

WESTERN ELECTRIC · HAWTHORNE

Its Life And People

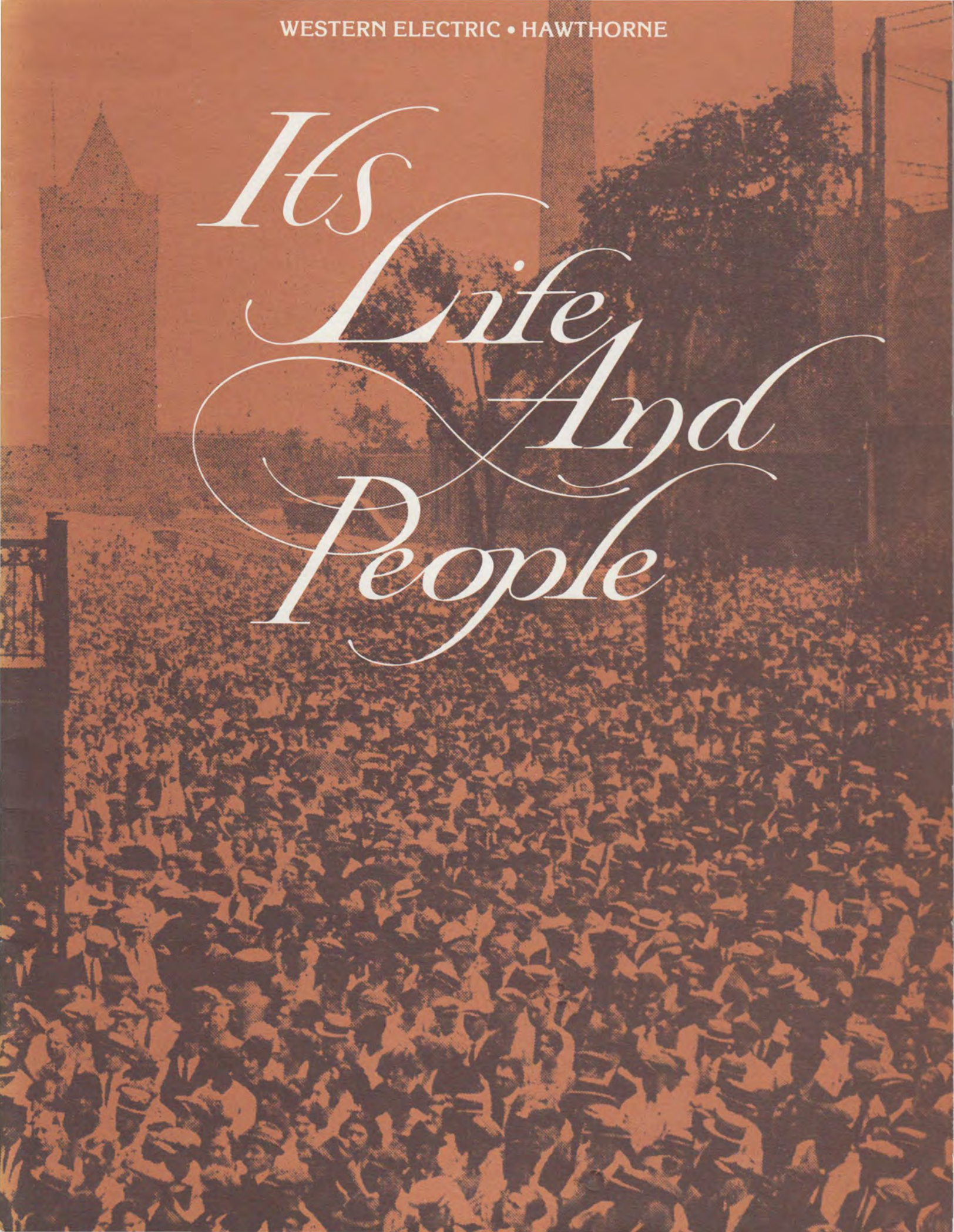
Hawthorneans, always proud of the products they make, showed their pride unabashedly one balmy summer day in 1922. This was the first demonstration of Western's new public address system. It was good-bye megaphone, hello microphone, and the beginning of a new era in communications to a massed, live audience.

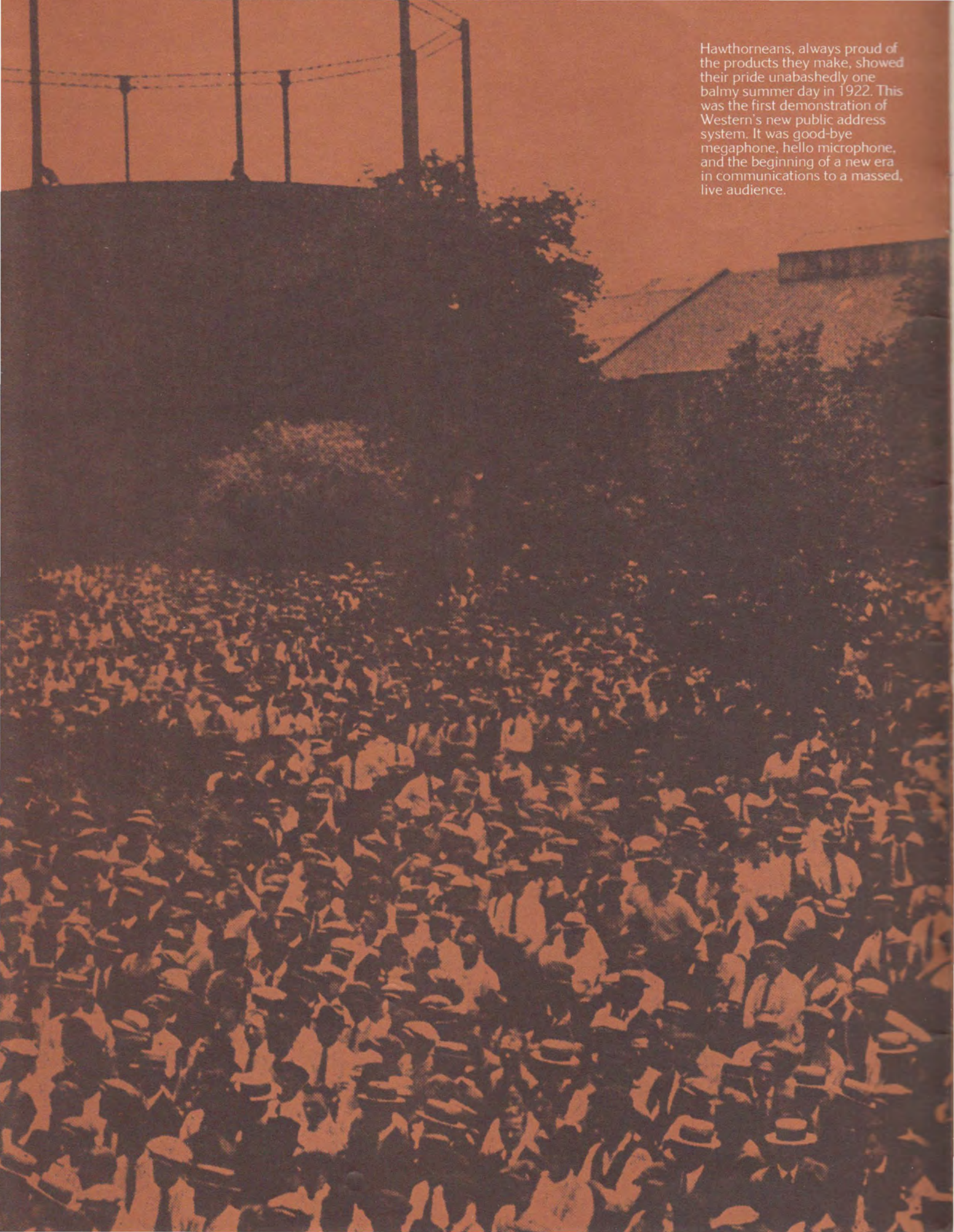


May, 1978

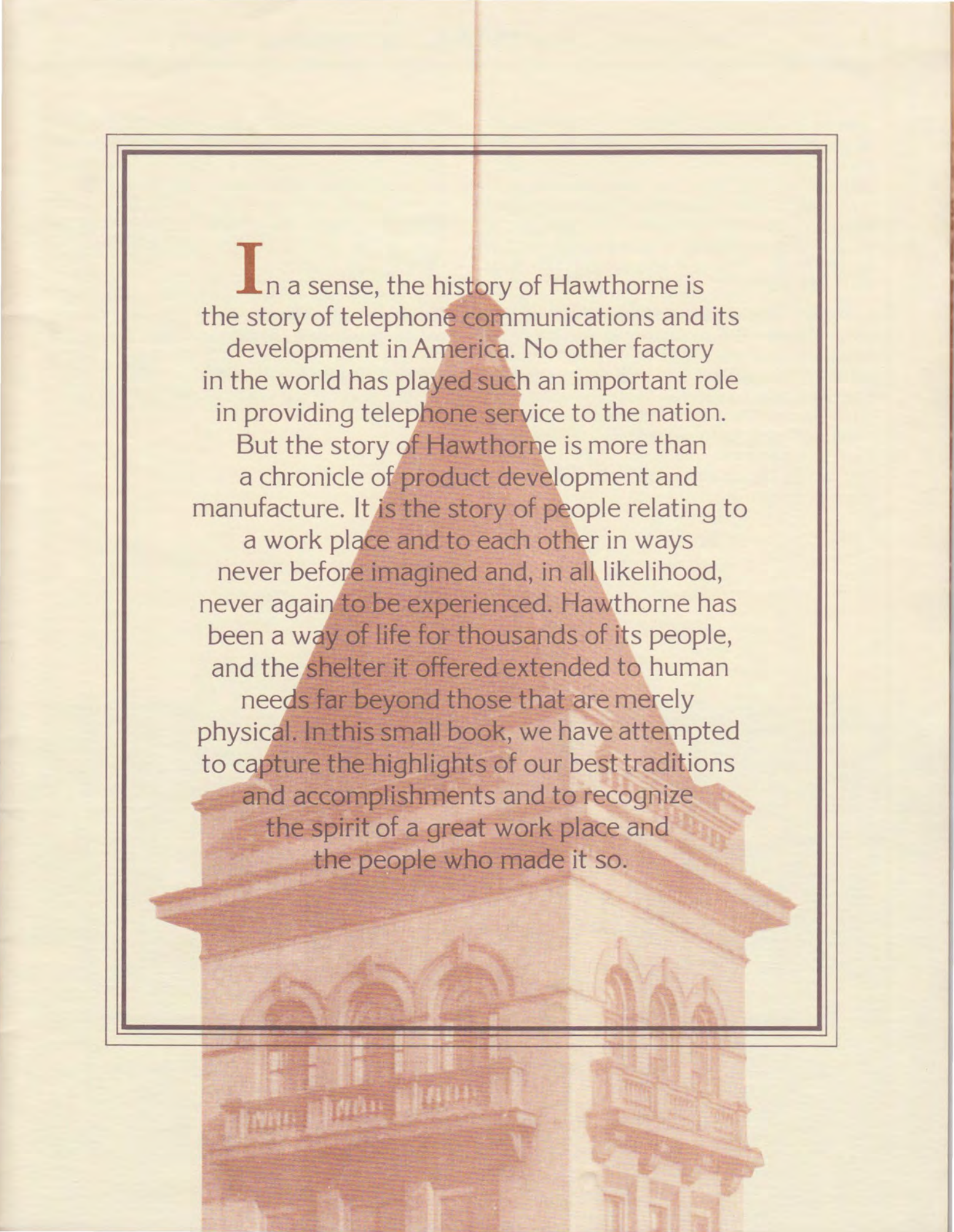
WESTERN ELECTRIC • HAWTHORNE

*Its
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And
People*



A large crowd of men, many wearing hats, is gathered outdoors for a public address demonstration. The scene is set in a field or open area, with a building and utility poles visible in the background. The image has a sepia or brownish tint, suggesting it is a historical photograph.

Hawthorneans, always proud of the products they make, showed their pride unabashedly one balmy summer day in 1922. This was the first demonstration of Western's new public address system. It was good-bye megaphone, hello microphone, and the beginning of a new era in communications to a massed, live audience.



In a sense, the history of Hawthorne is the story of telephone communications and its development in America. No other factory in the world has played such an important role in providing telephone service to the nation. But the story of Hawthorne is more than a chronicle of product development and manufacture. It is the story of people relating to a work place and to each other in ways never before imagined and, in all likelihood, never again to be experienced. Hawthorne has been a way of life for thousands of its people, and the shelter it offered extended to human needs far beyond those that are merely physical. In this small book, we have attempted to capture the highlights of our best traditions and accomplishments and to recognize the spirit of a great work place and the people who made it so.

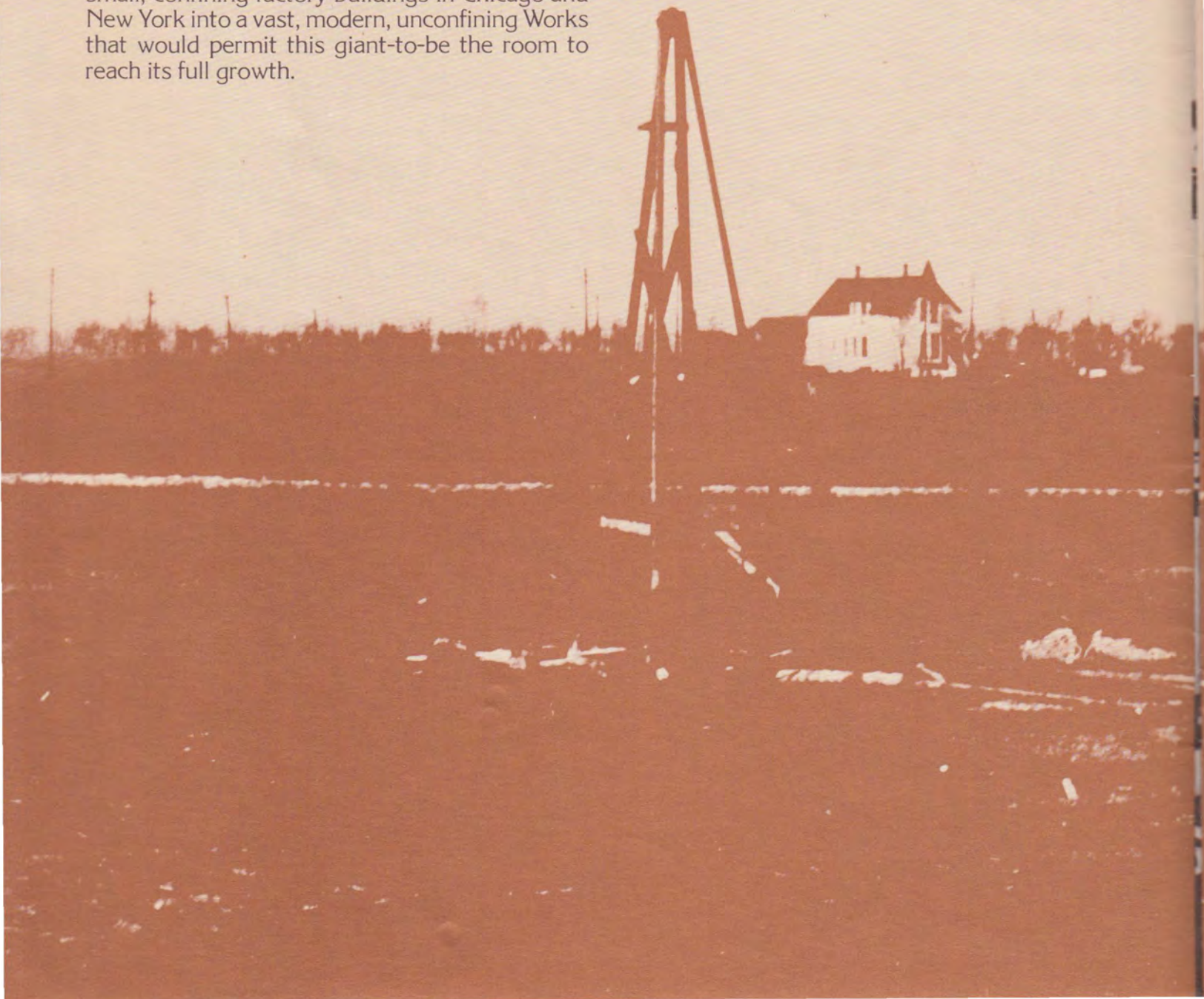
HAWTHORNE...MAKER OF TELEPHONE EQUIPMENT

In 1903, the year construction began for the Hawthorne Works of Western Electric, two interesting points stand out—almost in direct contrast with each other. First, if you wanted to, you could hunt prairie chickens on the fertile land that was still untouched by the construction crews. Second, in 1903 Western Electric was already 34 years old as a company. It was the age-old story: Progress. You can't stop it.

Western Electric, the company that had been selected by the Bell System as its primary manufacturer of telephone equipment, typified America in those great, rugged days. WE was big and getting bigger day by day, filled with skilled workers. What else was there to do but break away from its small, confining factory buildings in Chicago and New York into a vast, modern, unconfining Works that would permit this giant-to-be the room to reach its full growth.

And break away it did. On September 14, 1902, Enos Barton, Western's third president, was authorized to purchase 113 acres of land in the area known as "Hawthorne." An additional 179 acres of land was purchased on March 14, 1903, and a short time later ground was broken for the first of the dozens of structures planned: the famed water tower.

Yes, the prairie chicken lost to the steam shovel. It was a small price to pay for the progress this nation demanded. Chicago, snapped back from the disastrous Chicago Fire, was typical of the growth of communications in this nation. In 1903, the groundbreaking year, Chicago made 750,000



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phone calls per day, an average of 18 calls per telephone. Chicago's need for communications was like America's: Urgent, and ever growing. Western Electric's mandate was clear: Satisfy that need!

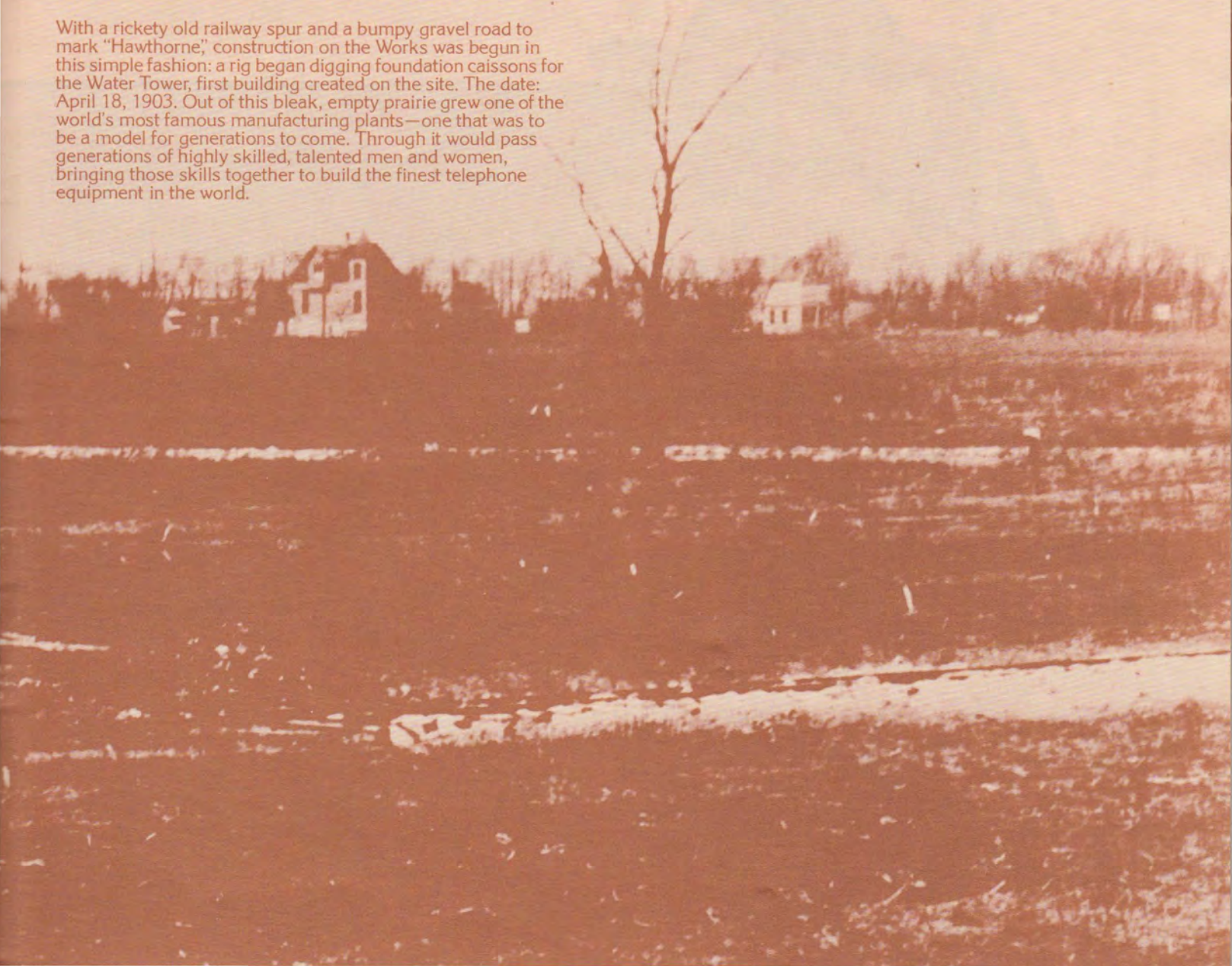
Buildings quickly grew out of the Hawthorne prairie. First the water tower. Then the power plant. For even in those early days, planners knew that such a gigantic Works should be self-sufficient in supplying its energy. Following quickly came the cable plant, machine shop, foundry, blacksmith shop and—finally, office buildings.

Meanwhile, WE employees continued their skilled work at the old factories on Clinton Street in Chicago and at 463 West Street in New York City.

Two years later, a plant that was a marvel for its age gleamed ready to accept the workers and management teams that moved west to occupy its benches, offices and foundries. An amazing 36 building sections, totaling 600,000 square feet, had been built in two years. It was beyond doubt the most modern industrial complex of its day.

It had wide concrete walkways, wide roadways, bordered by grass and flowers. Hundreds of workers were transferred to it from New York and Chicago. One New Yorker, accustomed to that city's cramped working quarters, wrote back home describing his new working conditions. He said that Hawthorne looked "more like a park than anything else."

With a rickety old railway spur and a bumpy gravel road to mark "Hawthorne," construction on the Works was begun in this simple fashion: a rig began digging foundation caissons for the Water Tower, first building created on the site. The date: April 18, 1903. Out of this bleak, empty prairie grew one of the world's most famous manufacturing plants—one that was to be a model for generations to come. Through it would pass generations of highly skilled, talented men and women, bringing those skills together to build the finest telephone equipment in the world.



“ A PLANT THAT WAS A MARVEL FOR ITS AGE ”

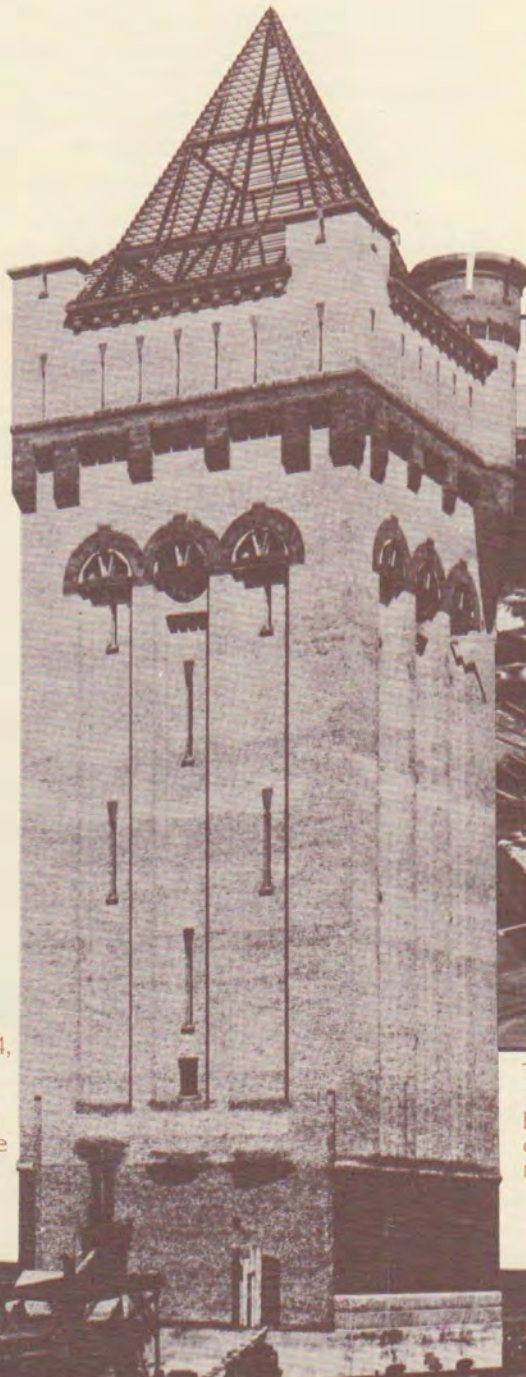
From its very beginnings to this day, the Hawthorne Works has manufactured major and minor parts for the never-ending needs of the Bell System. But there are many who forget that in 1905—and continuing until 1926—Western Electric was a major manufacturer of large and small electric appliances and other apparatus for the home. From washing machines and hair dryers to

radiators and electric heating pads, WE products were used daily by millions of people throughout the world. Yes, WE even had manufacturing plants in England, Germany, France, Belgium and Japan. (All these were sold to ITT in 1925).

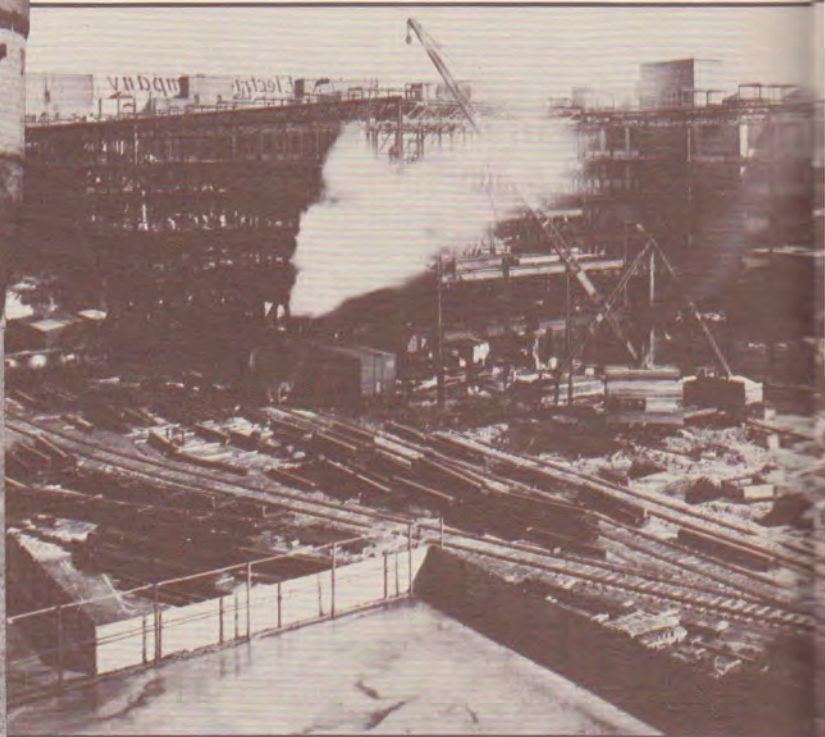
But from its birth to this moment in time, there are thousands of Americans for whom “The Hawthorne Works” was Western Electric. It was the largest, the most productive, the most forward-thinking plant in the world.

Legend has it that in those first years you needed a letter of recommendation from an employee to even be considered for employment at Hawthorne! People wanted to work here—and why not! This plant typified the future.

And it kept growing in size! By 1915, someone said that it would take nine hours of steady walk-



By March 23, 1904, the Water Tower had grown out of the prairie... a tall symbol of promise against the open sky.



The nation's need for telephones grew to such proportions in 1918 that a huge complex of telephone apparatus shops was built. It was an age of steam power, attested to by mighty blasts of steam from the giant cranes dotting the site. The sound must have been awesome.



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ing to pass once through each floor of every building. There was 2,500,000 square feet of floor space, almost 60 acres!

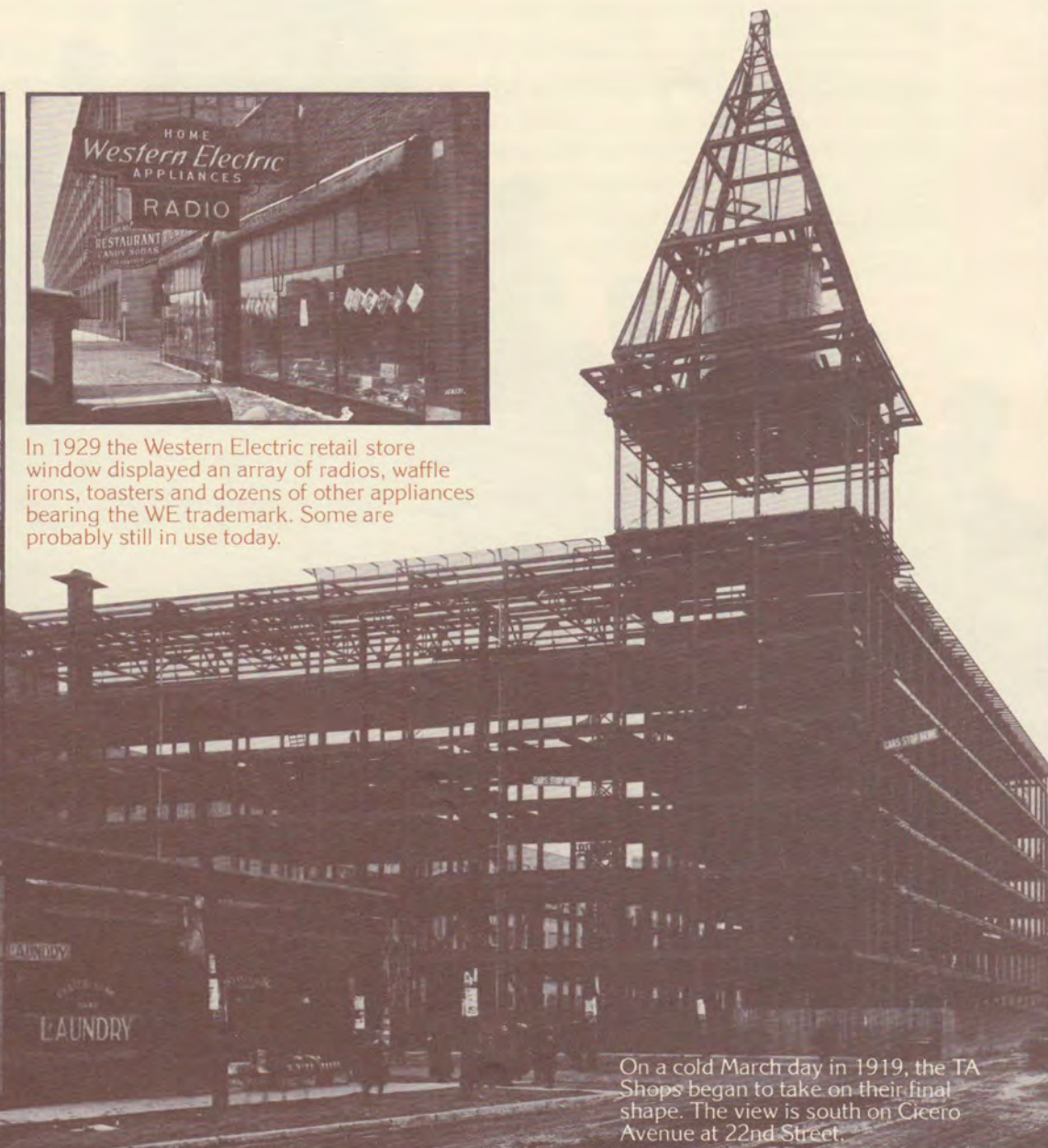
In addition, there were baseball diamonds, tennis courts and a cinder running track—for from the first, Hawthorne's designers incorporated recreation and leisure-time into their plans.

Imagine Chicago in those years between 1905 and the early Depression years. There was no mass personal transportation such as we know it today. Most workers lived within a five-cent "el" or streetcar ride of the Works—or within walking distance. With no radio (in the early days) or television—with movies still a special occasion event, with family ties quite strong, Hawthorne was quite literally the "hub of life" for many employees and their families.

When entertainment was desired, people often came to the Works. They came to participate in baseball and track events—or to cheer on players from the grandstands. They came to play cards, dance, play chess. In 1911, a Club was formed—called the Men's Club. It was started to promote smokers and have exhibition wrestling matches. Encouraged by its first Works Manager, Henry Albright, this club rapidly grew in numbers and activities, until pressure from the women caused it to become co-educational, and the name was changed in 1914 to the Hawthorne Club. It is still one of the Works' strongest internal forces.



In 1929 the Western Electric retail store window displayed an array of radios, waffle irons, toasters and dozens of other appliances bearing the WE trademark. Some are probably still in use today.



On a cold March day in 1919, the TA Shops began to take on their final shape. The view is south on Cicero Avenue at 22nd Street.

“...ROMANCES OFTEN BEGAN AT WESTERN ELECTRIC”

In 1911, the Men's Club featured dancing classes (with music supplied by some talented employees who had organized a dance band). There were lectures by visiting authorities on dozens of topics; evening classes in mathematics, electricity and typewriting; commercial-league baseball; tennis; soccer; tug-of-war; exhibition chess and chess classes; billiards; skating; and picnics.

Picnics. They really knew how to have them in those days, with real dishes, glasses, silverware and fine country meals. And they dressed up for them, with starched collars, neckties, long dresses and pretty shoes. Entire families showed up to enjoy those Sunday WE picnics. Those families often resulted from romances begun at the Works. Early plant newspapers are filled with lists of en-

THE MEN... In the days before World War I, these men built giant electric generators in the Works' power shops. Their pride and intensity shine through this 1909 photograph.



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gagements and weddings between “Mary N. of the relay assembly shop and John W. of the cable plant.” It was commonplace to see soccer—and baseball teams where father pitched and son played third base—and possibly grandson played outfield!

One of the largest picnics in those early years was planned for Saturday, July 24, 1915. Over seven thousand people—employees and their families—were to take five large excursion steamers on a four-hour cruise across Lake Michigan to a picnic grove near Michigan City, Indiana. One of the steamers, the Eastland, carried over 2,000 persons. At 7:31 a.m., as many WE employees stood at the dockside railings, it listed and quickly turned over. The Eastland carried over 30 tons of lifesaving equipment above its waterline. Combined with the great weight of so many passengers, it capsized in the Chicago River.

Entire families were wiped out in seconds. Over 400 employees died, along with 400 of their children, wives, fathers and mothers who went along as guests on that ill-fated day.

Incredible efforts were made by WE and its people to assist the surviving families. Special teams of relief workers traveled to every family requiring aid. Some survivors came right to the Works for assistance, and there were emergency offices throughout the city, ready to help. The Company paid all funeral expenses, if the family requested it.

By Thursday following the disaster, a permanent relief organization had been established. Employees with more than five years of service who died in the disaster were eligible for regular Company death benefits, and their families were provided for. But many of the victims had less than five years of service. Their survivors were given permanent financial assistance by the Company as well. Not a single home was lost by a family as a result of the Eastland tragedy. The Company extended and even cancelled mortgage payments of survivors' houses.

In the months and years that followed, Western Electric saw to it that the widows of the men who died were given jobs so that they could support their families. If the widow was unable to work, the Company hired her children when they were old enough to be employed.

THE WOMEN...Dresses and “middy” blouses were the “in” thing for women who worked in the early Cable Plant in October, 1905. Note the up-swept hairdos, both a popular style of the period and a practical fashion for the working girl.





The Roaring Twenties ushered in the Age of the Flapper. This girl was featured in the Hawthorne Follies of 1921, an employee-produced spoof with comedy, singing, dancing and... what else? ...Flappers!



In March, 1925, employees made good use of the well-stocked Works Library, where evening classes were held on a variety of subjects.



By 1929, the Hawthorne Follies was bold enough to boast these bathing beauties in a lively song-and-dance number.



By 1929, Albright Gym was completed. Among its varied activities: The Girls Gun Club.



On a sunny June lunch hour in 1921, what better way was there to spend a lunch hour than to listen to the The Western Electric Concert Band! Musical talent has always been high among Hawthorne people. And now, The Blue Danube, if you please, Maestro!

HAWTHORNE WAS THE 'HUB OF LIFE' FOR MANY EMPLOYEES AND THEIR FAMILIES

By 1915, co-ed activities of the Hawthorne Club extended to having a ballroom dancing class in the Company restaurant. Styles featured the Fox Trot, Tow-Step and the Black Bottom. Participation was very high.



The pose is classic...it could be any year you choose. His arms and legs raised, this 1921 pole-vaulter seems to float over the bar. Countless trophies attest to the incredible prowess of Hawthorne people in every sport ranging from track and field to baseball, swimming and football.



HELLO CHARLEY—A TRADITION UNBROKEN

THE GREAT WAR OF 1914-18

The great Eastland disaster came when the European continent was facing its own massive disaster: The Great War. Two years later, in 1917, America was in it as well—to save the world for democracy, we said.

Hawthorne was in it from the start—with communications gear a prime necessity. Hundreds of its men—and its women, too—left to join the Army Signal Corps. By 1917, 25,000 employees of the Bell System were in uniform, with more than half serving overseas. Of these, thousands never returned. Bell's women operators staffed 273 telephone exchanges in France.

Hawthorne met the challenge by turning out tons of gear for the Signal Corps. Over 40 years had elapsed since the invention of the telephone by Alexander Graham Bell, and already it was a vital element in our victory in Europe.

But the huge growth in number of employees during the Great War was nothing to the growth following the conflict. America was booming and had suffered from lack of communications equipment as a result of the conflict. Now Hawthorne people had to make up for lost time.

The Bell System was now switching from operator-assisted calls to dial, and Hawthorne was the source for Panel dial switching gear—the mainstay in large cities until the advent of crossbar switching in 1936. Along with Panel, Hawthorne was—and still is—a major manufacturer of famed, reliable Step-by-Step switching, used in many small towns and cities to this day to serve up to 10,000 lines.

Left: Once upon a time, the Hawthorne Works produced all the telephones used by the Bell System in America. In 1919 this young woman was being trained to put finishing touches on the cords that connected telephone sets to ringer boxes.

Center: In 1913, Hawthorne's Foundry bustled as molten steel poured into molds, forming hundreds of metal parts for phones and switching frames. Now, a parking lot marks its location.

Right: America needed more and more switchboards. Hundreds of Hawthorne men stood in these shops, wiring those manual boards. The year was 1920.

In addition, the Works manufactured such mainstay gear as power supplies, cable, rod and wire, basic metals, wood parts and thousands of piece parts—to say nothing of the millions of telephones that Americans used.

It is history now. All those funny, beautiful, gangly-looking phones that brought America together. Once, almost all were made here at Hawthorne.

To concentrate on making those telephones and the means to connect them, Western Electric spun off its appliance manufacturing and distributing to Graybar Electric in 1926. By 1929, the number of employees at the Works was at an all-time high—34,170.

That was one year before Hello Charley started with the Works' first Hello Charley Girl—Jean O'Rourke—a tradition unbroken to this very day.

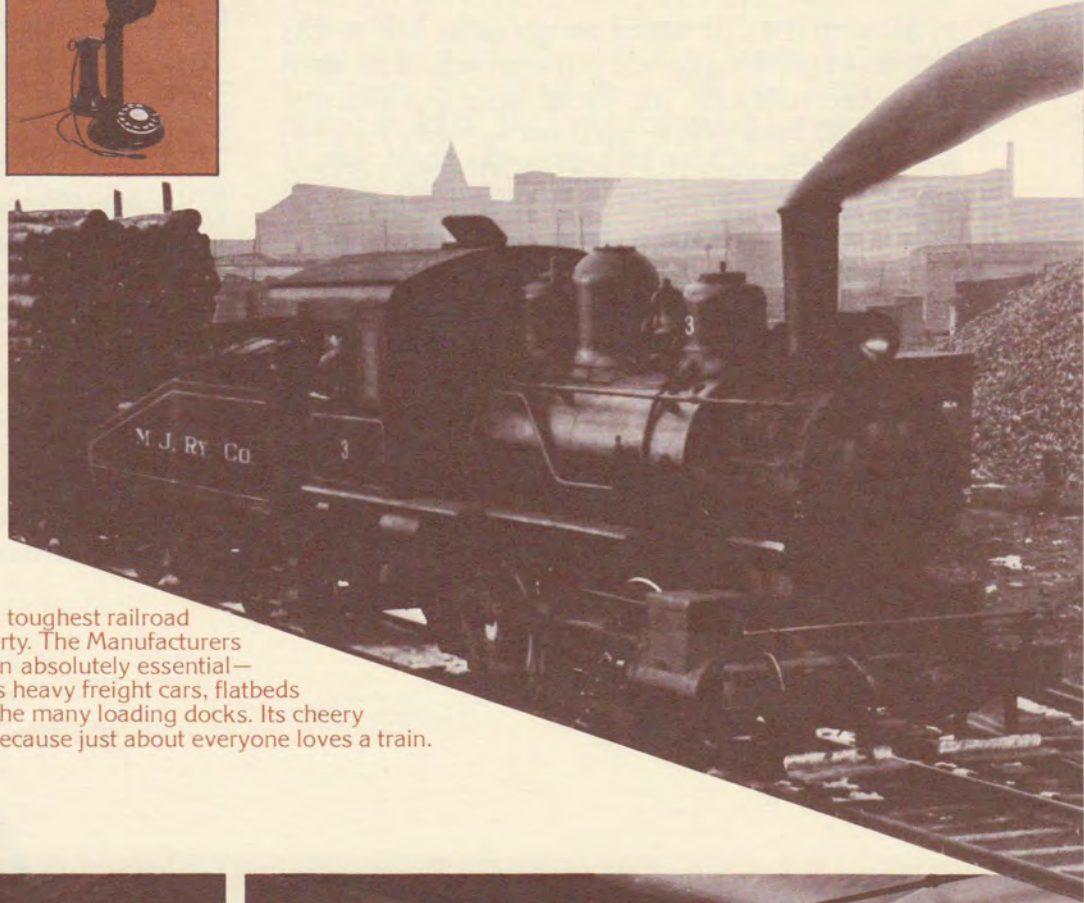
But some products had already been split away from Hawthorne by 1925, the year the Kearny Works was opened in New Jersey. Power and switchboard equipment went to Kearny, as new switching equipment began to be developed at Hawthorne.



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Hawthorne has always played a part in the romance of the telephone. These six phones typify the variety and time-span of Hawthorne's love-affair with the Bell Telephone.



The world's shortest, smallest, but perhaps toughest railroad exists to this very day on Hawthorne property. The Manufacturers Junction Railway, or "MJ Railway" has been absolutely essential—from the beginning of Hawthorne. It moves heavy freight cars, flatbeds and tank cars onto the grounds and up to the many loading docks. Its cheery engine bell brought smiles to employees, because just about everyone loves a train.



DEPRESSION AND WORLD WAR II

No question about it, the Great Depression hurt Western Electric. Many were laid off or cut back in assignments. It was a tough time, but it was also an interesting period in the growth of modern employee relations, for these were the years of the famed Hawthorne Studies. Actually running from 1924 through 1933, and with the joint efforts of men from Harvard University, it was determined that employees respond more to their feeling of teamwork than to other factors, such as hours worked, lighting or other working conditions. These famed studies have continued to have a profound impact on the thinking of management leaders throughout the world, and even today, at major universities, scholars are using the data from the Hawthorne Studies to learn more about the American worker.

Hawthorne, nearly self-contained and full of vigor, survived the Depression. Its employees could purchase nearly everything they needed from Company-run stores. Just two years prior to the 1929 Crash, Albright Gym was built. It became a hub for social and athletic activity. Even in the worst days of the early 30s, workers could forget their problems on the Gym's courts, tracks and equipment.

World War II brought Hawthorne to the peak of its employee numbers, more than 40,000, and to the limits of men's ability to meet a challenge. Working 'round the clock, a river of equipment for the military services was turned out. Radios by the thousands for planes, tanks and artillery were made here. Radar, ultra high frequency and microwave techniques were developed and manufactured here, as were flight trainers, submarine detectors, artillery and mine fuses, gun control



Elected first Hello Charley Girl by her fellow employees, Jean O'Rourke started a trend in 1930 that has become a tradition every year since. The "Hello Charley" song is long since forgotten, but each spring ushers in a new Hello Charley Girl.



From 1924 through 1933, the now-famous "Hawthorne Studies" took place, using these women who assembled relays. Working under widely varying conditions, these women's efforts have had a profound effect on management in plants from coast to coast. Even today, researchers at universities are analyzing the Hawthorne Studies.

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systems and a variety of telephone and teletype-writer apparatus. When the war ended, over 1,200 major defense projects had been completed at Hawthorne. And many hundreds of Hawthorne people had served in the armed forces, many never to return.

A giant reconstruction of the Works followed the war, to meet the incredible demand for phone service. War production equipment was quickly replaced with machine and assembly processes for making telephone equipment.

In 1936, during the Depression, Hawthorne had become the manufacturing plant for No. 1 Crossbar, the switching system for telephones in major cities with needs of up to several hundred thousand lines. Crossbar switching began to replace the older Panel switching that had been introduced in 1922. By 1947, following the war, Hawthorne began to manufacture No. 5 Crossbar, a system designed to serve suburban areas and small cities, needing from 10,000 to 50,000 lines.

In the twenty years following World War II, our nation had its largest surge of telephone demand, caused both by the restrictions that had been imposed during the war and the greater affluence in American society. Where it had been impossible to have a phone, due to wartime regulations, now everybody wanted one. Hawthorne people were called upon to meet this demand for phones and the associated switching gear that links phones together.



For many years Hawthorne ran its own Club Store and business always seemed brisk, as it was here in 1928 during a noon-hour break. Cosmetics, candy, tobacco and clothing led the list of fast-moving merchandise which sold at bargain prices because of the store's bulk-purchasing methods.

With the nation at war in 1942, thousands of women were recruited into jobs formerly held by men. This Hawthorne woman was typical of thousands of WE employees, giving their all to the war effort.

“...LEARNING NEW TECHNIQUES TO MEET NEW CHALLENGES...”

Ironically, with Crossbar switching systems becoming the nation's “standard” for large-city systems, Hawthorne's biggest output remained Step-by-Step, that ‘old reliable’ system. In 1958, all Step manufacture for WE was consolidated here. The Works then averaged thousands of units of Step equipment a year for many years—totaling millions upon millions of line and trunk connections for phone users in the nation. Step was then the most economical system for small phone offices, under 10,000 lines. Demand for it was very high in those days.

But the social life of the Works started changing after the war—reflecting the newer mores and folkways of American culture. Following the war, more and more workers owned their own automobiles and started moving to distant parts of the city, or to suburbs that were beginning to spring up farther and farther away from the Works. Television, movies and a new style of family living caught up with the athletic fields, clubs, and insular life of the “older” Works. Where Hawthorne once represented a “center” to employees' lifestyle, it now was seen basically as a place of employment. And there were beginning to be changes in the types of equipment being manufactured here, as well.

In the 1950's, Hawthorne saw Crossbar 5 switching equipment transferred to WE's newer plants in Omaha, Columbus and Oklahoma City.

But a new challenge came here in the form of the switching equipment that is rapidly sweeping the country: Electronic Switching, or ESS. The first ESS system in the world for commercial use was made here in 1963. It was a PBX unit for installation at Cape Canaveral. Later, in 1969, Hawthorne was selected as the primary manufacturing site for ESS #1 which was destined to replace all Crossbar #1 and Panel offices in the country.

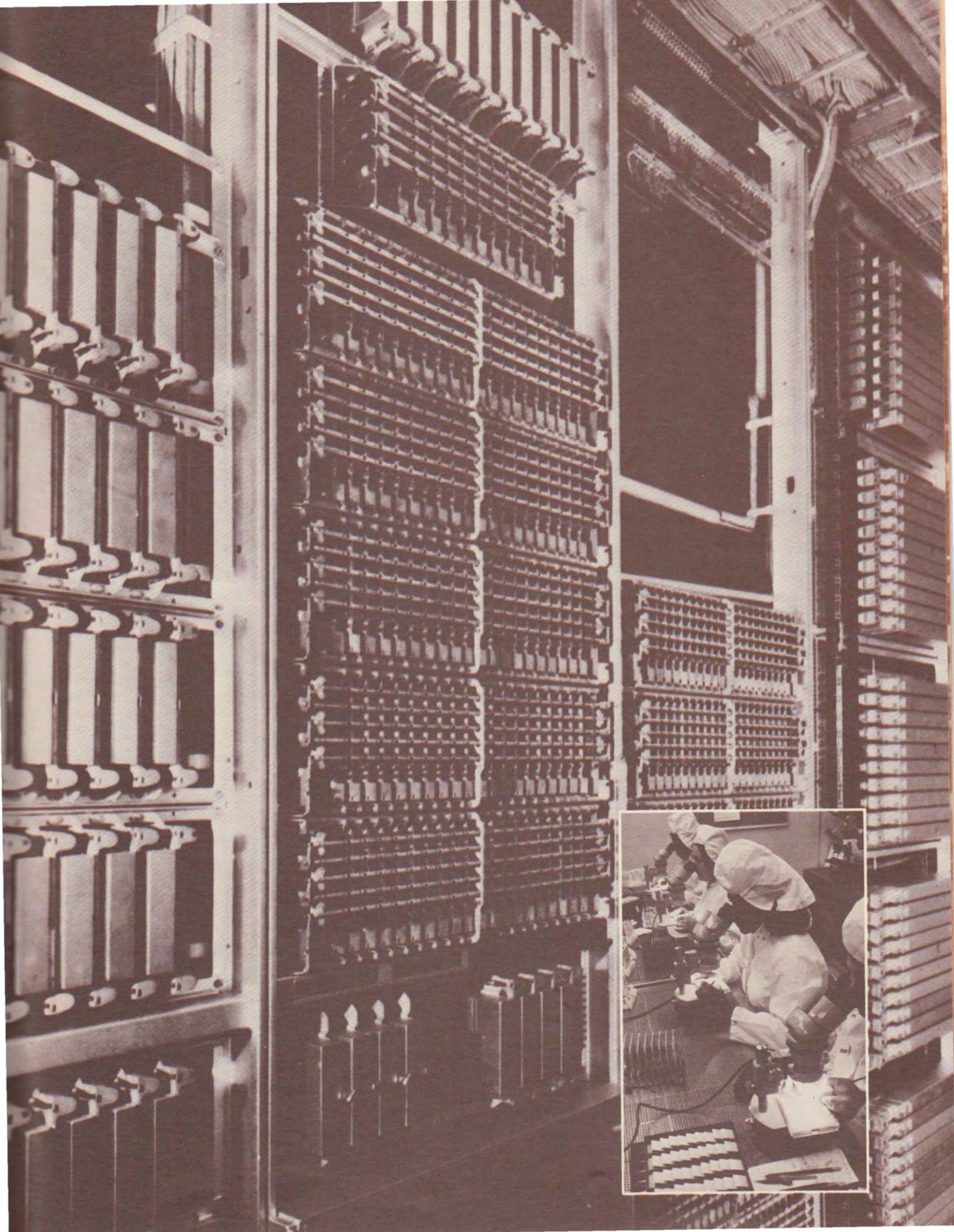
After two years of ESS production at Hawthorne, however, the Company management determined that manufacture of ESS required temperature and humidity controls too exacting for buildings that were constructed in the early part of this century. The decision was made to transfer ESS into new, modern plants at Dallas, Oklahoma City and Lisle, Illinois.

Meanwhile, Hawthorne people keep learning new techniques to meet new manufacturing challenges. Technical training at Hawthorne has been built-in to its character from the beginning. Classes in a wide variety of subjects have been continuously available to its employees, and a tuition refund program is available to those who attend college or university classes. Training and education permit its people to assume greater roles in production and management and has been encouraged everywhere in the Works.

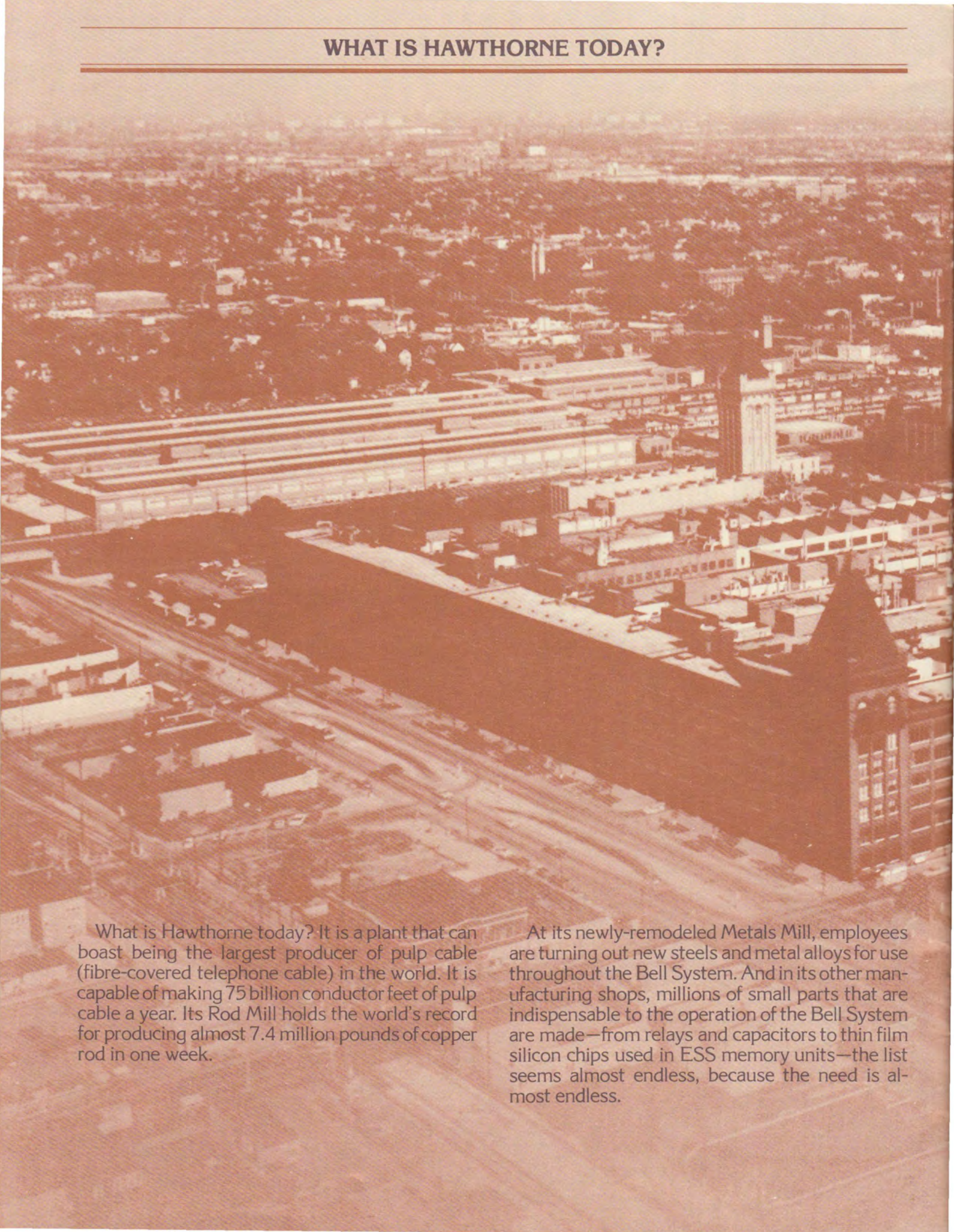


The dawn of a new era in telephone switching came on this summer day in 1963 when the first Electronic Switching System, made at Hawthorne, was shipped to Cape Canaveral. Thousands of workers turned out for the ceremony. America had entered the electronic telephone era.

By early 1939, Hawthorne had moved into the mass-production of Crossbar switching systems, then the most advanced systems of their type ever produced. Crossbar was to remain the nation's standard until the advent of ESS in the early 1960s. Crossbar still is in use in many cities and towns in America.



WHAT IS HAWTHORNE TODAY?



What is Hawthorne today? It is a plant that can boast being the largest producer of pulp cable (fibre-covered telephone cable) in the world. It is capable of making 75 billion conductor feet of pulp cable a year. Its Rod Mill holds the world's record for producing almost 7.4 million pounds of copper rod in one week.

At its newly-remodeled Metals Mill, employees are turning out new steels and metal alloys for use throughout the Bell System. And in its other manufacturing shops, millions of small parts that are indispensable to the operation of the Bell System are made—from relays and capacitors to thin film silicon chips used in ESS memory units—the list seems almost endless, because the need is almost endless.

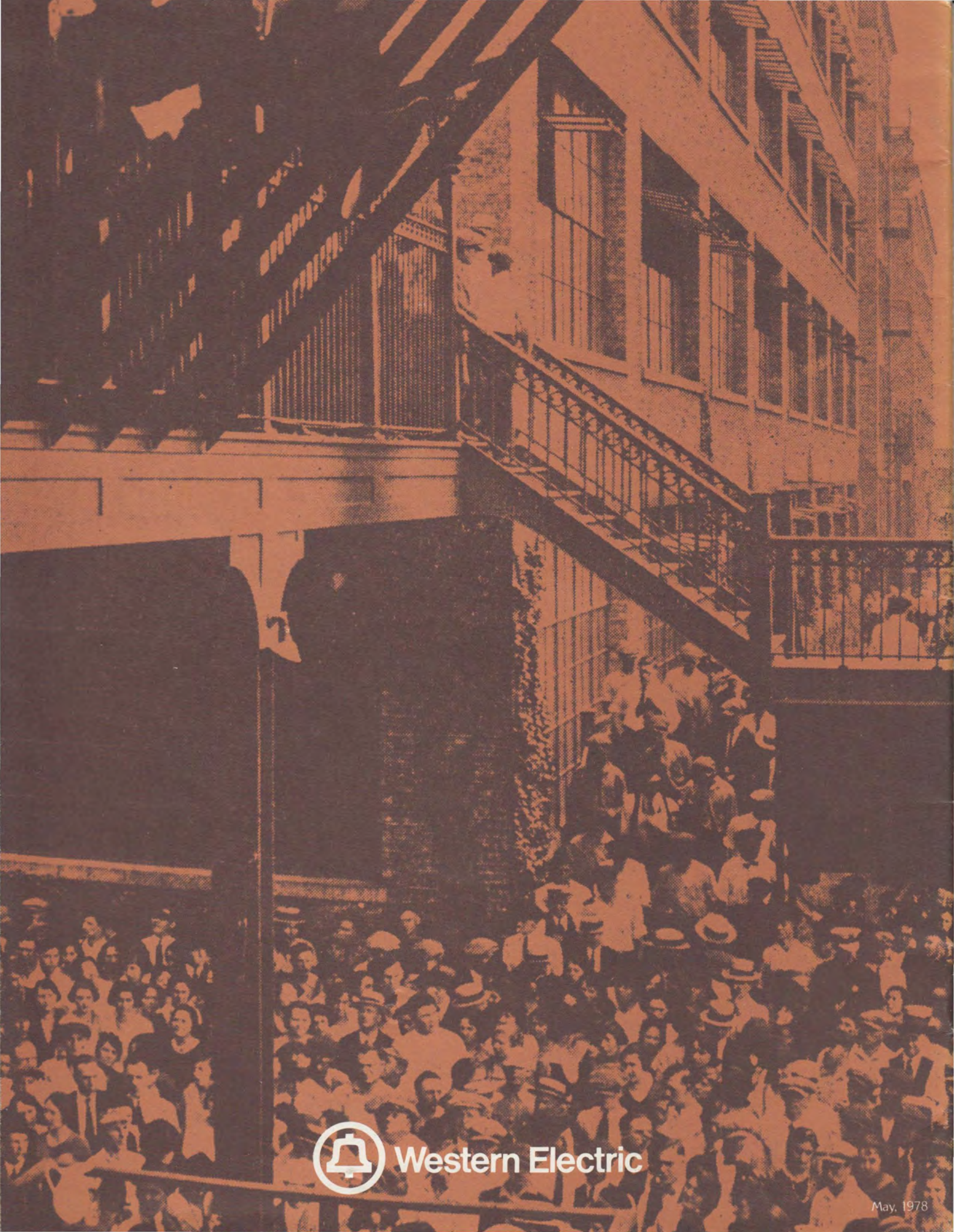
HAWTHORNE – ITS LIFE AND PEOPLE



Today, 75 years strong, Hawthorne stands as a symbol of what this nation has done to grow and survive. It has seen new products come, grow and move on to be replaced by even newer innovations. Each time, Hawthorne people have met these challenges—through two major wars, through a Depression, through the pressure of post-war boom, and through the invention and development of more modern, highly complex telephone equipment.

The men and women of Hawthorne, past and present, are the men and women of America—representing all cultures, demonstrating the urge to learn, grow and prosper. Hawthorne's giant buildings and equipment are just concrete, brick and metal. Hawthorne's heart is its people who gave life to it 75 years ago and are keeping the faith even now.

It is evident that no matter what challenges are given to Hawthorne people in the future, America's telephone users can know that they'll be served—with skill and pride.



Western Electric