Forward March OF AMERICA

AN EXHIBIT OF THE ELECTRIC UTILITY INDUSTRY AT THE WORLD'S FAIR

Edison once said: "The electrical development of America has only well begun . . . great days are ahead . . . and electricity will have a great part to play, granted only that it can be unfettered, with full opportunity for the largest possible individual initiative and energy."

EARLY BEGINNINGS OF THE ELECTRIC LIGHT AND POWER COMPANIES

WHEN you entered the Street of 1892 in FORWARD MARCH OF AMERICA, your electric light and power company's exhibit at the New York World's Fair, you saw little evidence that electricity was really at work.

Yet the electric company was celebrating its Tenth Anniversary and much had happened since that day in 1882 when a man in a white, high-crowned derby hat and a collarless shirt sat in a long, illuminated room and beamed happily at thirty little balloon-shaped globes, all glowing with horseshoe-shaped filaments.

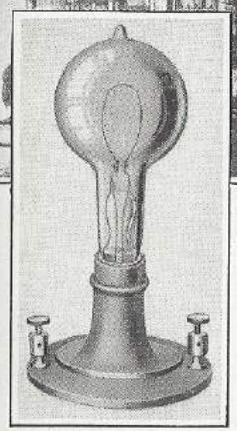
That was Thomas Alva Edison, who had just started two engines in the Pearl Street steam-electric station of the Edison Electric Illuminating Company in New York City. He was thoroughly enjoying the triumph won by years of painstaking effort to develop the first practical incandescent lamp.

But there was trouble aplenty ahead for the new company. Not more than three men really understood the machinery. Ludicrous and frightening things happened. One mechanic put an oil can between two con-

ductors and was a badly frightened man a second later when the can melted away as quickly as the oil it contained. Another workman used a screwdriver and was horrified to see it burn away in his hands.

Yet in spite of these mechanical difficulties, within fourteen months this company was serving 508 customers with electric light.

During the same year, the first hydro-electric plant was started at Appleton, Wisconsin. The FORWARD MARCH OF AMERICA with electricity had begun.



Here is the birthplace of the electric light and power industry—the Pearl Street station in the shadow of the new Brooklyn Bridge in New York City. Started by Thomas A. Edison, September 4th, 1882.

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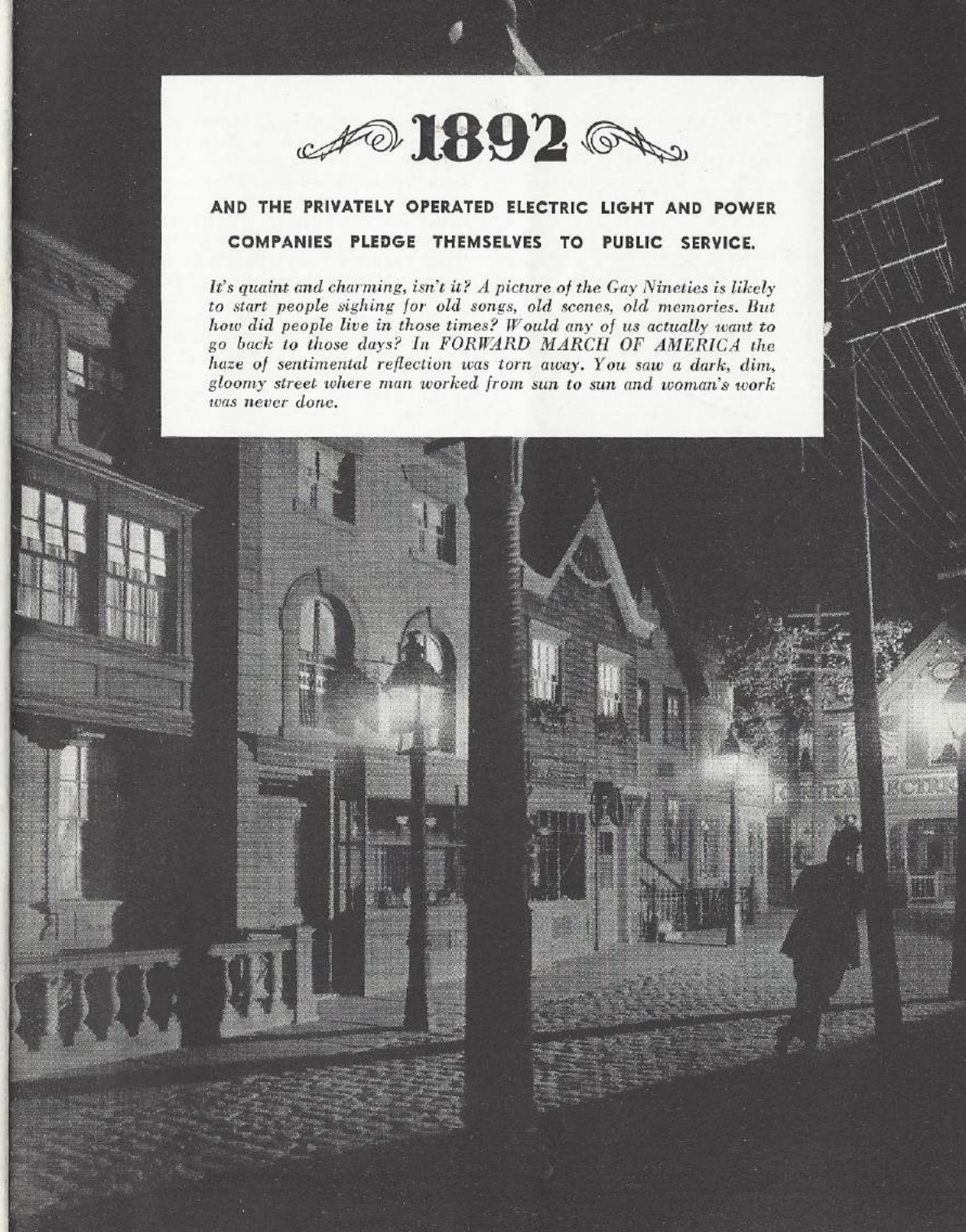
The first successful incandescent lamp, developed by Thomas A. Edison in his laboratory at Menlo Park, New Jersey. Shedding only a feeble light, these early bulbs cost $1.50 each!



1892

AND THE PRIVATELY OPERATED ELECTRIC LIGHT AND POWER COMPANIES PLEDGE THEMSELVES TO PUBLIC SERVICE.

It's quaint and charming, isn't it? A picture of the Gay Nineties is likely to start people sighing for old songs, old scenes, old memories. But how did people live in those times? Would any of us actually want to go back to those days? In FORWARD MARCH OF AMERICA the haze of sentimental reflection was torn away. You saw a dark, dim, gloomy street where man worked from sun to sun and woman's work was never done.

"ELECTRICITY IS THE LIGHT OF TODAY AND OF THE FUTURE"

THE office of the old electric company in 1892 showed you that the budding young electric light and power companies already boasted 40,000 customers, employed 8,500 people, and paid $750,000 a year in taxes. The average cost of service to the household user was 22½¢ per kilowatthour.

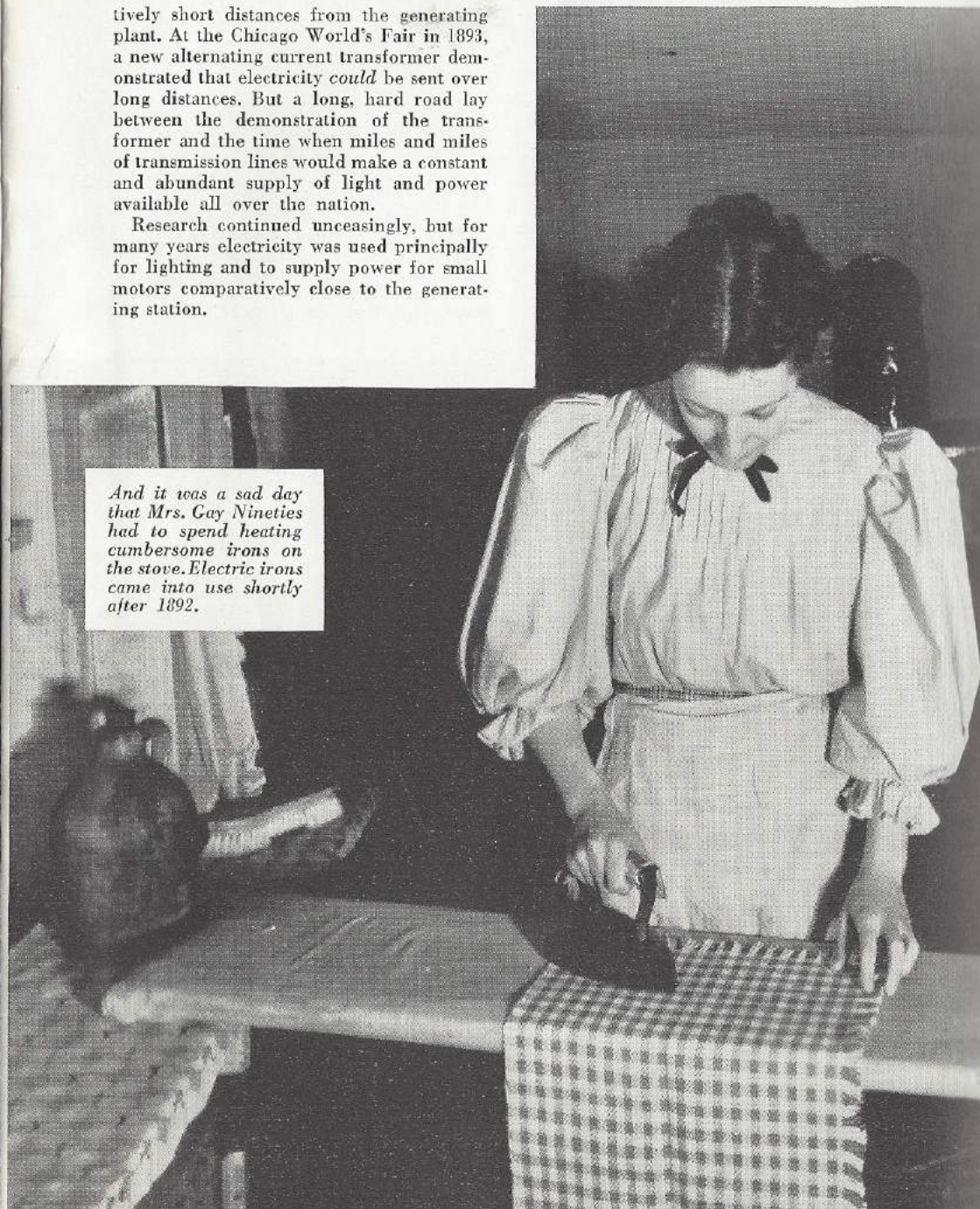
Yet the industry was going through a hard time. Fortunes were lost and personal failure stalked among those early pioneers. Ridicule and indifference—the great enemies of progress and invention—were hard at work, tangling up the feet of marching men.

A few men with vision knew that electricity was more than the light of the future. They knew it was a force to run huge motors, and a source of heat as well as light. They knew it was destined to turn hard manual labor in the home and on the farm into button-pushing convenience. If only it could be delivered where it was needed!

In 1892 electricity could be sent only relatively short distances from the generating plant. At the Chicago World's Fair in 1893, a new alternating current transformer demonstrated that electricity *could* be sent over long distances. But a long, hard road lay between the demonstration of the transformer and the time when miles and miles of transmission lines would make a constant and abundant supply of light and power available all over the nation.

Research continued unceasingly, but for many years electricity was used principally for lighting and to supply power for small motors comparatively close to the generating station.

They sang a song that said "Nellie was a lady," but bending over a scrubbing board for hours was no lady's work.

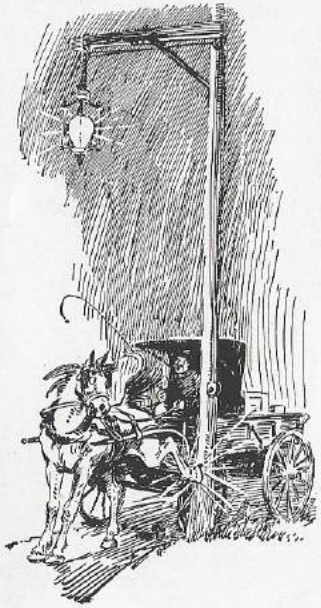


And it was a sad day that Mrs. Gay Nineties had to spend heating cumbersome irons on the stove. Electric irons came into use shortly after 1892.

LEFT—*Next time you go to your modern beauty salon with the last word in electrical equipment, think of the lady whose hip-length tresses had to be slowly dried with what little help could be obtained from a palm-leaf fan.*

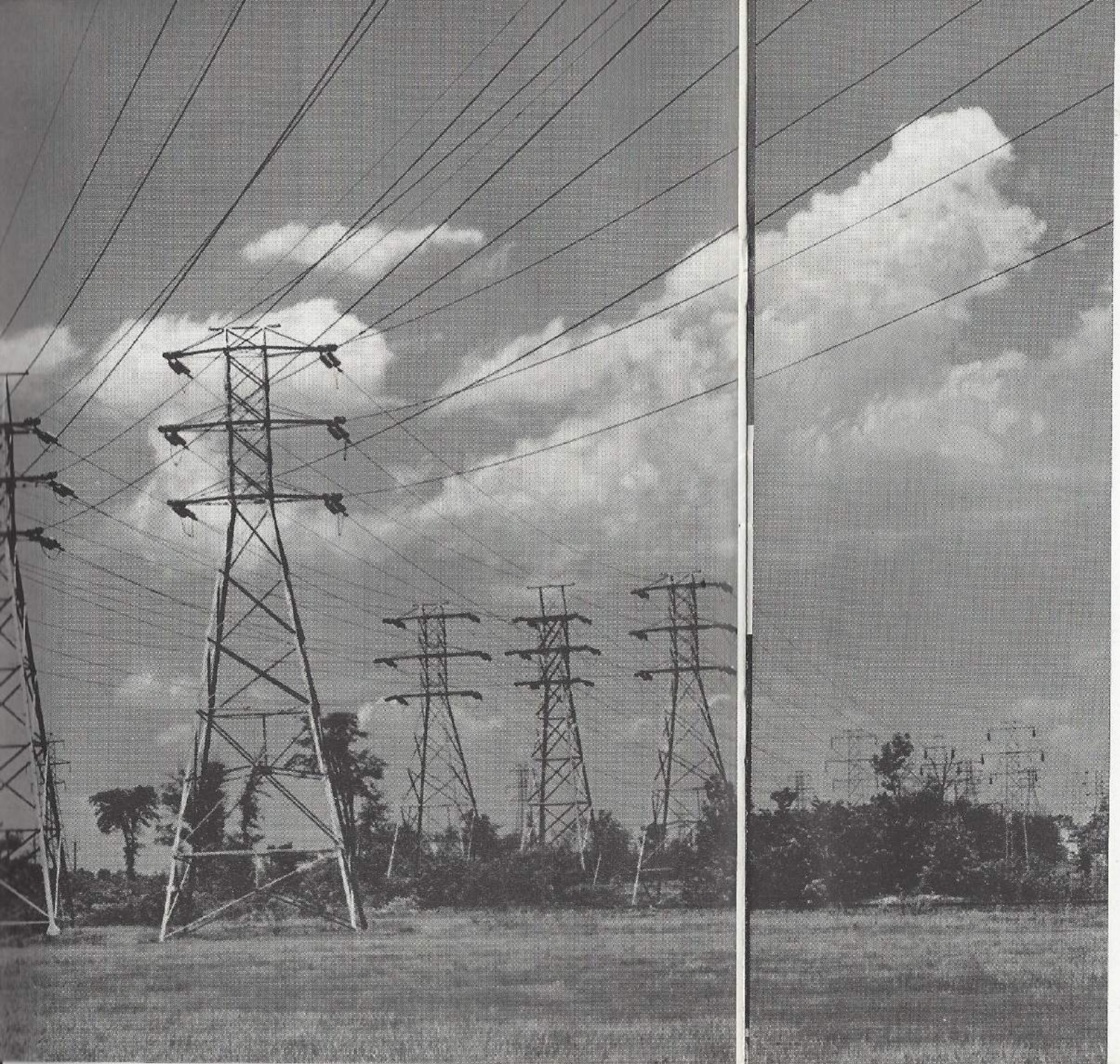
RIGHT—*The smartest and most up-to-date buildings boasted electrically-operated elevators. They were considered marvels of modernity.*

BELOW—*Have you one of these pictures among your souvenirs? Don't laugh! These early electric trolleys were a tremendous improvement over the horsecars, and when they made their appearance, people said "Heavens, what will they think of next?"*



Earliest means of electric street lighting, these Brush arc lamps crackled, flickered, and frequently went out. This lighting service man taught his horse to kick the lamp-post to start the light going.

Here is the kind of place where business was done in 1892. View of the old electric company office in FORWARD MARCH OF AMERICA.



1910

THE ERA OF LOW COST ELECTRICITY *Really* BEGINS

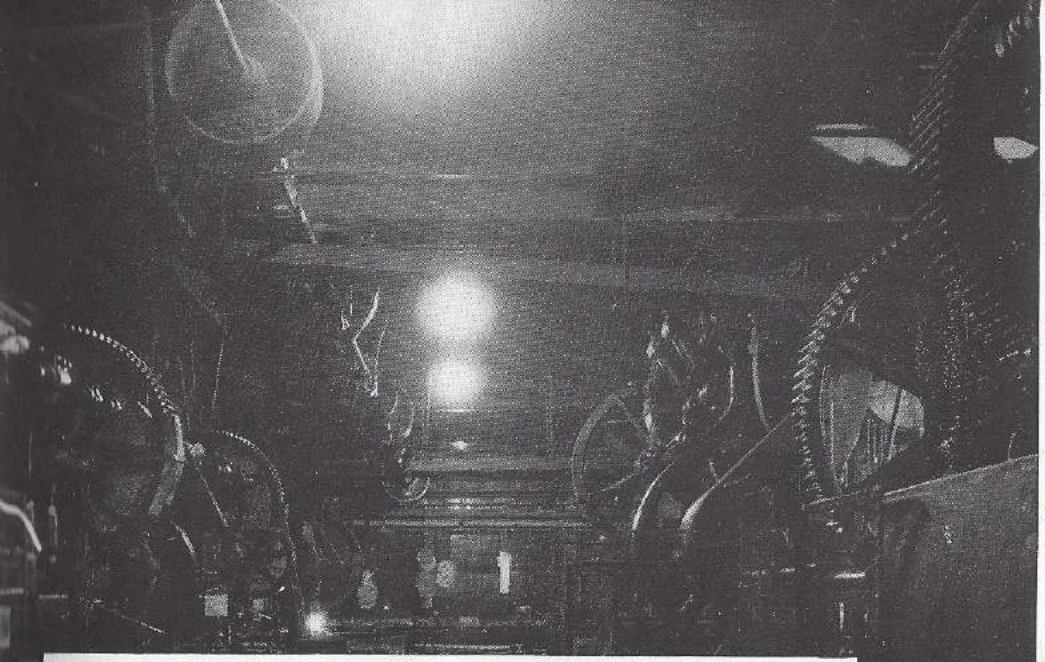
BY 1910, longer-distance transmission was a working reality. The chains that had bound electricity to short distances were finally broken. The small towns were receiving electric service. So were the farms. And the manufacturer who wished to build his plant away from the congestion of the cities, near his source of raw materials, could do so and still run his motors with low-cost electric power.

At this time the electric light and power companies were serving 3,500,000 customers and the average cost of service to the household user had dropped to 9.62¢ per kilowatthour. Taxes had increased to $10,000,000 a year.

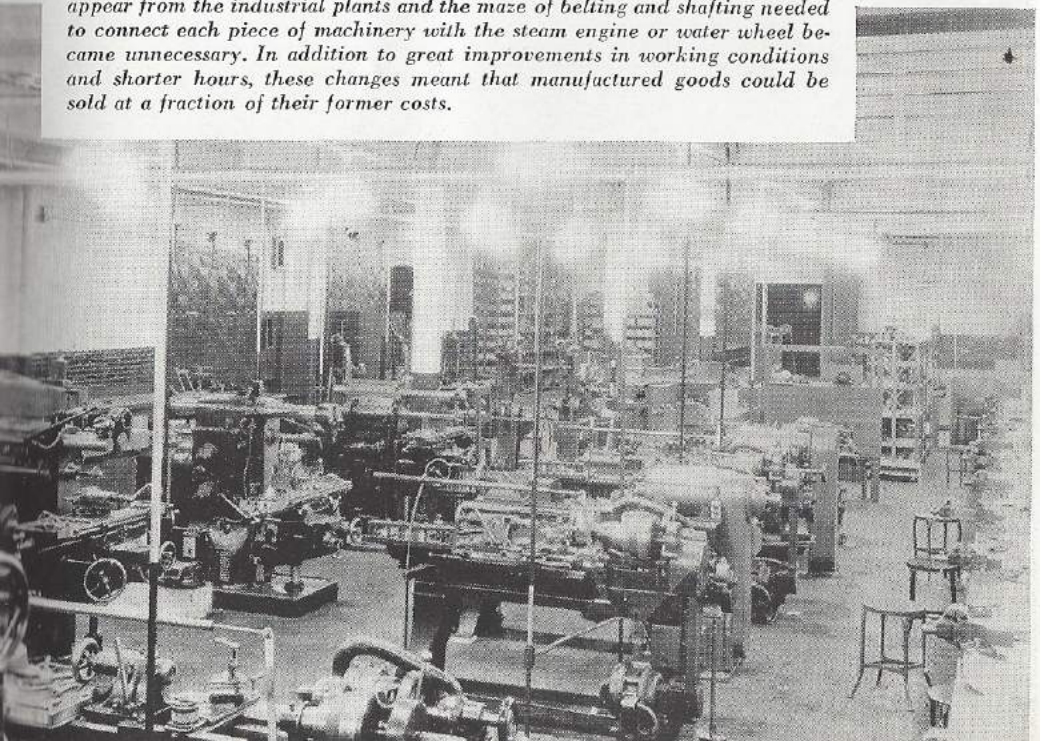
Abundant electric power, available miles from the generating plant, the cost dropping steadily year by year, stimulated the minds of men to greater inventive genius than ever before. The next decade saw hundreds of labor-saving electrical household appliances put on the market.

The street scene began to change at this time as retail stores discovered the advantages of electrically lighted store windows. As ways were found to harness electricity to farm machinery, a new science of farming was developed.

The twenty-eight year old dream of the privately operated electric light and power companies was recognized as a reality by the country at large. *The Forward March of America quickened as electricity became more and more the dependable, low-cost, universal servant.*

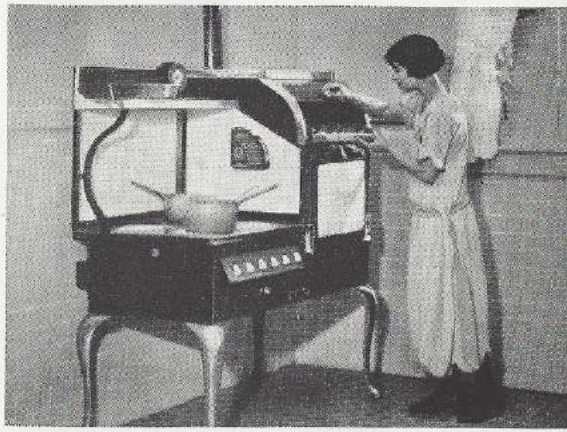


If living conditions were dreary in the Street of 1892, you can imagine what working conditions were like before electricity began its march of progress. Ten to twelve hours a day and seven days a week were not unusual working hours. Industrial accidents were common. . . . By 1910 smokestacks began to disappear from the industrial plants and the maze of belting and shafting needed to connect each piece of machinery with the steam engine or water wheel became unnecessary. In addition to great improvements in working conditions and shorter hours, these changes meant that manufactured goods could be sold at a fraction of their former costs.



Contrast this picture with the brilliant effects created in store windows today. Modern, brightly illuminated show window displays continue to sell the stores' wares long after the closing hour.

Electric refrigeration changed the buying and eating habits of the entire country! Perishable food could be kept for days at a time. Left-overs need not be thrown away.



Excitement ran high when housewives saw a stove that was as clean and easy to use as electric light! Now millions of homemakers enjoy the many advantages of electric cooking.

The sad business of setting aside a day or two a week to do the family laundry was over. The electric washer, that even a child could handle, made this domestic horror an easy job and completed in much shorter time.

The broom went out the window for heavy cleaning when the vacuum cleaner appeared. And this new electric appliance brought new ease for housewives, and more healthful homes.

Scores of electric table appliances made their appearance at this time—chafing-dishes, percolators, toasters, waffle irons, and many more—all designed to help the housewife.

1920

A NEW DEVELOPMENT —INTERCONNECTION—

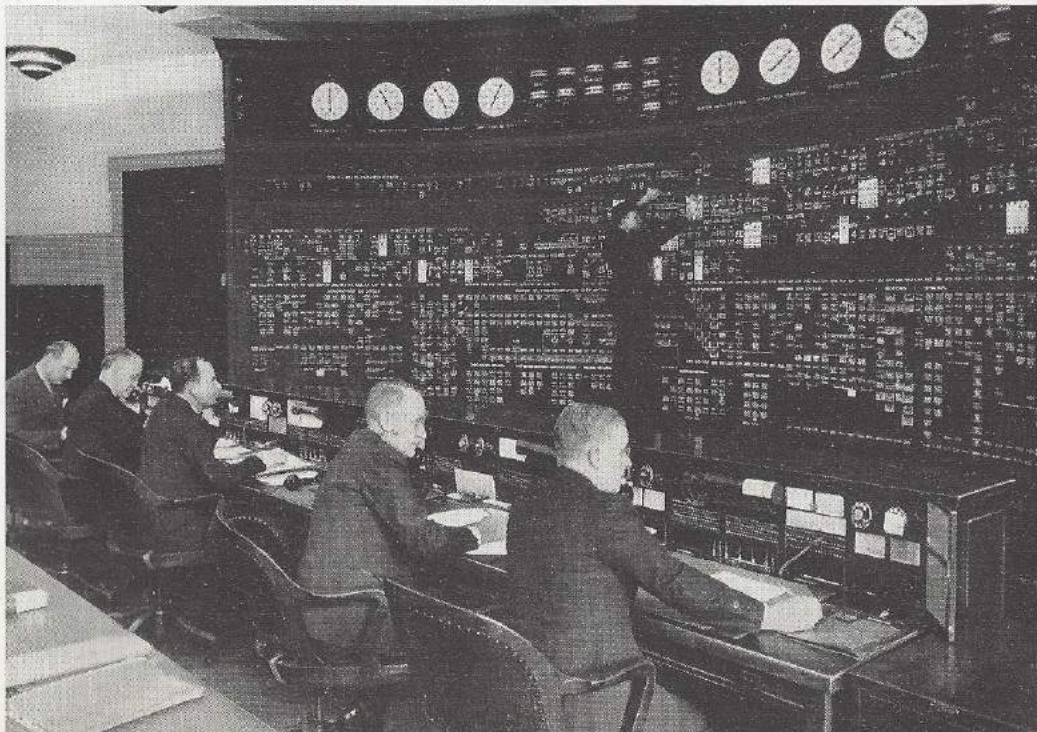
MAKES POSSIBLE STILL GREATER REDUCTIONS IN POWER COSTS

BY 1920 electricity was an accepted part of American life. The forerunners of the electrical household appliances you saw in the office of the modern electric company in FORWARD MARCH OF AMERICA were in use in homes. Industry leaned heavily on low-cost power for efficient manufacturing. The efforts of the privately owned electric companies were directed toward lowering costs still further.

Electricity cannot be stored in warehouses. It must be used as soon as it is made. Therefore, the nearer a power station can work to full capacity for twenty-four hours a day, the less it costs to supply electricity.

The electric light and power companies built lines connecting generating stations, so that when the demand for electricity fell off in one city, the unused power resources could be put to work to serve an-

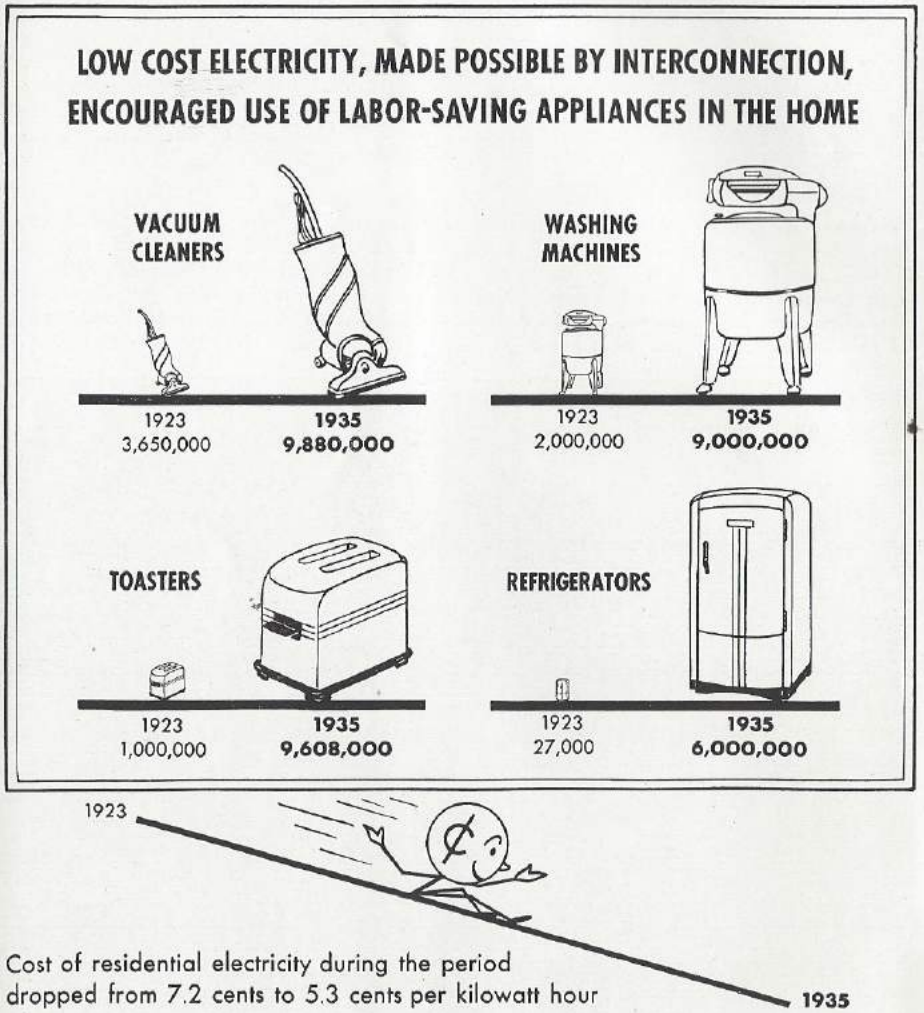
The power dispatcher merely runs his fingers over his keyboard, borrowing electricity from a source where it is not needed at the moment and sending it to fill any unusual demand. For instance, a mid-day storm in a certain town will cause thousands of lights to go on suddenly early in the day and create an extraordinary demand for electricity. The dispatcher, with several sources of electric power to draw on, can immediately fill this increased demand from another point sometimes several hundred miles away!



other community. Interconnection made possible continuous, uninterrupted service to communities in times of storms, floods, etc., minimizing the possibility of interrupted service which might occur if the community were entirely dependent upon a single isolated generating plant.

As more and more long-distance lines were built, the cost of electric service dropped lower and lower, and the use of electricity in homes, farms, stores and industry increased rapidly.

As a result of this effort 10,800,000 customers were on the lines of the electric light and power companies in 1920, and the average cost to the household user had dropped to 7.45c per kilowatthour. Taxes had increased to $50,000,000 a year.



Life begins at 1:15 P.M. for the woman who takes advantage of low cost electricity. It takes over so much of the drudgery of housekeeping. Tired of sweeping? An electric vacuum cleaner will clean your house in half the time for a penny or so a day. How about washing and ironing? Electricity will do both for a few cents a week. Food protection a worry? Let an electric refrigerator keep food fresh. Cooking a chore? See how easy it is with an electric range. *Don't deny yourself this extra leisure. Anyone can afford all the help low cost electricity brings because it's the biggest bargain you buy.*

Strikingly beautiful is the Avenue of Tomorrow. The last word in modernity in architecture and lighting, this Avenue, with its expanses of glistening glass, attractive window displays and even, glareless light, shows the remarkable progress made since 1892—less than fifty years. It is symbolic also of electricity's contribution in building the World of Today . . . and Tomorrow.

THE FORWARD MARCH OF AMERICA *Never Slackens*

. . . THERE ARE MORE WONDERS ON THE HORIZON!

MILLIONS of people who strolled down the Avenue of Tomorrow in FORWARD MARCH OF AMERICA sighed with relief. Thank goodness, no one need go back to the darkness and discomfort of 1892.

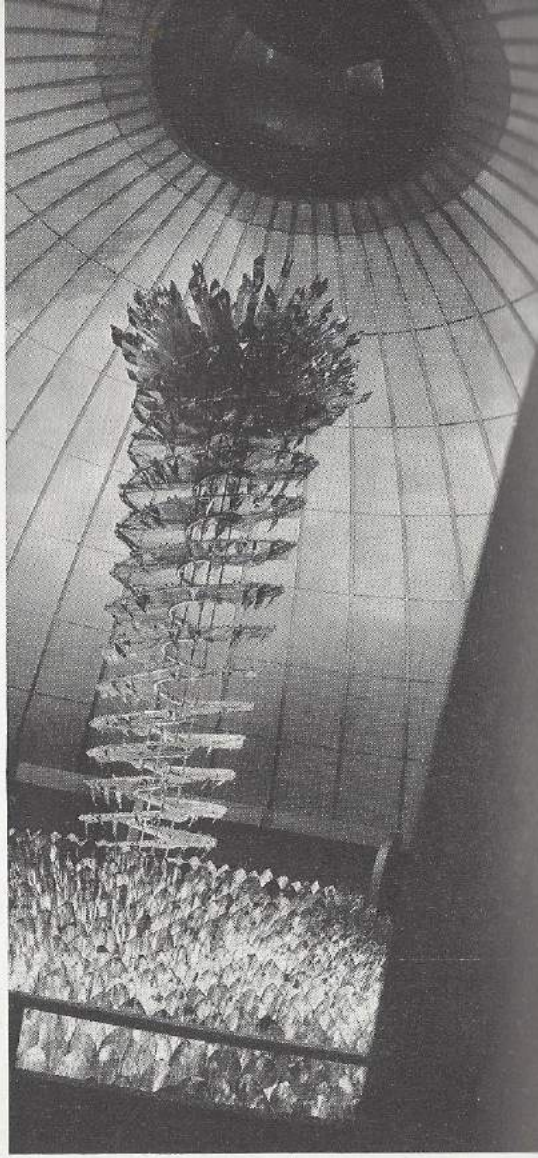
Today, almost everything you touch, eat, or wear has been produced by means of electricity.

In the home, even so simple a task as beating an egg is now done with electricity. The farmer has over 200 jobs that electricity can do economically. Electricity sends sound clear around the world, and is sending television pictures right into our homes. Inside stores, offices, factories and homes, electricity creates ideal weather with the efficient new air-conditioning devices. It regulates our swiftly-moving city traffic and lights country highways to keep accidents at a minimum. It enables ships at sea to communicate with ports and with each other. It guides our great airliners to safe landings in spite of heavy fogs.

In the half century that has elapsed since the electric light and power companies came into being, everything has changed. Everything, that is, except the spirit of progress that has always characterized these companies.

This thought is best expressed in the words you heard in the Chamber of Light:

"In this building, you have seen a cross-section of the America our parents and grandparents knew only half a century ago. You have also seen a cross-section of the America which we and our children will know in the America of Tomorrow. The great transition from the dim, gas-lit era of the Nineties, to the



In the Chamber of Light you saw all the magic of light, color and music woven into a spectacle of transcending beauty and sound.

clear, gleaming perfection of the Modern Avenue of Tomorrow, can best be expressed in a single word: Electricity.

"Electricity, today, sends its friendly light through all America; in hamlet, and city, in home, farm, store and factory, it works night and day for man's progress and pleasure. It brings us scientific marvels which help mankind in the ceaseless battle against human ills. And in homes throughout the land, it brings us the every-day push-a-button comfort which makes American home life pleasanter, more liveable, happier.

"What of the future of electricity, the mysterious force which Thomas A. Edison gave us a half century ago? Perhaps the answer lies in Edison's own words. Years ago he told us: 'I am proud of the electrical industry, of its vision, courage, zeal, and devotion to public service, and I suspect every American feels the same way about it. Great days are ahead and electricity will have a great part to play, granted only that it can be unfettered, with full opportunity for the largest possible initiative and energy.'

"This, then, is the heritage that Edison has left us; electricity and the responsibility to see that its possibilities are fully realized. Your electric light and power company has accepted this responsibility. For the future, electric light and power companies throughout the country pledge themselves to carry on with research, with experimentation and with the initiative of private American enterprise, to insure the greatest benefits of electricity to all. Given freedom, the unfettered opportunity Edison wished to see, these same privately operated electric light and power companies will continue to carry electricity's swift, white light in the FORWARD MARCH OF AMERICA!

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Today, nearly 28,000,000 customers receive electric service. The average revenue per kilowatthour from residential users has dropped to 4.21¢. The electric light and power companies pay yearly in taxes $325,000,000.

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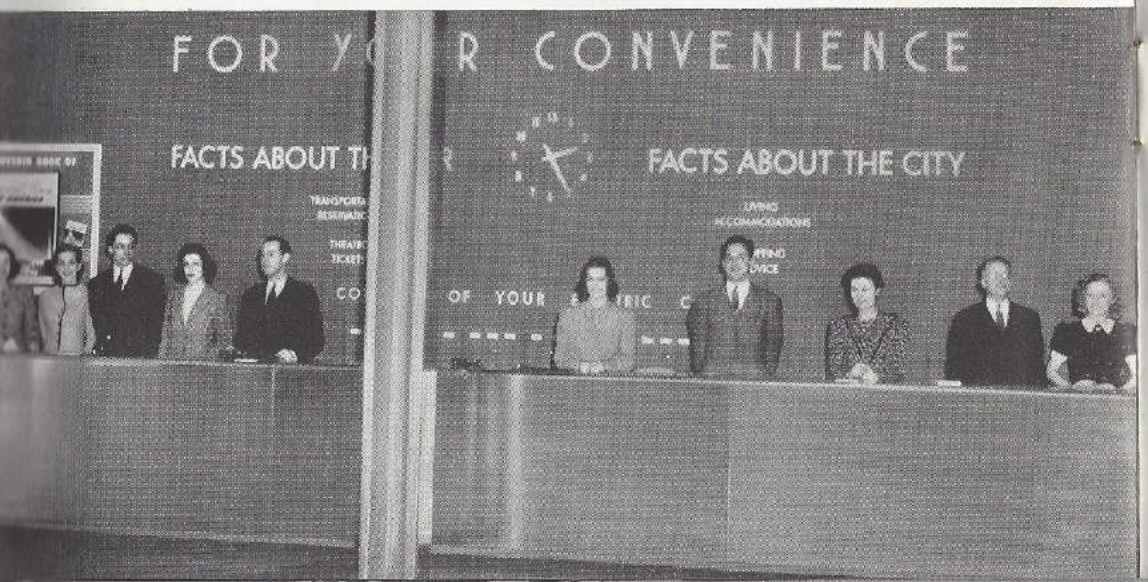
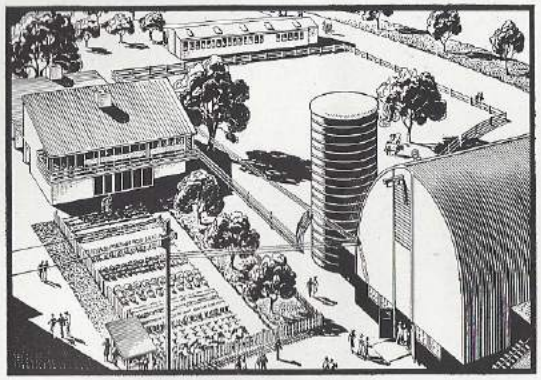
THE "FOR YOUR CONVENIENCE" BUREAU

Here alert and courteous attendants, thoroughly familiar with the Fair, as well as the City of New York, answer questions and render services to help make your visit a pleasant one.





The Electrified Farm

ALSO AN EXHIBIT OF YOUR ELECTRIC LIGHT AND POWER COMPANY AT THE NEW YORK WORLD'S FAIR

THE story of farm electrification is a story of more than 40 years' constant effort to electrify the farms of America, and a story of cooperation to this end between the electric light and power companies, the farmer, manufacturers of electrical machinery, and farm organizations.

In 1919, when the first Census of Agriculture was made, 100,000 farms were receiving electric service. Today, nearly 1,500,000 electrified farms are proving that electricity not only takes much of the drudgery out of farm labor, but that it pays dividends in increased farm profits.

Here, in the World's Fair Electrified Farm the most important uses of electricity on the farm today are shown. You see that the farm home can be as easily maintained as a city apartment. Electricity in the dairy does the work of many hired hands, better, quicker and cheaper. You see how electricity has aided the farmer to make the poultry business a successful part of farming. Electric soil heating, soil pasteurizing and soil shredding all make it possible to grow plants in or out of season, besides eliminating uncertainty and insuring vigorous plants. And in the completely equipped electrical workshop the modern farmer can repair his own farm machinery.

A new trend in farming is demonstrated —the Community Packing and Storage Building. Serving a number of farms, this community building demonstrates how groups of farmers can reduce the cost of cleaning, grading, packing and cold storage of fruits and vegetables.

The World's Fair Electrified Farm is proof that the electric light and power companies are constantly at work doing a job for the farmer . . . a continuing job of bringing electric service to more and more farms, and of helping to make possible better tools for economical farm operations.

MORE POWER
TO
THE HOME

THROUGH economical and multiplied uses of electric service, the home again becomes the center of family interest in better and happier living. Electric service now brings labor saving, convenience, health and entertainment values that the family has previously sought in other more expensive ways.

Thousands of families yearly in Eastern Pennsylvania find increased use of electric service in the home the economical answer to "Better Living".

"Ready Kilowatt", "Your Electrical Servant", works for every member of the family twenty-four hours a day, serving every need throughout the day—throughout the night.

"Ready Kilowatt" heats water for the bath and answers every shaving need—prepares coffee and browns the toast—washes clothes and irons too—preserves food and cooks meals—washes dishes and cleans floors—provides safe-seeing light for every task—tells time and furnishes ice—and—with the radio, brings education and entertainment—at COSTS SO LOW that every family can make ever-increasing use of his service.

The local Company representative is seeking an opportunity to better serve your needs. Let him give you full information regarding the many Health, Better Living, Appearance and Security values assured through Fuller Use of Electric Service in your home.

PENNSYLVANIA POWER & LIGHT COMPANY

Call
FRANK NOVELLO
3-2093

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