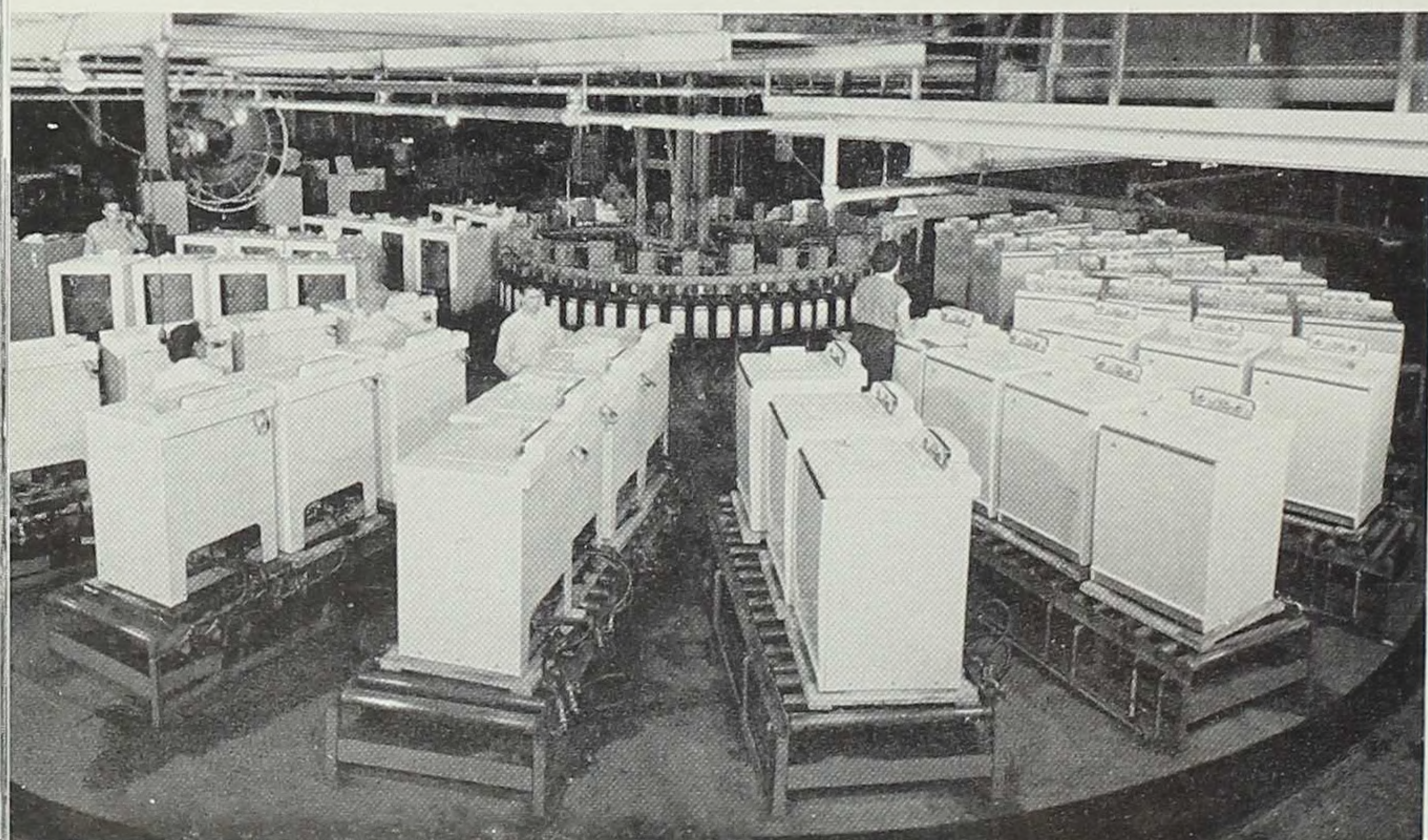




THE MAYTAG COMPANY: Newton

In 1893 Fred L. Maytag, W. C. Bergman, A. H. Bergman, and G. W. Parsons founded the Parsons Band Cutter and Self Feeder Company. In 1907 the Newton firm entered the washing machine business, taking its present name in 1909. In 1922 the "Gyrafoam" principle was introduced and by 1924 Maytag had taken the lead in washer production. By 1949 the company had produced 6,000,000 of its famous wringer washers. In that year it built a second plant in Newton to produce automatic washers and dryers. It also manufactures freezers, combination refrigerators-freezers, ironers, and gas ranges. In 1955 Maytag had 4,200 employees, with a monthly payroll of almost \$2,000,000, and net sales for the year of \$93,067,105. Plant 1 at Newton is over 900,000 square feet in area, the new Plant 2 is nearly 800,000 square feet, while a third plant at Hampton is 44,000 square feet. Total assets of the company are \$51,115,923. Fred L. Maytag II is the president.

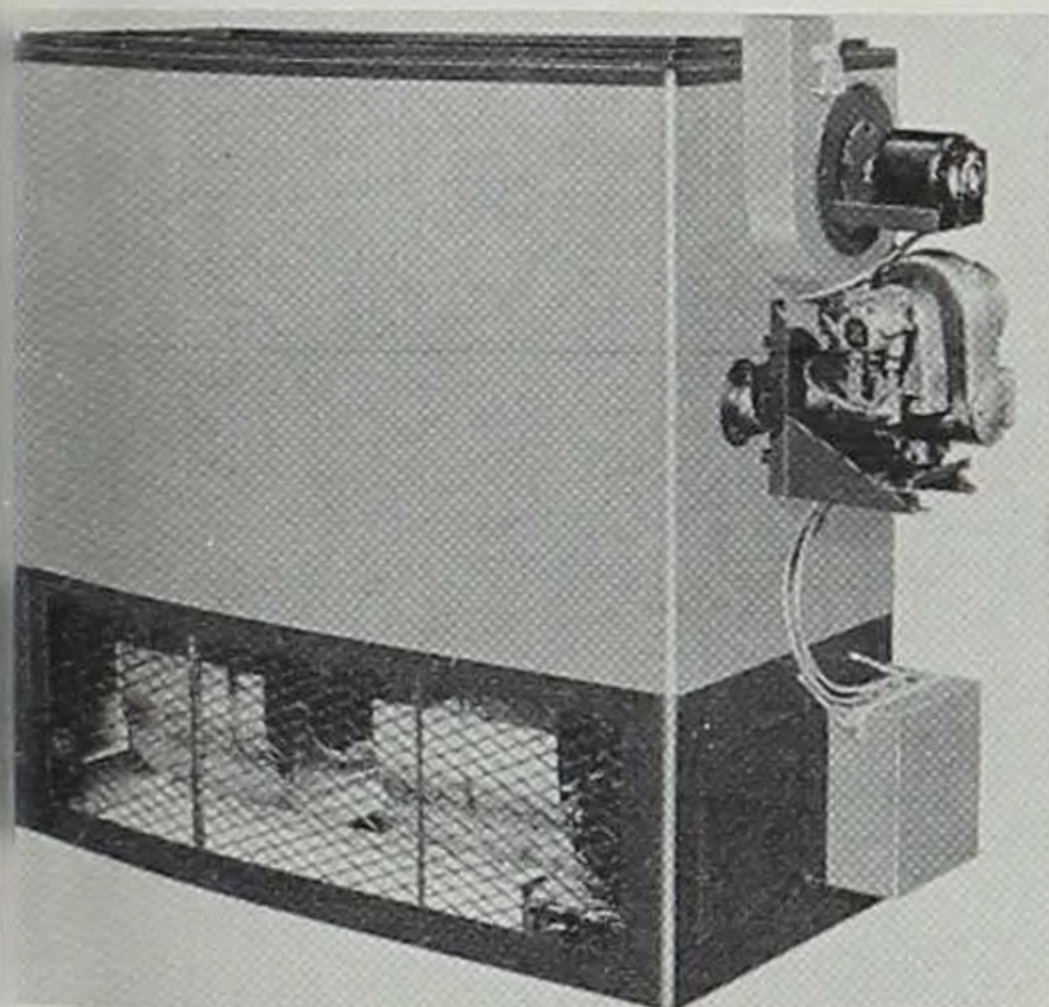
ABOVE: Plant 1. RIGHT: Maytag Dutch Oven. BELOW: automatic washer assembly line.



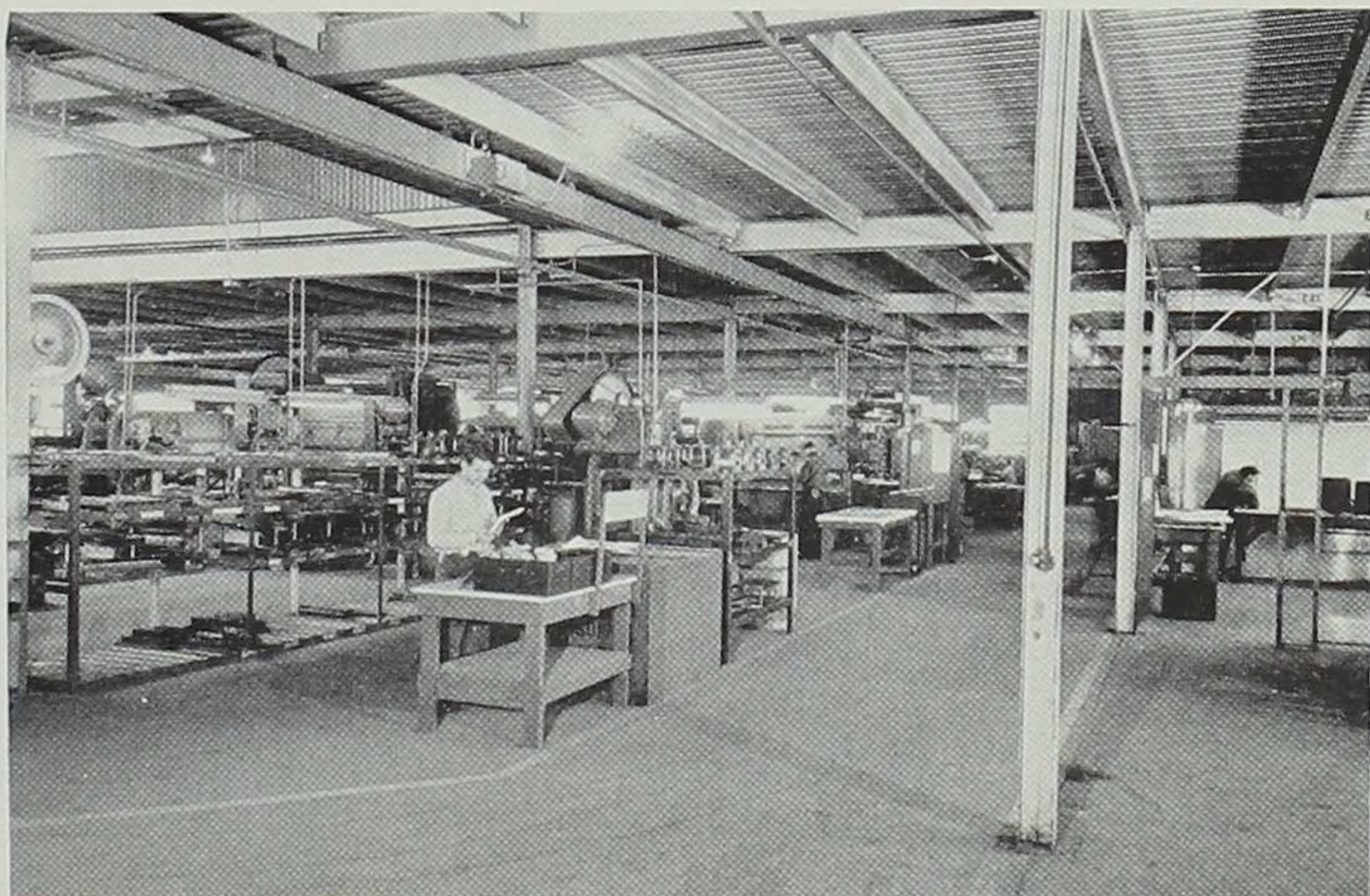


LENNOX INDUSTRIES, INCORPORATED: Marshalltown

What is now the world's largest manufacturer of warm air heating systems had its beginnings during the 1890's in the Marshalltown machine shop of David Lennox. In 1904 the Marshalltown newspaper publisher, D. W. Norris, purchased Lennox's furnace business and until his death in 1949 aggressively promoted the sales of Lennox Furnaces to an ever-widening market. In 1917 the first of the existing Lennox plants was built in Marshalltown, and in the following years others went up in Syracuse; Columbus, Ohio; Salt Lake City; Fort Worth; Pasadena, and Decatur, Georgia. In 1954 Lennox purchased the Armstrong Furnace Company of Des Moines. The company now employs 2,700 workers. Of these 880 are in Iowa, 250 at the new Des Moines division, the remainder at Marshalltown. Best known for its furnaces, Lennox also produces air conditioning equipment, and, at the Des Moines plant, agricultural crop drying equipment. John W. Norris has been president since his father's death.



ABOVE: the Marshalltown plant. LEFT: a Lennox Furnace. BELOW: interior of Des Moines plant.

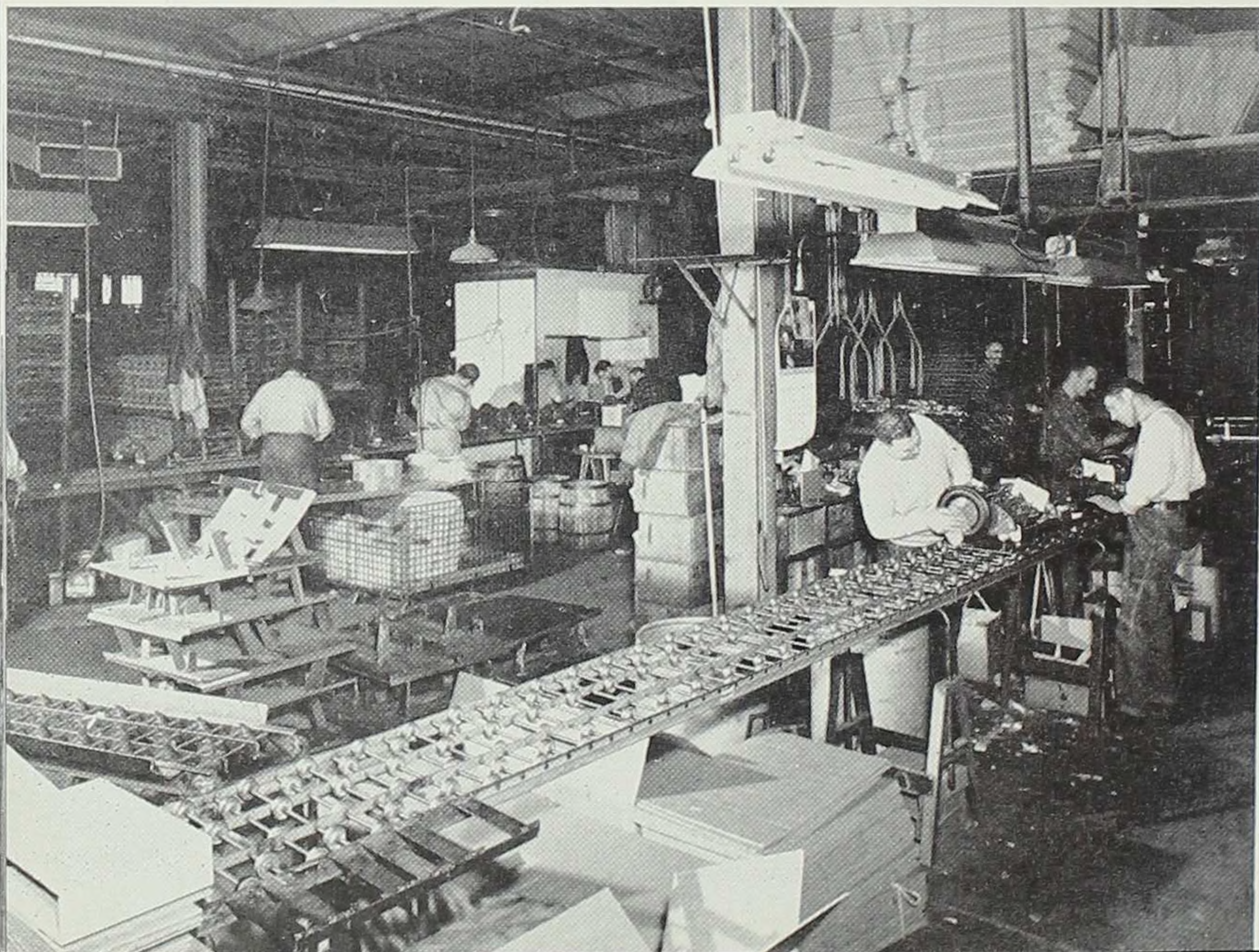




WESTERN TOOL AND STAMPING COMPANY: Des Moines

Founded in 1935 by E. W. Kolls and Ralph Torgersen, Western Tool was for over a decade a metal stamping and tool company, producing materials for other companies. In 1946 President Kolls decided that the future of the company lay in manufacturing products of its own. Entering the field of lawn mower manufacturing, Western Tool has become the largest producer of lawn mowers, lawn sweepers, and domestically used snow plows in the world. In addition to its Des Moines plant it has also acquired plants at Gainesville, Georgia, and Springfield, Massachusetts. The company is the world's largest user of small gasoline engines. In 1955 it employed 415 workers with a monthly payroll of \$155,000, and produced close to 300,000 lawn mowers which, with the other HOMKO products, were valued at \$13,000,000. With a capital of \$3,000,000 the firm has about 650 stockholders.

ABOVE: a HOMKO power mower. BELOW: an assembly line at Des Moines plant.

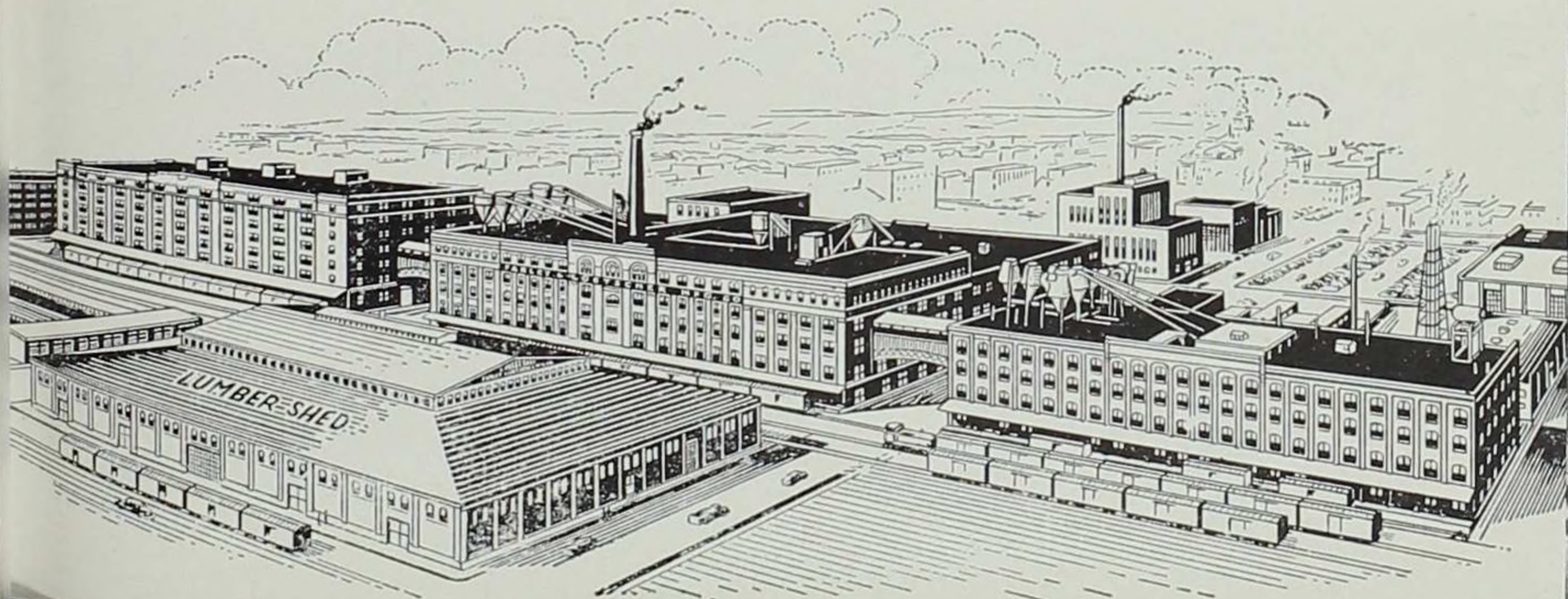


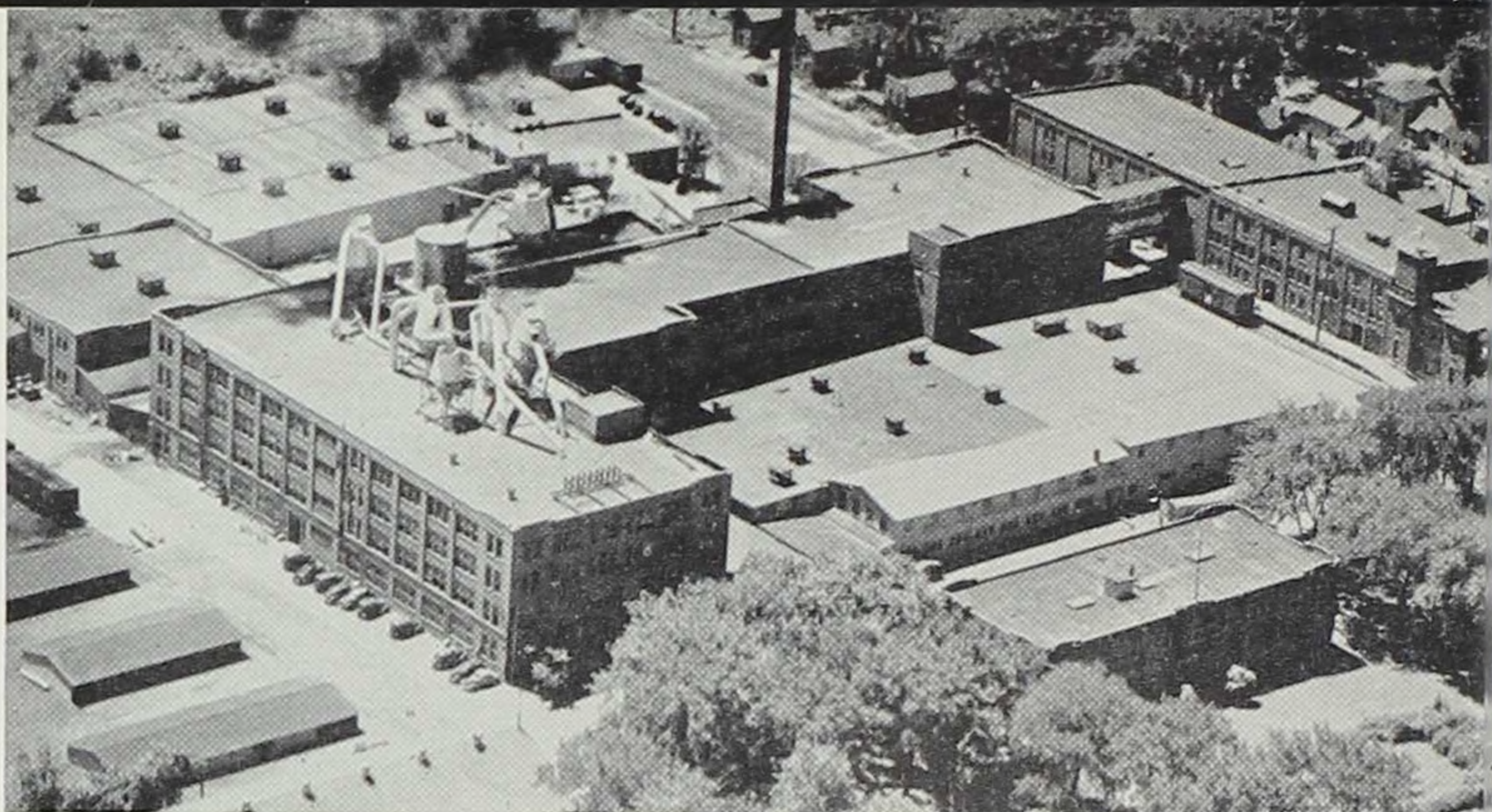


FARLEY AND LOETSCHER MANUFACTURING COMPANY: Dubuque

In 1875 Christian Loetscher of Dubuque rented tiny quarters on the second floor of a mill and established his own planing mill. Six years later when J. P. Farley acquired an interest the company was incorporated under its present name. Today the company employs 1,100 workers with a monthly payroll of \$400,000. Besides its main plant at Dubuque, which occupies over 21 acres, the company also has a division plant in Des Moines and branches in Chicago and Sioux Falls. Its sashes, doors, cabinets, and other mill-work have been famous for many decades. Since 1929 it has also built up a reputation in the field of plastics. Since 1947 the president has been J. Merrill Burch, Jr., who succeeded John A. Loetscher, who, in turn, became chairman of the board.

ABOVE: original plant in 1876. LEFT: Farley & Loetscher kitchen cabinets. BELOW: Dubuque plant today.

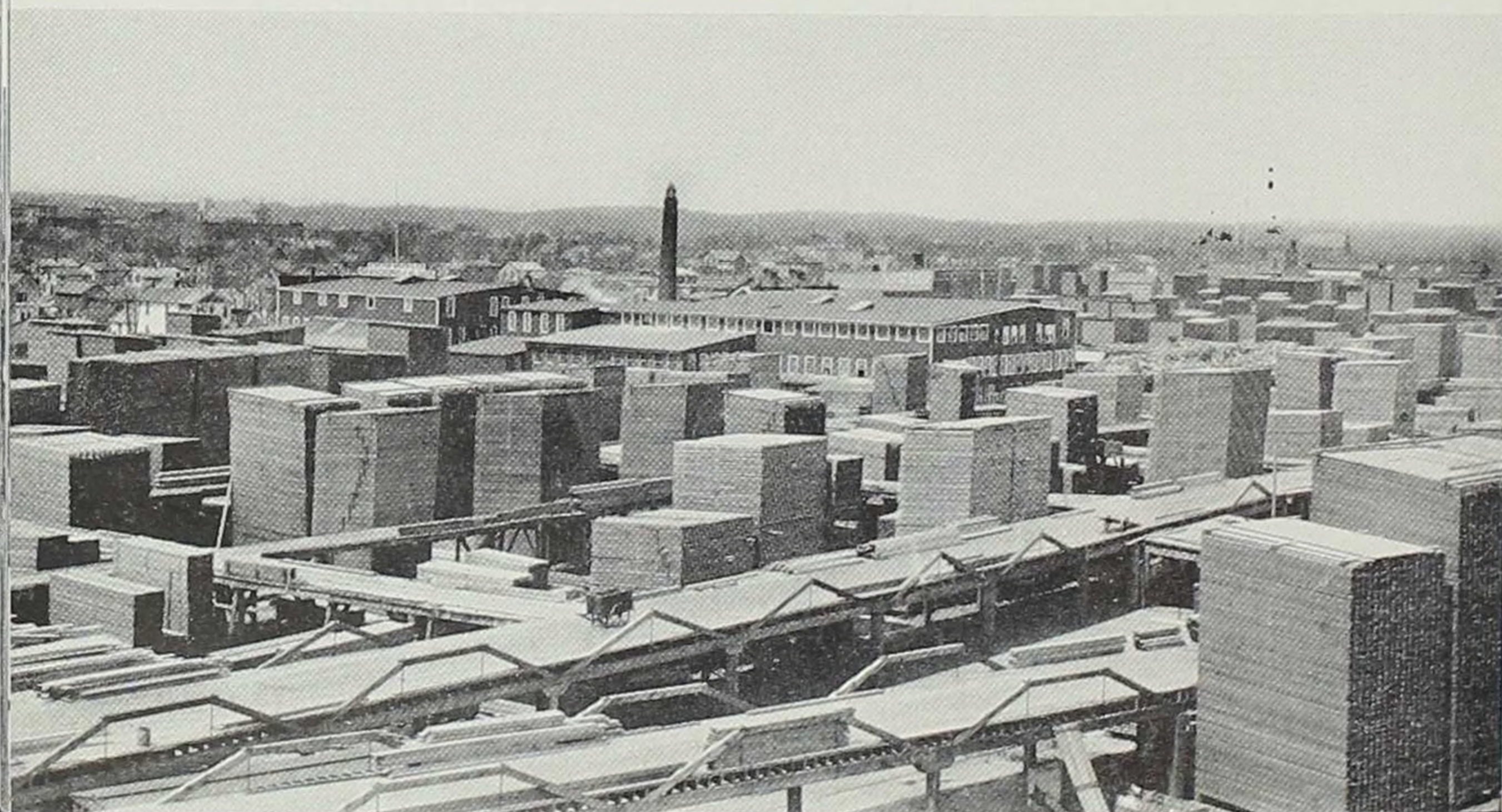




CURTIS COMPANIES, INCORPORATED: Clinton

In 1866 C. F. Curtis and W. G. Hemenway bought a struggling little sash and door mill in Clinton. The following year Curtis' older brother, George, joined him, Hemenway selling out. Within three years the new firm had bought out its chief competitor in Clinton and in the years following established branches in Wisconsin, Minnesota, Nebraska, Oklahoma, and other states. A Sioux City plant was purchased in 1897. In 1955 Curtis employed 707 workers, had a monthly payroll of \$241,129, and an annual production valued at \$10,213,034. It manufactures a complete line of residential building woodwork. Among many firsts, Curtis was first in the industry to advertise nationally, to employ nationally known architects to design its products, and to establish a fully equipped research department. Until his death in March, 1956, G. L. Curtis was chairman of the board. His son, G. M. Curtis II, is president.

ABOVE: Clinton plant, 1954. RIGHT: stairway and interior trim by Curtis. BELOW: Clinton plant, 1879.

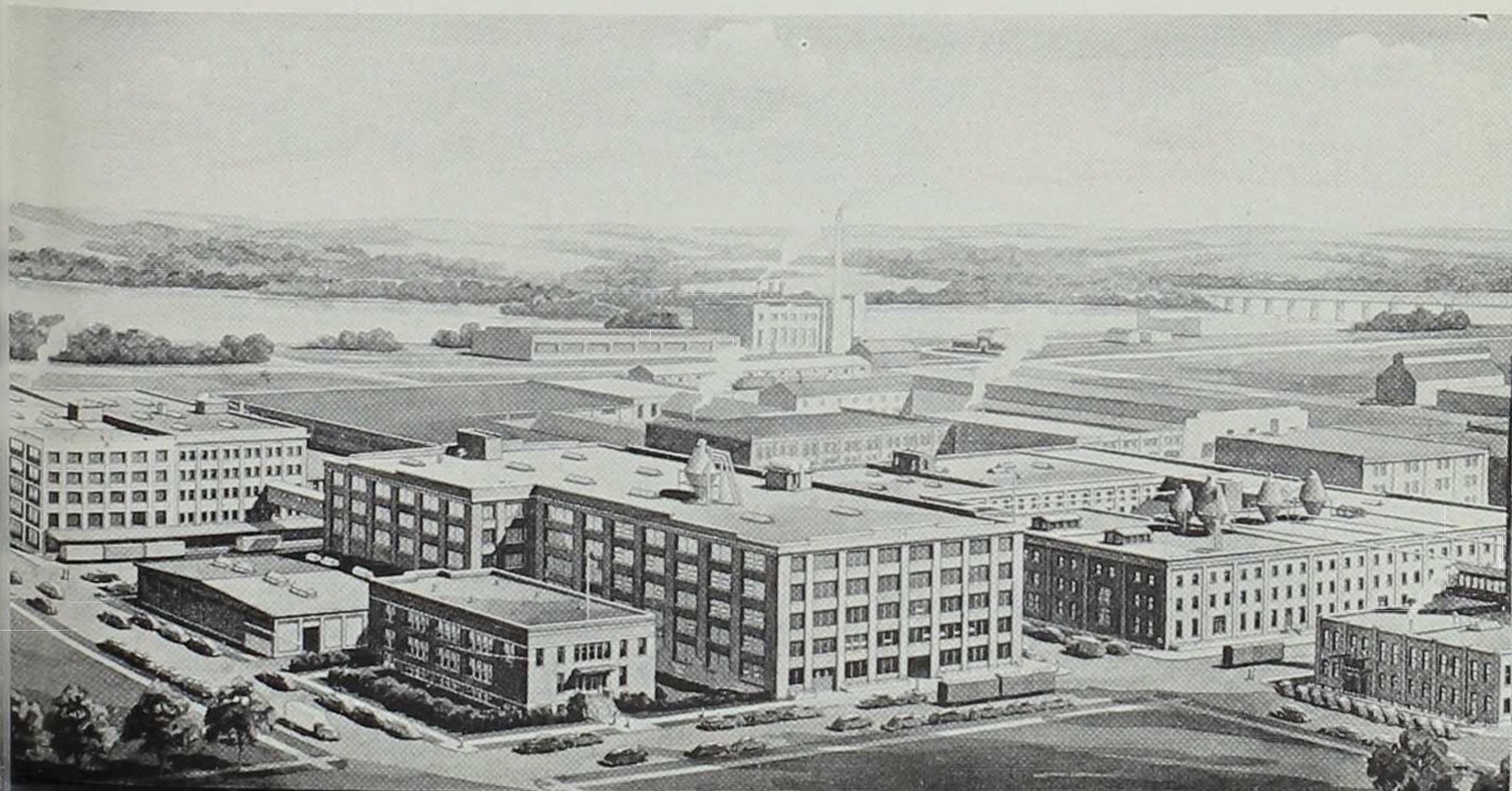


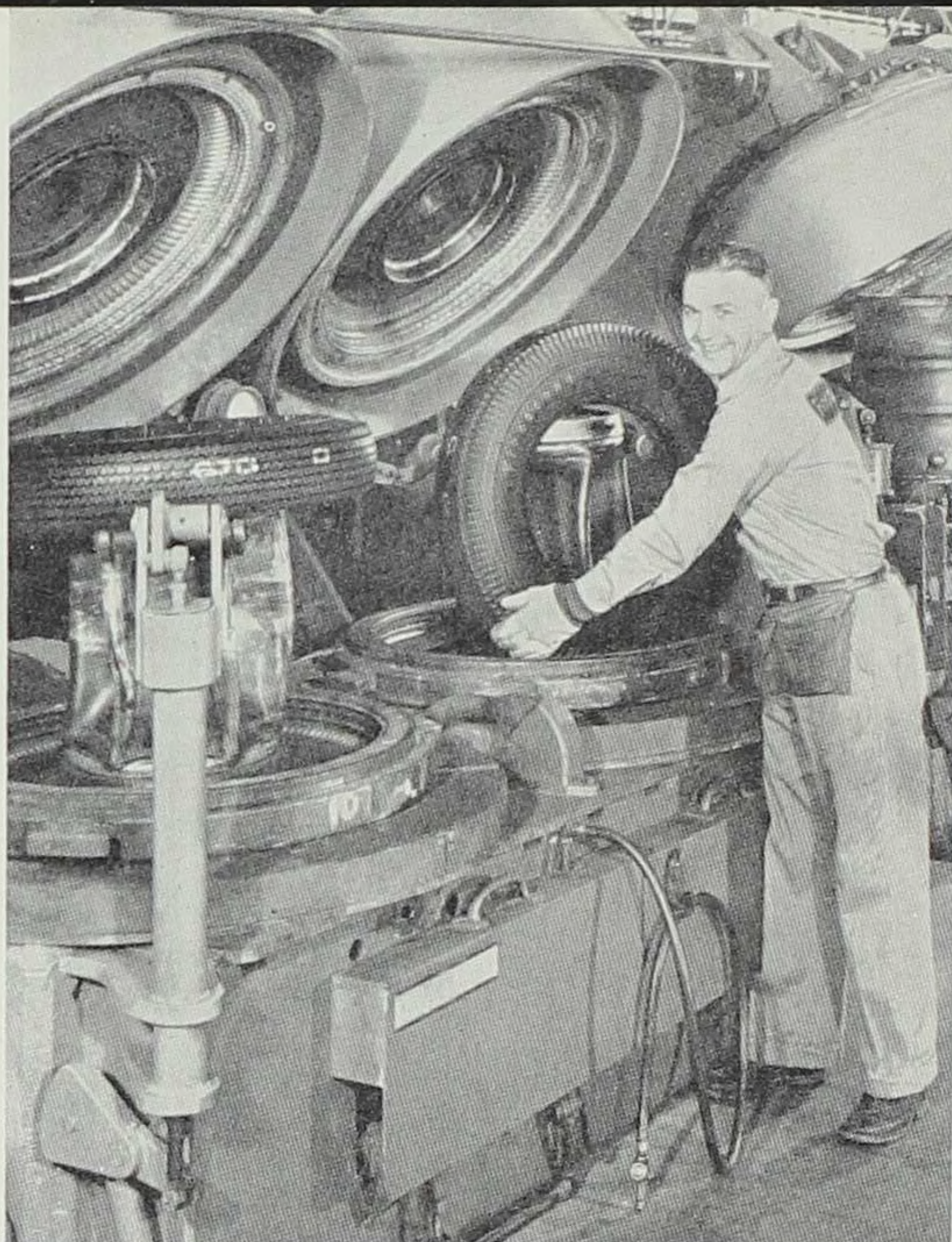


CARR, ADAMS AND COLLIER COMPANY: Dubuque

Since its formation in 1866 by W. W. Carr and W. H. Austin the firm of Carr, Adams & Collier has gone through several changes of name before adopting its present title. When John T. Adams joined the Dubuque sash and door manufacturers in the 1880's the firm was called Carr, Ryder & Wheeler. When Adams became company president in 1895 it was renamed Carr, Ryder & Adams. Upon Adams' death in 1939, James C. Collier, an officer in the company for 44 years, succeeded him as president, and the firm took its present name. Through all these changes, however, the company has steadily grown and prospered, its "Biltwell" doors, window units, and cabinets achieving a wide-spread reputation for fine quality workmanship. Starting with two employees, the company now has 1,200 at its manufacturing plant in Dubuque, with branches in Nebraska, Illinois, Minnesota, Indiana, Ohio, and Missouri, plus a kiln-drying plant at Klamath Falls, Oregon.

ABOVE (left): awning window units; (right): kitchen cabinets. BELOW: Dubuque plant.

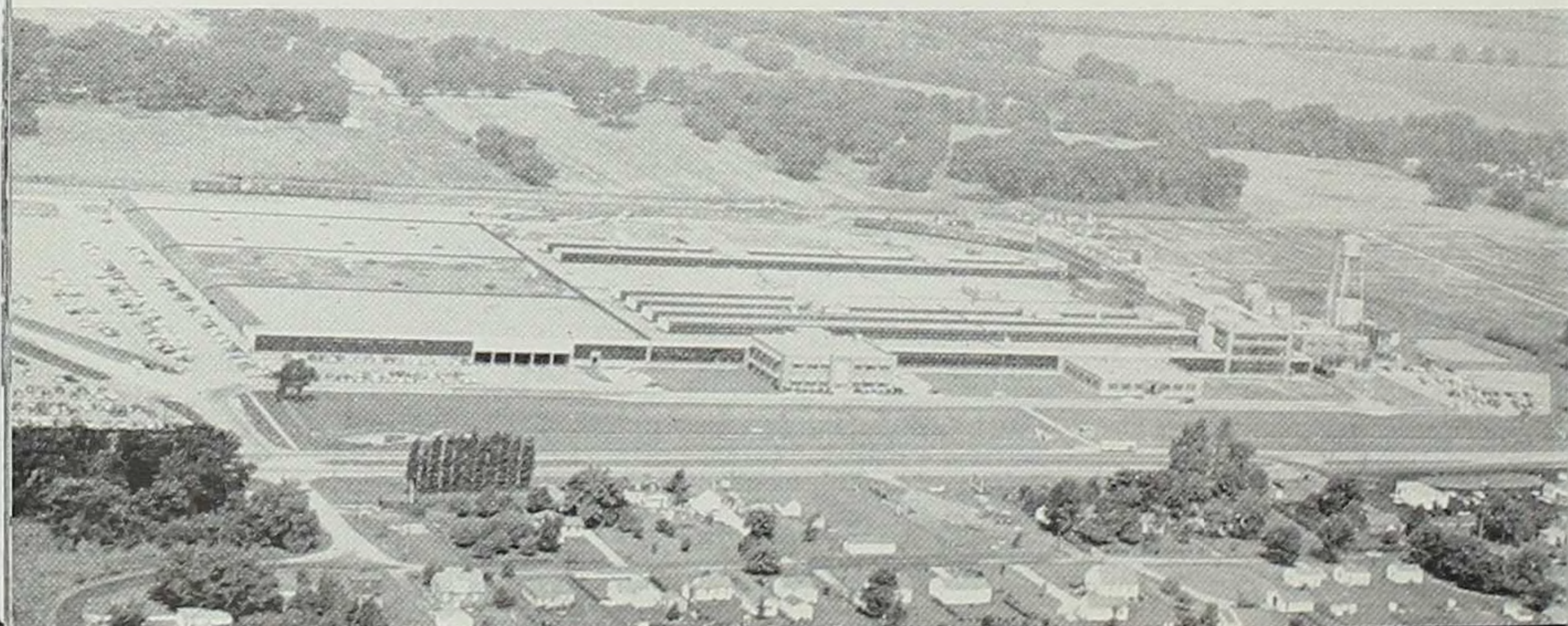


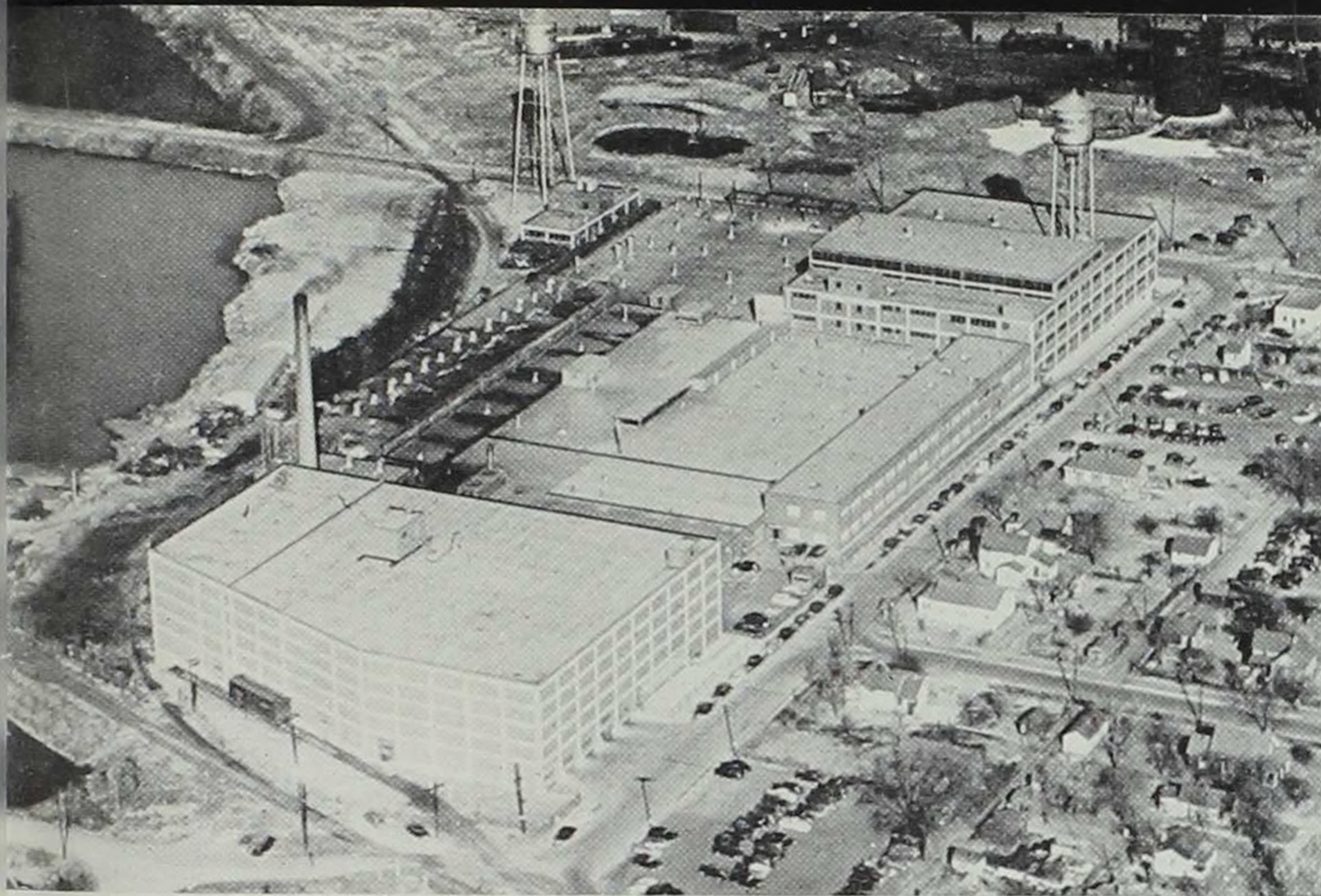


FIRESTONE TIRE AND RUBBER COMPANY: Akron

The government began construction of a rubber plant at Des Moines in 1944. When war ended production Firestone purchased the \$4,000,000 plant early in 1946. In the decade since then Firestone has spent \$13,000,000 on expansion of its Des Moines plant until it now includes 25 acres under one roof. The ultra-modern unit, the finest in the Firestone system, now employs 2,200 workers and has an annual payroll of \$13,000,000. One tire every three seconds comes off the assembly line, for a total of 18,000 in a day. Of this total 17,000 are for passenger cars, the rest for trucks and tractors. Some of the huge tires for earth-moving equipment sell for \$4,000 each.

ABOVE: a modern tire-casting unit. BELOW: the Des Moines plant.

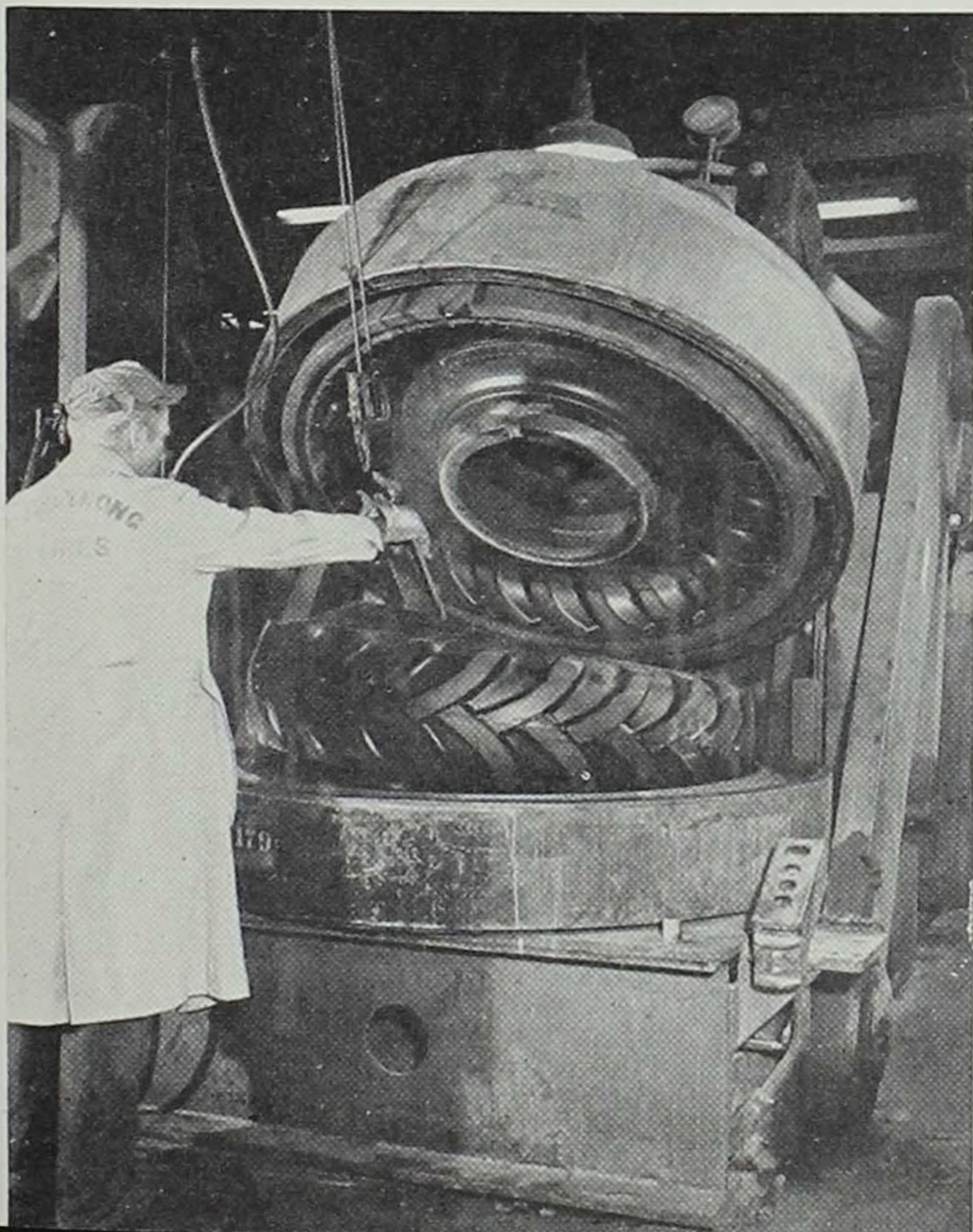




**ARMSTRONG RUBBER MANUFACTURING COMPANY:
West Haven, Conn.**

The Lake Shore Tire & Rubber Company, organized at Des Moines in 1927, was sold to Armstrong Rubber in 1943. The new owners have spent some \$4,000,000 on expansion of their Des Moines plant. Whereas in 1940 the plant had 250 employees who produced 2,500 tires a day, by 1955 employment was nearly a thousand with a yearly payroll of \$4,000,000. Between 9,000 and 10,000 tires are produced daily, a third of which are for trucks and tractors, the rest being passenger tires.

ABOVE: Des Moines plant. BELOW: casting a tire.



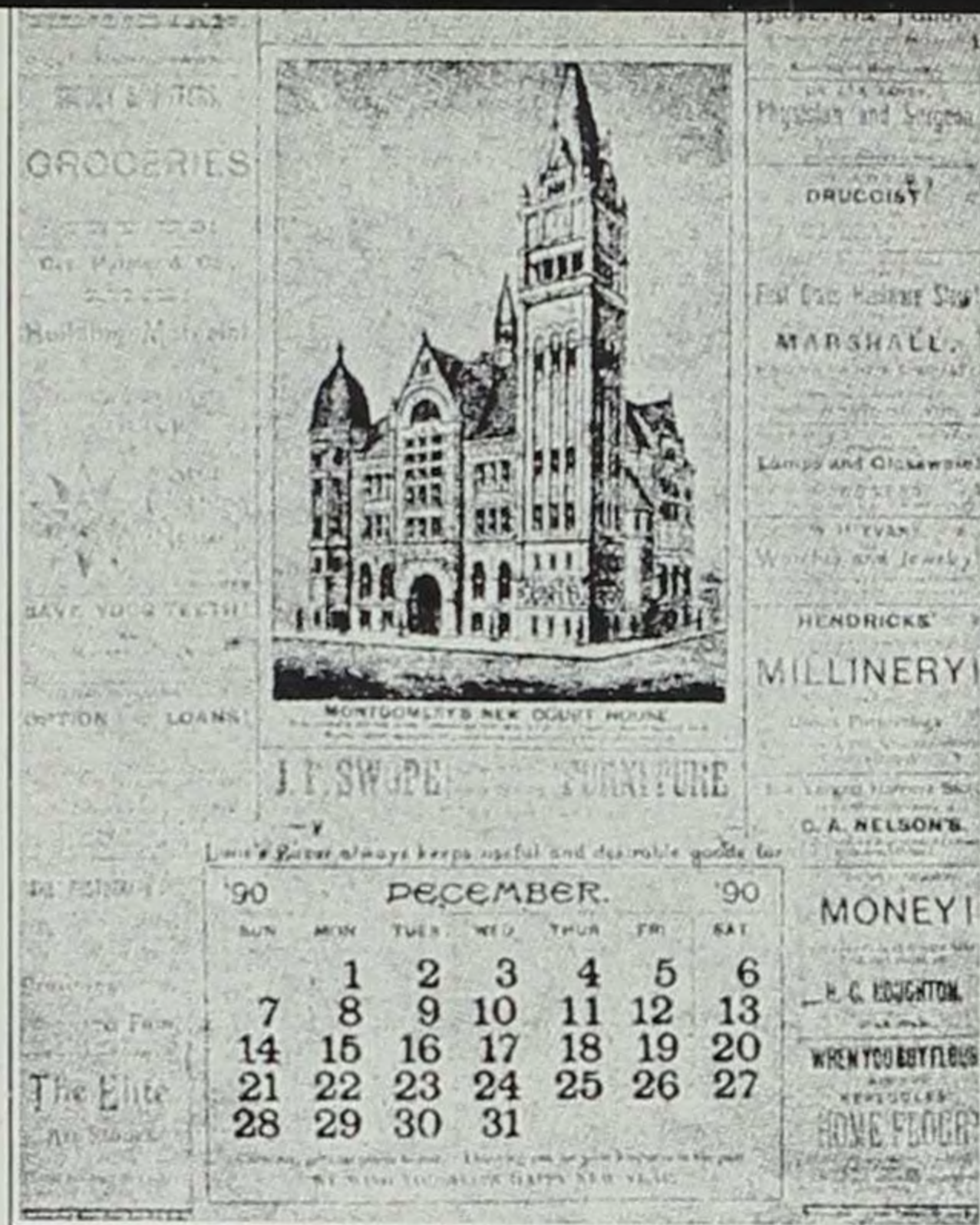
Photos courtesy Iowa
Development Commission

DES MOINES REGISTER AND TRIBUNE COMPANY: Des Moines

In addition to being Iowa's largest newspaper publisher, the Register and Tribune Company is also a very large employer. The company, which was incorporated in 1902, publishes the morning *Des Moines Register*, the evening *Des Moines Tribune*, and the *Sunday Register*. The latter has the largest circulation, having jumped from 375,000 in 1940 to over 550,000 at present. During the same period the company's employment has risen from 800 to 1,300 and its annual payroll from \$2,140,000 to \$6,200,000. Gardner Cowles acquired control of the company in 1903. His son John is now chairman of the board; Gardner, Jr., is the president.

RIGHT (top): Gardner Cowles, Sr.; (center): Gardner Cowles, Jr.; (bottom): John Cowles. BELOW: the plant; (insert): home of company before 1918.



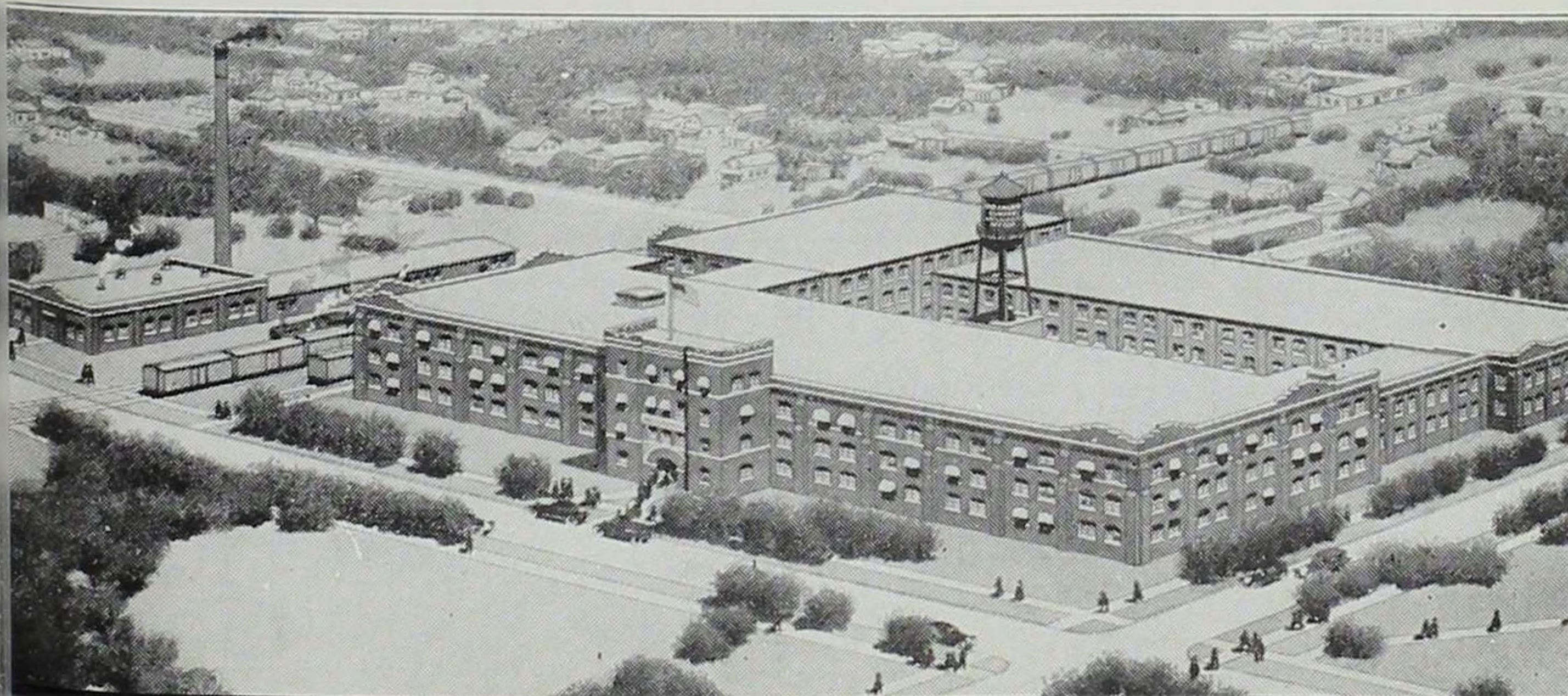


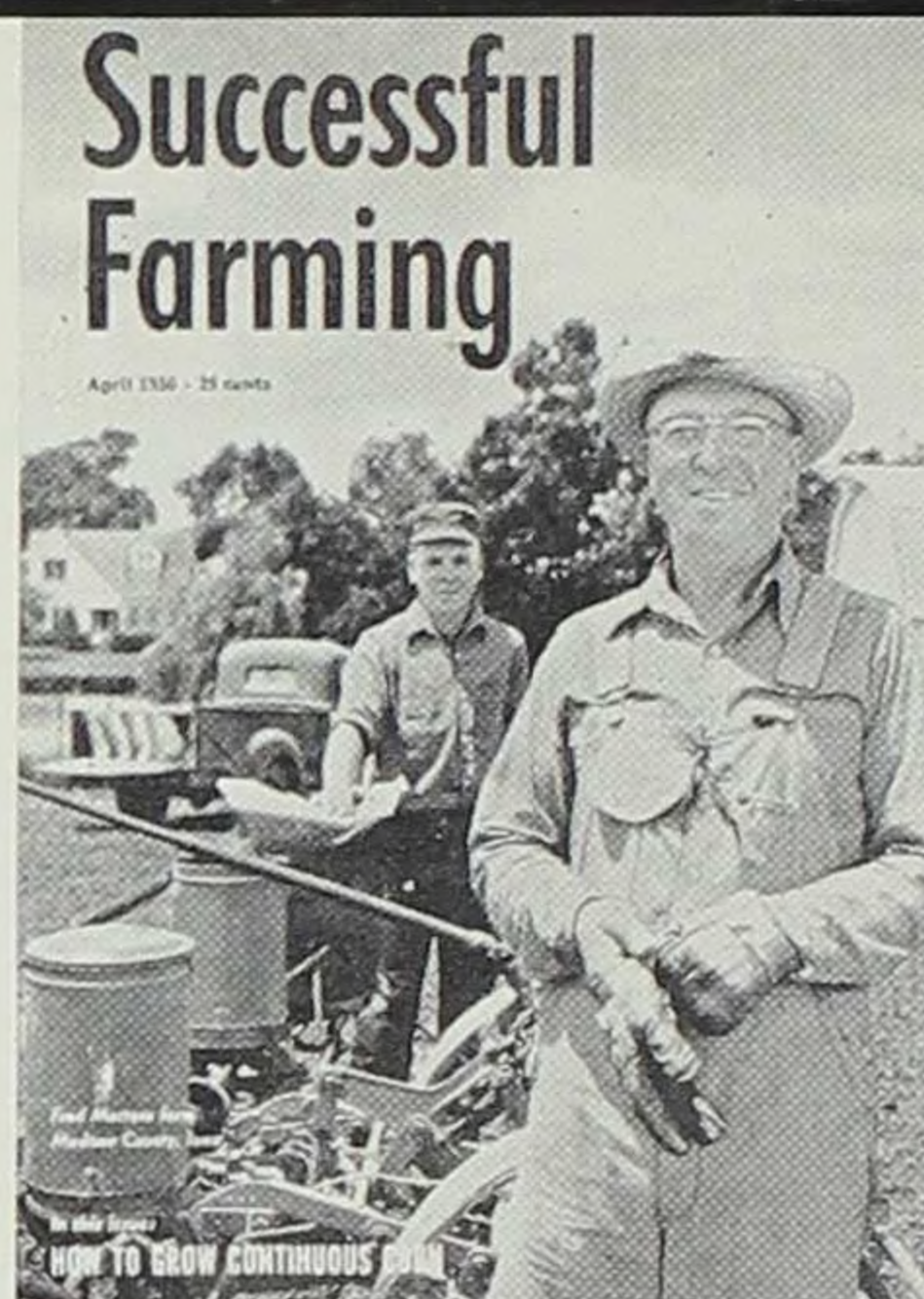
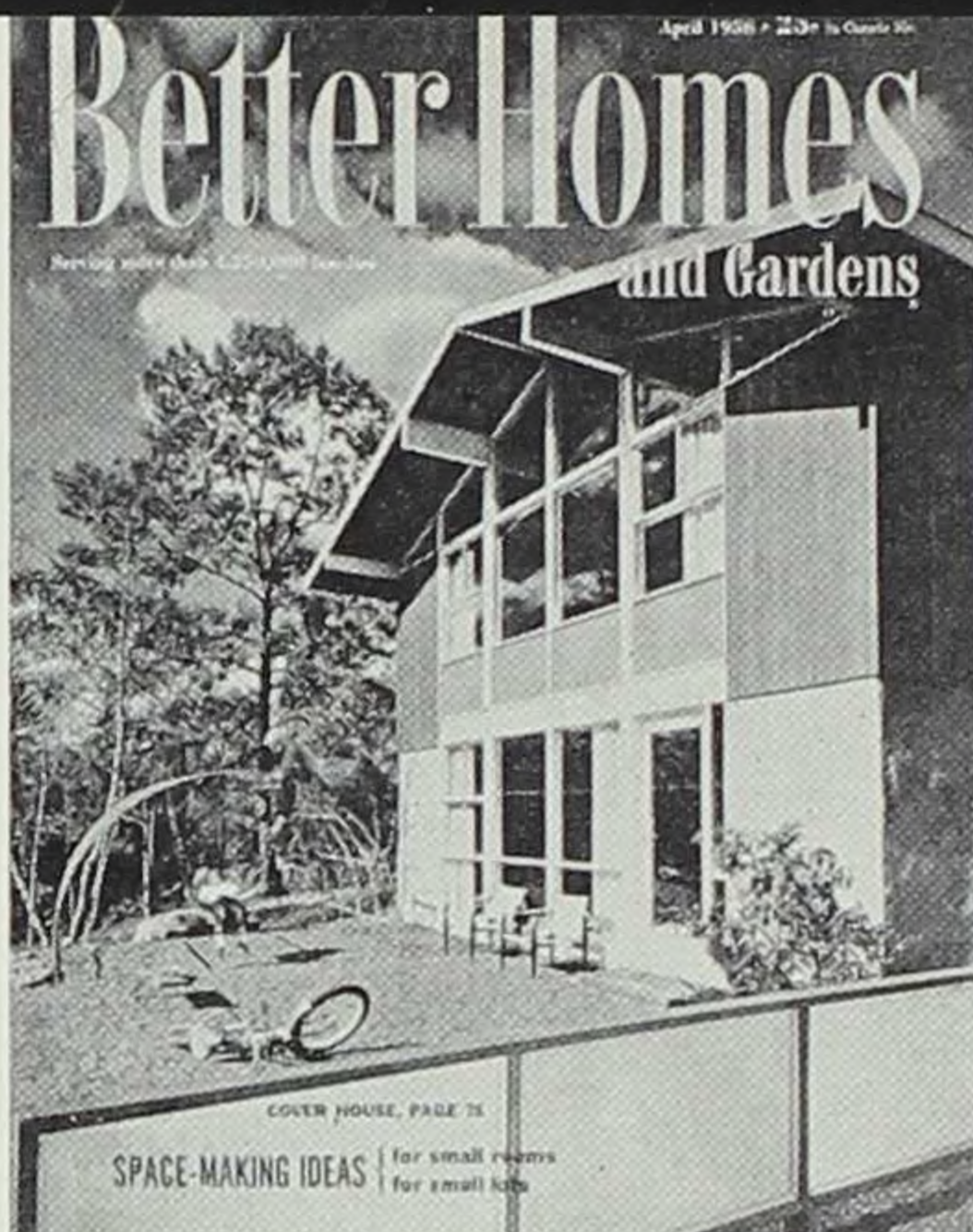
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THE THOMAS D. MURPHY COMPANY: Red Oak

In 1889 two young Red Oak newspapermen, Thomas Murphy and E. B. Osborne, looking for a way to increase the income of their paper's job printing plant, printed a calendar with a picture of the new Montgomery County courthouse surrounded by the ads of 22 local companies. This was so successful that the two men formed a calendar printing company in 1890. Osborne later bought out Murphy and moved the company east, but in 1900 Murphy formed the present firm which has become perhaps the largest producer of art calendars in America. In 1932, when the depression threatened the company's future, William Cochrane, a company executive since the start, purchased control. His son-in-law, Malcolm D. Lomas, is now president and chairman of the board. The company has over 400 employees plus several hundred agents throughout North America.

ABOVE (left): Thomas D. Murphy; (right): Murphy and Osborne's first calendar.
BELOW: Red Oak plant.



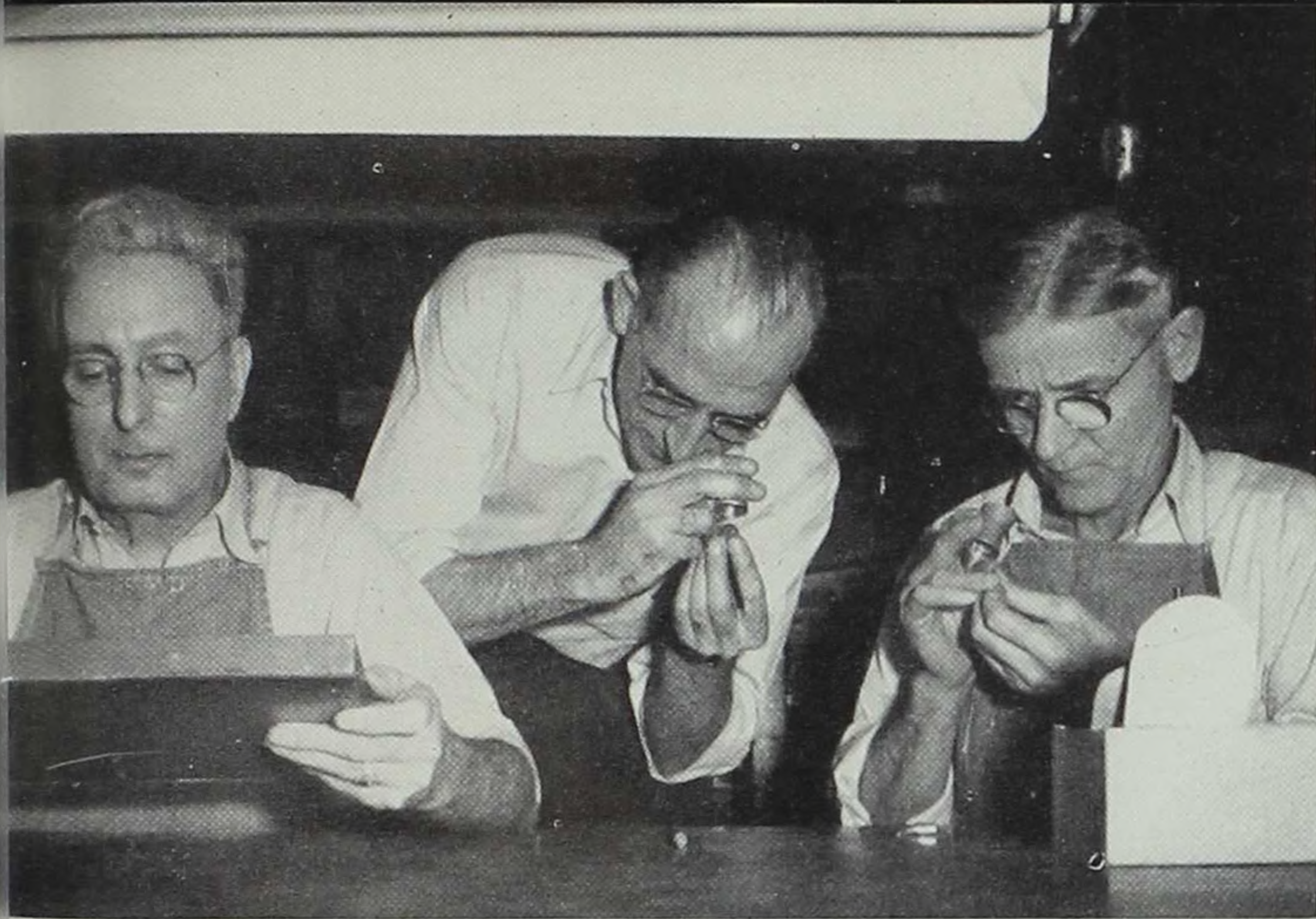


MEREDITH PUBLISHING COMPANY: Des Moines

In 1902 Edwin T. Meredith began publishing a new magazine, *Successful Farming*. This was the start of the Meredith Publishing Company of Des Moines which, in 1912, moved into a new plant, containing 55,000 square feet. From this nucleus the company has steadily expanded until now its plant contains almost 420,000 square feet with a new east wing, scheduled for completion in 1958, to add even more space to what is the largest publishing plant under one roof. Employment has risen from 8 to the present figure of 2,200. *Successful Farming* has a circulation of 1,300,000, while Meredith's other magazine, *Better Homes and Gardens*, has a circulation of over 4,000,000. From this source and from the sales of its popular home-help books and its radio and television stations, Meredith had a revenue of \$42,754,000 in 1955. F. O. Bohen is the president, E. T. Meredith, Jr., is vice president.

ABOVE: covers of Meredith magazines. RIGHT: E. T. Meredith, Sr. BELOW: Des Moines plant.





W. A. SHEAFFER PEN COMPANY: Fort Madison

Certainly one of Iowa's best known companies, Sheaffer was founded in 1913 by the Fort Madison jeweler, W. A. Sheaffer, although he had sold his first pen the year before. The first year the company had 7 employees and net sales of \$85,000. In 1955 it had 1,800 employees and sales totaling \$27,073,000. Wages and salaries and profit sharing payments to employees for the year were \$9,354,225. Since the 1920's Sheaffer has been, with few exceptions, the largest manufacturer of pens and mechanical pencils with many "firsts" to its credit. It has three plants in Fort Madison and one in Mount Pleasant, plus foreign branches in Canada and Australia. Its stockholders number 2,952, residing in 46 states, Canada, and several United States possessions. Craig R. Sheaffer is the chairman of the board, W. A. Sheaffer II is president.

ABOVE: inspecting gold processing work. LEFT (top): W. A. Sheaffer; (bottom): Craig R. Sheaffer. BELOW: main plant, Fort Madison.

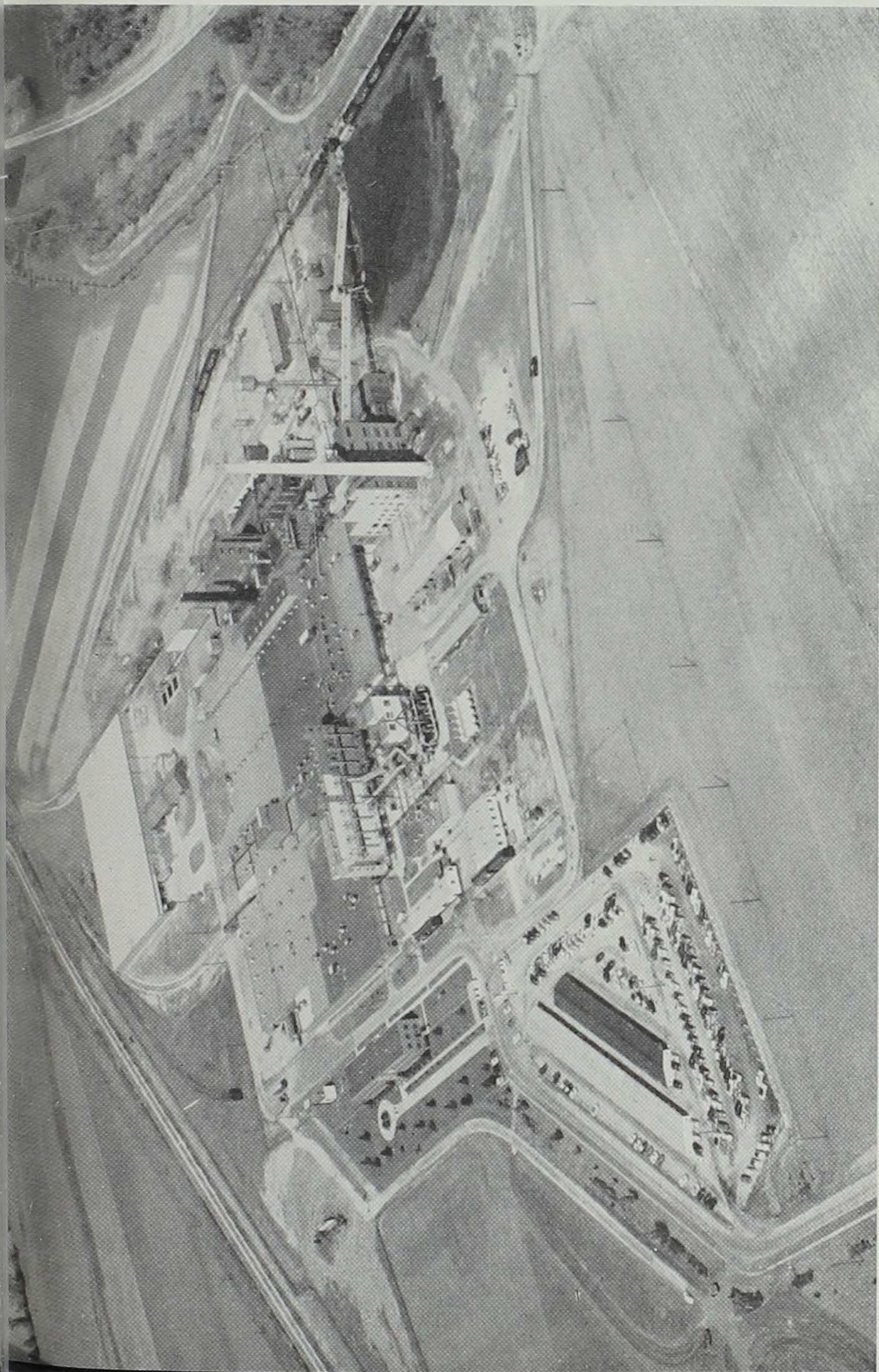




THE HINSON MANUFACTURING COMPANY: Waterloo

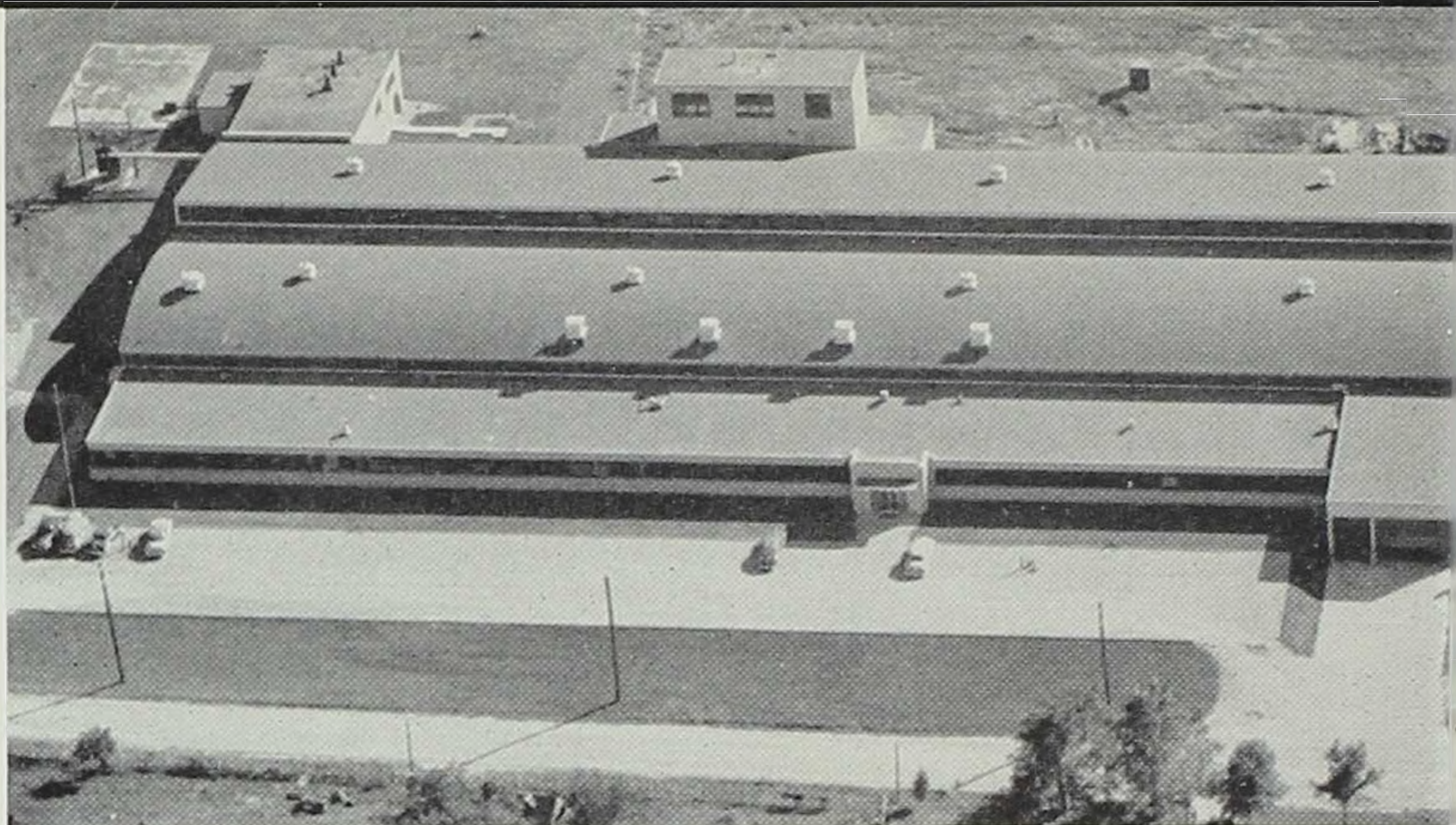
Since its founding in 1923 by Clyde Hinson, the Hinson Company has grown from a \$28,000 to a million-dollar corporation. Where it had only 20 employees in 1923, a monthly payroll of \$2,000, and production valued at \$150,000, in its peak year recently it employed 650 workers, had a monthly payroll of \$130,000, and an annual production worth \$4,700,000. The Waterloo firm makes over a hundred textile and leather products ranging from huge raincoats for Air Force bombers to small leather cases for cameras. Auto seat covers, golf bags, luggage, work clothes, and auto insect screens are some of Hinson's other products. The firm has 1,400 distributors and 30,000 dealers. Clyde Hinson is the president.

ABOVE: plant interior.



E. I. du PONT de NEMOURS AND COMPANY, INC.: Wilmington, Del.

Among the oldest and most famous of all American industrial firms is Du Pont, established in 1802. Among its newer plants is the one above, built in 1940 on a 220-acre tract of land outside the corporate limits of Clinton. The Clinton plant manufactures cellophane. It employs 1,200 persons and provides an annual payroll of about \$6,000,000. Du Pont declares that every job in the company represents an investment of \$24,200. The company also has a smaller plant at Fort Madison which manufactures paint.



Courtesy Cedar Rapids Chamber of Commerce

W. R. GRACE AND COMPANY: New York

Among the many and diversified operations of Grace is the manufacture of plastic bags by one of its divisions, the Cryovac Company. Until recently Cryovac was part of Dewey & Almy Chemical Company, another Grace subsidiary. In 1951 Cryovac's Cedar Rapids plant began operations. The \$2,500,000 plant employed 630 workers in 1955, as compared with 100 when it first opened. The value of the annual production at the plant was over \$10,000,000. Cryovac bags have many essential applications in the packaging of frozen and refrigerated foods, especially meat, poultry, and cheese.

ABOVE: Cedar Rapids plant. BELOW: how Cryovac is used.



VACUUMIZE

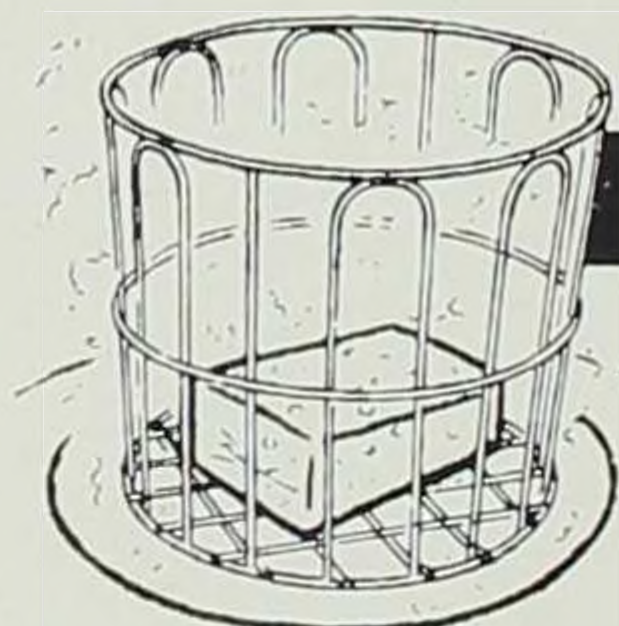
In the CRYOVAC process, the cheese is placed in a transparent CRY•O•RAP bag, which is then vacuumized, removing the oxygen.

SEAL

The bag is sealed with an aluminum clip —

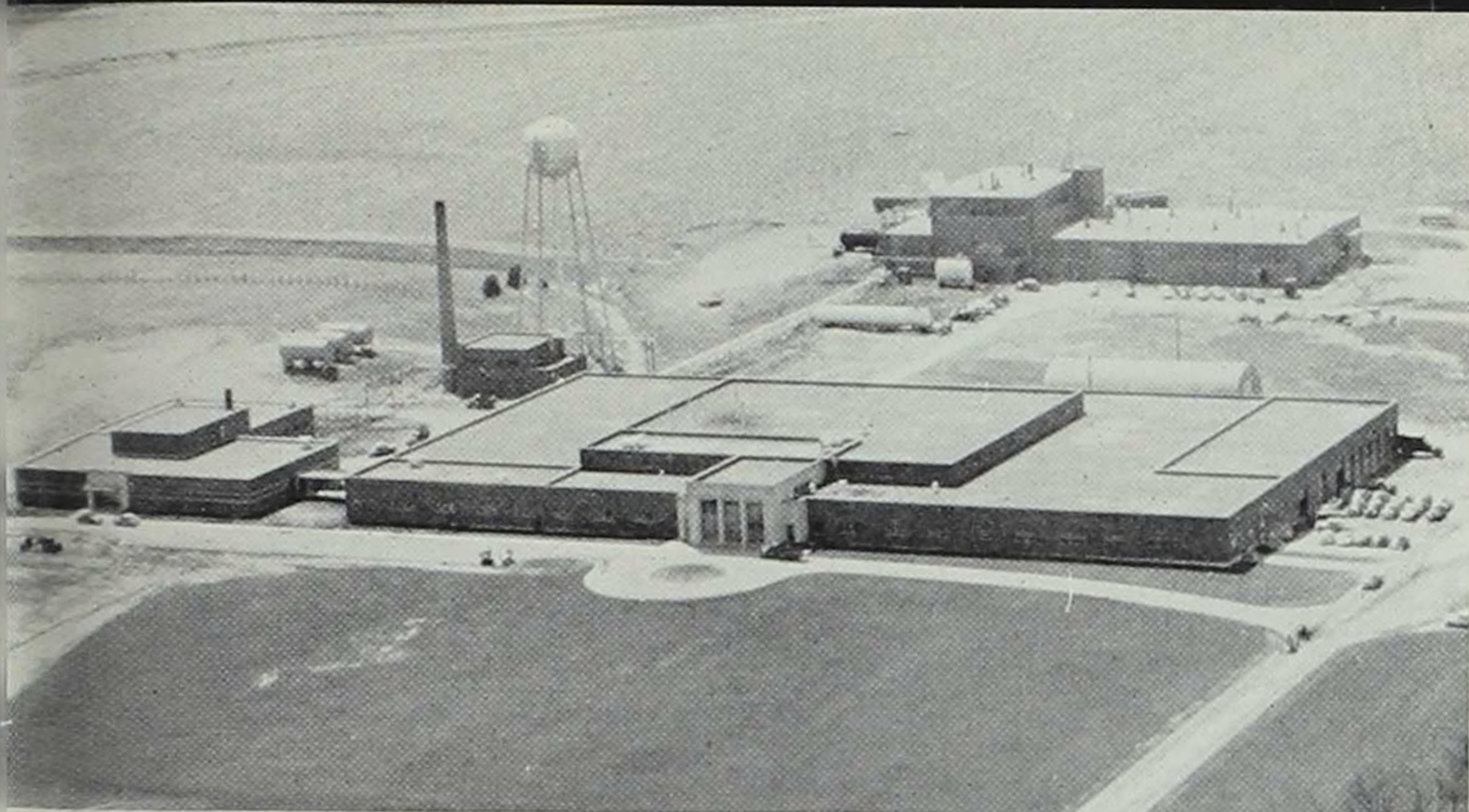


SHRINK



— and then actually *shrunk* by hot-water action to the contours of the cheese. It fits like skin, eliminating air pockets where mold spoilage could start.

The momentary hot-water dip brings a small amount of butterfat to the surface. As the package cools, a tight bond is formed between cheese and CRY•O•RAP bag. The highly impermeable film keeps air out — moisture in.

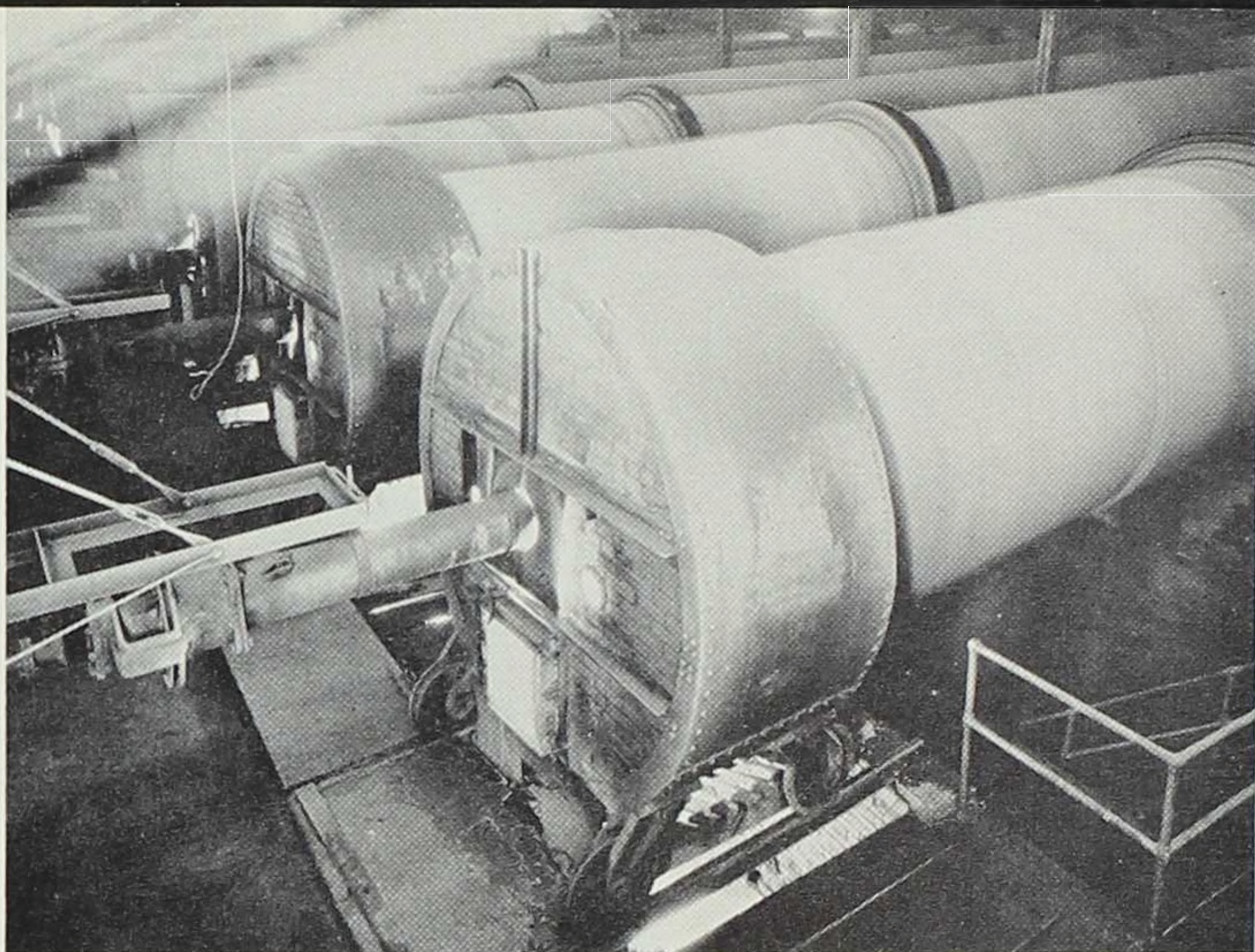


DR. SALSBURY'S LABORATORIES: Charles City

One of Iowa's more unusual industries is the pharmaceutical company founded at Charles City in 1923 by Dr. Joseph E. Salsbury. A veterinarian who specialized in poultry diseases, Dr. Salsbury decided to produce the low-cost medicines needed by poultry raisers to combat the diseases which cut so deeply into their profits. Today several modern plants plus a 55-acre research farm in and around Charles City are required to manufacture the company's poultry medicinals, biologicals, and growth stimulants for feeds. Some 450 workers are employed in these plants and the products they make are handled by 16,000 dealers in every state. Sales are also extensive abroad. Dr. Salsbury is the president with his son, Dr. John G. Salsbury, being vice president and general manager.

ABOVE: manufacturing plants. LEFT: Dr. J. E. Salsbury. BELOW: some of the company products.

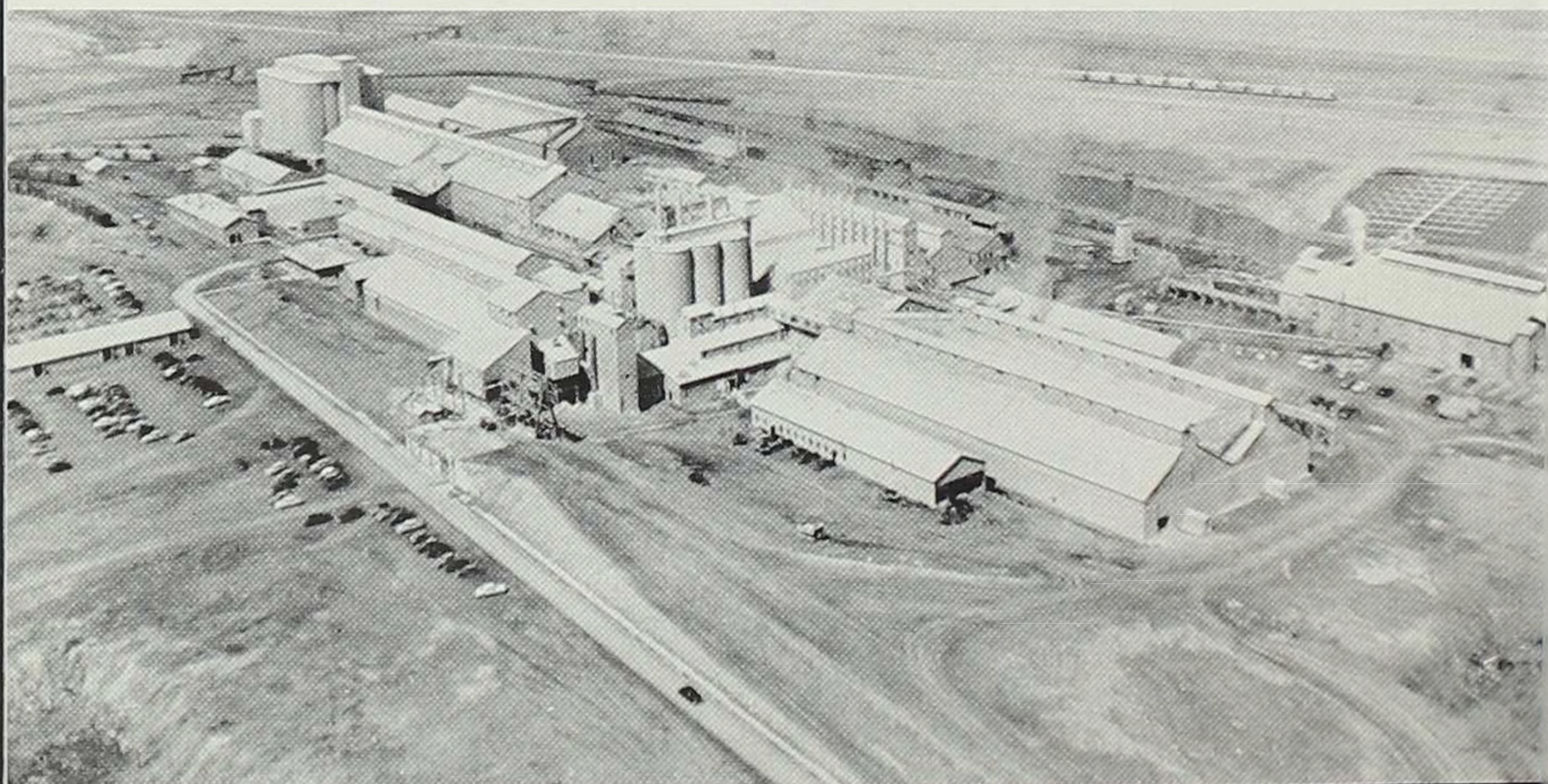




NORTHWESTERN STATES PORTLAND CEMENT COMPANY: Mason City

In 1906 W. F. Cowham, a Michigan cement promoter, built the Northwestern States Portland Cement plant at Mason City on a farm purchased from C. H. McNider. The latter, who took stock in the company as payment, assumed the management in 1911. Shortly after his death in 1928, his son, General Hanford MacNider, acquired control of the company which he has headed ever since. In 1908 the plant had a capacity of 3,500 barrels a day. This has been increased to 6,000, and the company is spending over \$3,000,000 on further expansion. Upon completion of this work its annual capacity will be 3,000,000 barrels of cement in contrast with the previous capacity of 2,200,000. In 1955 the plant employed 500 workers with a monthly payroll of \$162,581. The value of the year's product was \$6,935,913.

ABOVE: kiln room. RIGHT (left): C. H. McNider; (right): Hanford MacNider. BELOW: plant.



IOWA MANUFACTURING STATISTICS*

Totals for all manufactures: 1899-1953

<i>Year</i>	<i>Establish- ments</i>	<i>Employees</i>	<i>Salaries & wages</i>	<i>Value added by manufactures</i>
1899.....	4,828	49,579	\$ 22,253,000	\$ 47,092,000
1909.....	5,528	73,037	43,514,000	88,531,000
1919.....	5,104	98,470	122,168,000	221,757,000
1929.....	3,317	97,414	137,243,000	323,820,000
1939.....	2,541	88,054	114,087,000	243,390,000
1947.....	2,965	140,425	372,339,000	671,100,000
1953.....		166,274	642,766,000	1,179,513,000

Totals by product: 1947-1953

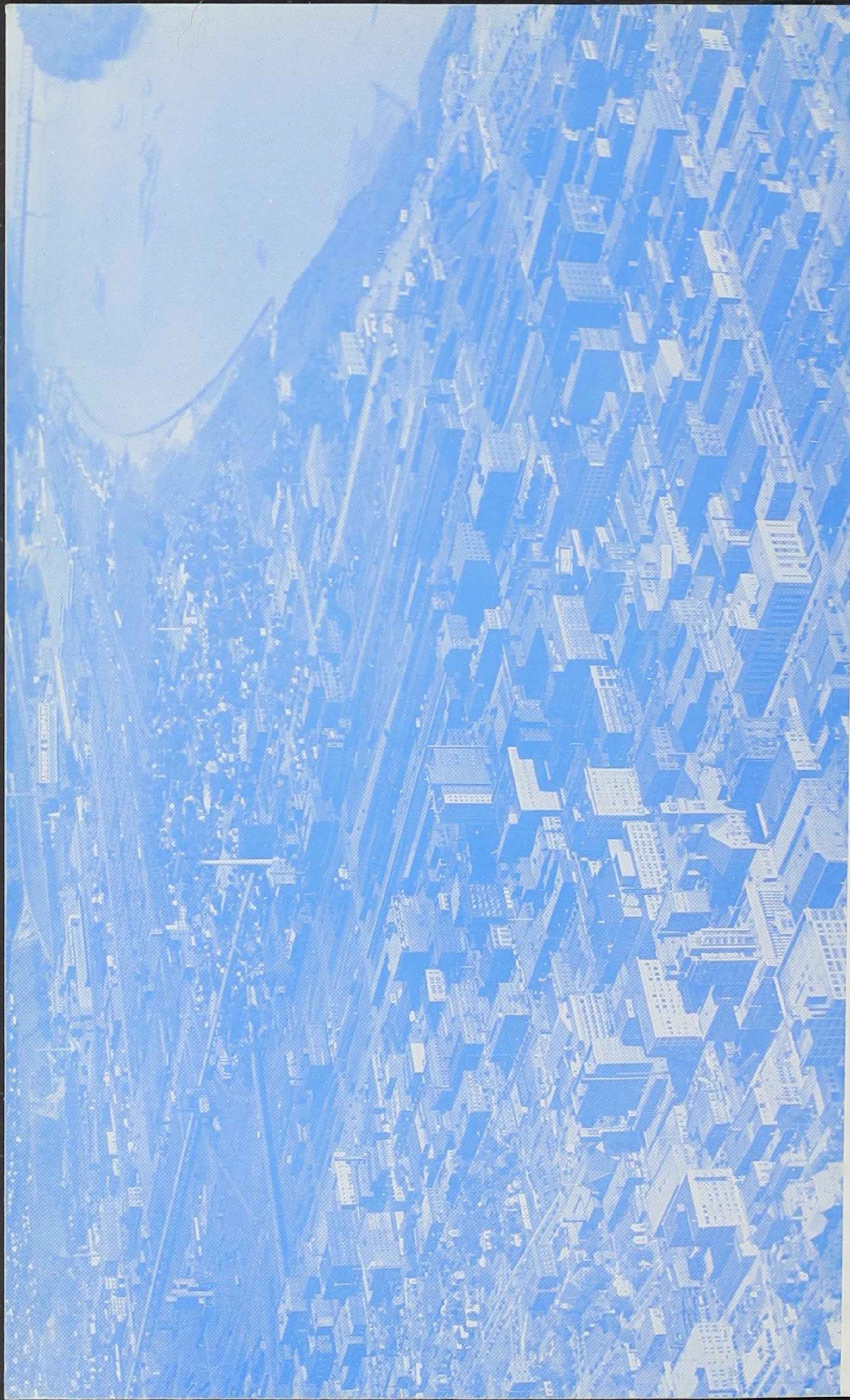
<i>Products</i>	<i>1947</i>		<i>1953</i>		
	<i>Employees</i>	<i>Value added</i>	<i>Employees</i>	<i>Salaries & wages</i>	<i>Value added</i>
Food	46,433	\$228,710,000	48,374	\$185,387,000	\$353,913,000
Apparel	4,466	12,198,000	3,706 ¹	7,996,000 ¹	12,295,000 ¹
Printing and pub....	9,138	55,385,000	9,852 ¹	36,038,000 ¹	77,106,000 ¹
Chemical	5,227	50,977,000	5,869 ¹	23,090,000 ¹	65,602,000 ¹
Rubber	2,317	12,976,000	3,889	15,746,000	33,204,000
Stone, clay, and glass	4,613	27,083,000	5,601	20,762,000	51,569,000
Primary metal	3,206	12,939,000	5,628	22,336,000	40,060,000
Fab. metal	5,271	27,649,000	7,686	29,805,000	51,701,000
Machinery	34,536	143,421,000	37,237	158,962,000	281,424,000
(ex. electric)					
Elect. machinery	5,127	17,795,000	9,139	31,070,000	49,413,000
Transportation					
equipment	2,861	9,868,000	4,567	18,952,000	25,882,000
Instruments	860	3,474,000	1,895 ¹	8,788,000 ¹	13,494,000 ¹
Miscellaneous	6,536	25,898,000	12,562	45,456,000	57,528,000

¹ Figures from 1952 census.

Ten leading industrial counties: 1953

<i>County</i>	<i>Employees</i>	<i>Pay rolls</i>
Polk	23,515	\$90,408,000
Linn	19,221	74,180,000
Black Hawk	17,582	74,020,000
Scott	14,306	57,224,000
Dubuque	11,739	44,400,000
Des Moines	11,025	36,820,000
Woodbury	10,098	36,476,000
Wapello	7,227	30,160,000
Lee	6,651	24,320,000
Jasper	5,860	24,108,000

*Source: United States Census of Manufactures.



Sioux City business district, stockyards in background

Courtesy Sioux City Chamber of Commerce