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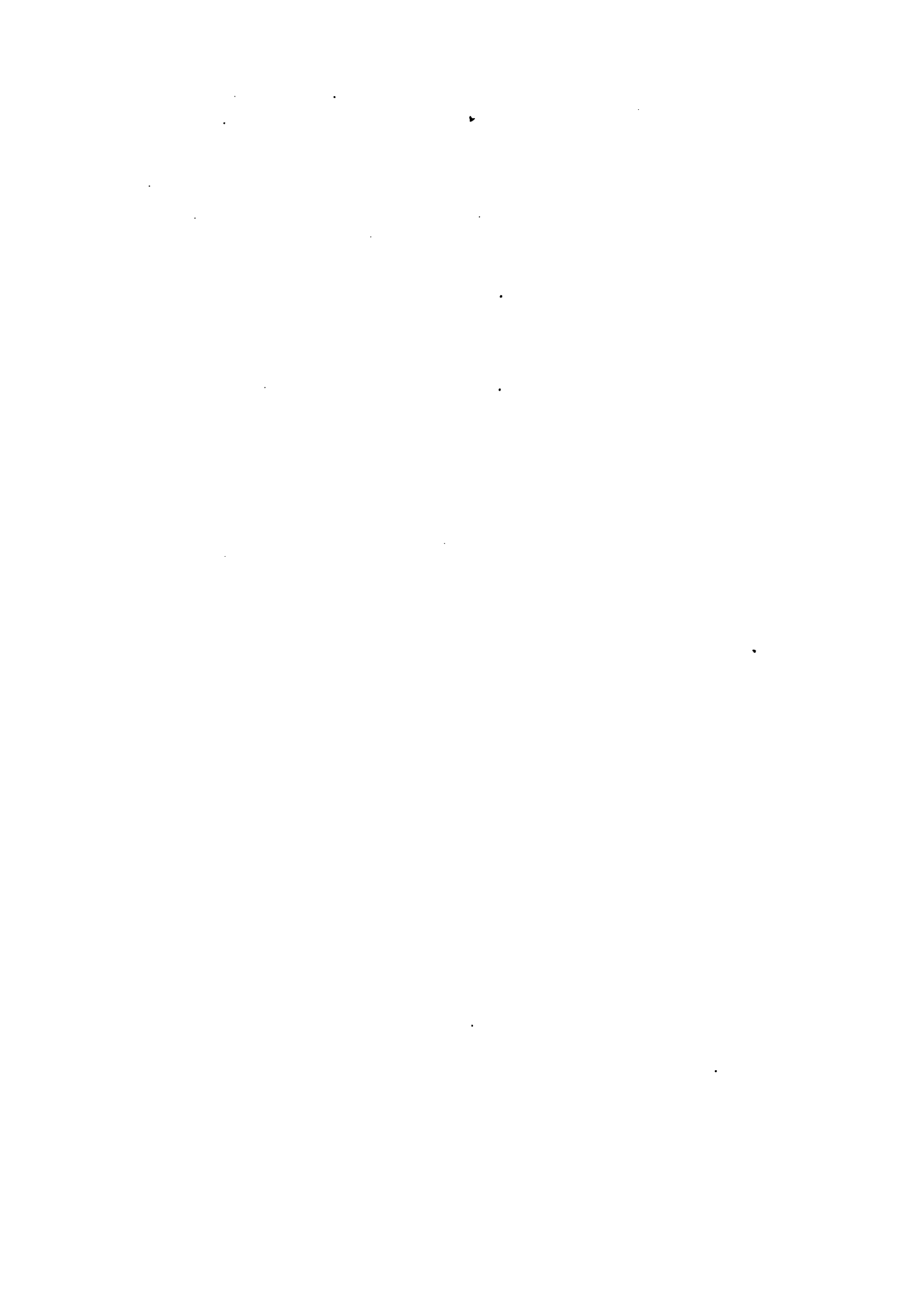
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**EDISON**

Monthly

*v. 114*  
*1922*



January 1922

The New York Edison Company  
Irving Place and 15th Street, New York



## The Edison Directory and the Edison Showrooms

THE very great increase in the number of names listed, and consequently the broadened scope and added importance of The Edison Directory make it necessary to issue it as a separate publication rather than as a department of THE EDISON MONTHLY. The Directory in its new form will be distributed partly by mail and partly through the offices of The New York Edison Company. It will be sent without charge to anyone upon request.

The Edison Directory is published for the purpose of rendering the greatest possible assistance to those desiring to use Edison Service for any purpose. Its lists include the names of dealers in every form of electric appliance, manufacturers or their agents, and contractors who do electrical work in the territory served by this Company. So far as is possible, the accuracy of each name and address is carefully verified.

Another object of the Directory is to give to every manufacturer, agent, dealer, and contractor an equal chance with those desiring to purchase devices or to have equipment made.

The Company desires to encourage the establishment of the largest possible number of dealers in electrical devices, appliances, and incandescent lamps, and of independent electric contractors who do satisfactory work at fair prices. It is believed that this policy is in keeping with the public interest, and is aided through a directory of this nature.

Each manufacturer or agent has equal right to free space, electric current and demonstration in the various showrooms of the Company, and equal endorsement by the Company's representatives when talking with prospective purchasers. The Company's representatives are forbidden to recommend any particular device as compared with another, and final choice in the purchase must rest with the purchaser.

It might be added that the Company itself makes no sales (other than of incandescent lamps), nor does it install any kind of electrical equipment upon the customer's premises, other than directly identified with its service and meter. Appliances are shown and demonstrated, and an order from the purchaser will be received and transmitted to the manufacturer or agent of the appliance selected, without commission or charge of any kind for this service.

*The New York Edison Company*

January



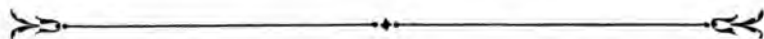
The Water Gate, East of Wall Street,  
1679

1922

VOLUME 14

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## The Edison Monthly

**The Edison Monthly**  
*Published by*  
**The New York Edison Company**  
*General Offices*  
**Irving Place and Fifteenth Street**  
**New York City**

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N F BRADY, President  
WALTER NEUMULLER, Secretary  
FREDERICK SMITH, Treasurer

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As a snow storm, the first flurry of the winter did not amount to very much. A wet snow fell for many hours but most of it melted as it struck the ground. Toward evening, with the lowering of the temperature this condition changed and a thin blanket formed; by the next morning this had turned to ice. Even this did not last more than a day or two but in that brief time it gave ample warning to teamsters of worse days to come. Snow in any shape or form offers serious impediment to traffic. When it freezes as a thin coating of ice it becomes particularly difficult for horses to keep their footing, and this is what happened, on that first Monday morning.

More than one driver went forth prepared for trouble in some unexpected form. On the other hand, the owners of electric trucks viewed the slippery streets with no more concern than they would the water after a rain fall. Ice on the asphalt has no terrors for electric trucks. Their traction is sure and their control is positive and they can pick their way in and out of traffic without the least inconvenience. In their performances after that first snow fall the three thousand electric trucks now in service in New York showed something of their capacity for work under abnormal

conditions and gave promise of what they will do when real winter conditions arrive.

While this may have been something of an old story to many owners of electric it proved a very satisfying revelation to those whose storage battery equipment is entering winter service for the first time.



Not so many years ago the mere possession of electric lights was to make one the envy of all the neighbors. Now the unwired home is the exception. With electric service installed the acquisition of various appliances becomes a mere matter of time and during the past few years there has been a remarkable increase in the use of such equipment. Houses being built today have not only the usual outlets for lighting fixtures, but additional outlets along the wall for the accommodation of appliances. In many of the older houses, however, the use of the vacuum cleaner often involves unscrewing a lamp from its socket; while the placing of a table lamp in the library is generally accompanied by a cord dangling from overhead. In the dining room the charm of the percolator and the coziness of the toaster are often marred because the cord leading to the fixture insists on getting into the butter or entangling itself with the sugar bowl. All too frequently the use of the electric iron in the kitchen is at the expense of the only light in the room.

One who has experienced these discomforts will readily agree with the claims made by those advocating the installation of additional outlets—"convenience outlets" as they have



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been very aptly termed. The reasonableness of the cost of this improvement will come as a surprise to many. The sum of course will vary with the number of outlets installed and the work involved, but in any case it will be all out of proportion to the comfort that follows. To paraphrase a time-worn expression, "their conveniences will be enjoyed long after their cost has been forgotten."

To one who does not have to spend long hours in the confines of a close room the importance of ventilation may not be readily apparent. But the cook who has to work over the range in a hot kitchen, the mechanic who has to spend a large part of his time in the pit beneath automobiles, the chemical worker who spends his days in an atmosphere of noxious vapors, the painter who is constantly threatened by the dread spectre of lead poisoning—all these know the ventilator and appreciate what an important factor it is in making decent living and working conditions possible.

A ventilating installation may be either simple or elaborate. For the kitchen and in some cases the laboratory, a twelve- or sixteen-inch fan mounted in a frame in the window will be entirely adequate; the same fan, but with a more elaborate housing to prevent the spread of fumes, serves the painter; the industrial establishment or the garage requires a larger apparatus, generally a blower type fan and an extensive duct system reaching every part of the large floor area.

The kitchen ventilator serves not

only the kitchen but the whole dwelling and its value is measured in terms of domestic comfort and happiness; the ventilator in the industrial establishment insures better working conditions, a higher degree of efficiency and the production of better material and its value is measured in terms of improved personal relations and increased profits.

The Navy football team recently completed one of the most successful seasons in the history of the Academy, a season which reached its climax with the victory over the Army on the last Saturday in November. The success of the team was due in very large measure to the fact that the coach always had a full squad of first-string men with which to work. Thus, with very little time lost from practice by the individual members, the squad became a well coordinated machine, something highly essential in these days of fast team play.

The reason for the Navy's high attendance average at practice has just been explained by the medical officer of the Academy. He says that the players were no less susceptible to injury than other teams but that when they were injured they received different treatment than had ever been given football players in the past. The Annapolis infirmary has a very complete equipment of electrotherapeutic apparatus and it was this that proved so efficacious in getting the players back into the game. Bruised muscles, strains and other injuries yielded readily to the applications of electric heat or some one of the high frequency currents.

## New York, a Fur Centre

**N**EW YORK, moving slowly forward and meeting with business acumen and energy the sharp competition of the old world, in 1921 had solidified its position as the greatest fur trade mart in the entire world, with more than \$500,000,000 represented in the various branches of the industry and at least 50,000 people, enough for a good sized city, identified with its progress. It has been said that the resources of the trade are of such magnitude that it would be possible at a week's notice to provide every man, woman and child in the country with a garment of fur. More than 85 per cent of the country's fur manufacture is carried on here.

In the grouping of kindred industries in local centres, which is a characteristic of New York business, fur found its original zone in the lower mid-city and had Bleeker Street as its pivotal point. Here it thrived and grew strong; here was developed the spirit of progress which has reached

the point of fruition in its present day greatness. Ten years ago when a general trade shift began, fur, having already burst its Bleeker Street bounds, moved too. It formed a community which now spreads in a commanding way over a score of streets on either side of Seventh Avenue, the main artery of the trade. Whichever way the eye turns in this section, just above



*Photograph by The New York Edison Company*  
Seventh Avenue is the Main Artery of New York's Fur District, and New Loft Buildings Are Rapidly Replacing the Five-and-Six-Story Structures of an Earlier Day

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23rd Street, it falls upon the signs of the industry,—pelts large and small, pelts in bales and bundles, pelts in the raw and newly arrived from the trappers' catches, and others ready for the skilled designer to fashion for the market.

There are more than 3,000 establishments engaged in the various departments of fur handling, manufacturing, dressing, dyeing and merchandizing in the city, importers and exporters, jobbers and agencies, brokers

and storage places, packers and shippers, wholesalers and retailers.

With the unprecedented growth of the industry, the broadening of its commercial field and the vast increase of the capital invested, there has followed naturally the adoption of all that is modern with respect to the technical features of handling raw skins and putting them through the processes which, in a cruder and less economical way, long made London and Leipsic famous. Invention has

given to the manufacturer mechanical devices which make easy the task once laboriously undertaken by the early worker. Electricity is now a most helpful agency. Innumerable motor driven machines serve the manufacturer, providing power for cutters and stitchers. The illuminating engineer has made possible the essentials of light without which it would be futile to undertake comparisons of skins or match to a nicety the pieces for a garment. The refrigerating system in cold storage vaults is still another important use to which electricity is adapted. Indeed,



*Photograph by The New York Edison Company*

The Streets Crossing Sixth and Seventh Avenues in the Neighborhood of 23rd Street Are Lined with Fur Establishments. The Earlington Building, Formerly a Hotel, Is Occupied Almost Exclusively by Furriers

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it may be said that the fur industry leans heavily on the motor.

The industry maintains its own considerable exchange and there are associations, alike strong in membership and influence, through which manufacturers, dressers and dyers, and dealers collectively are kept advised with respect to the larger matters of general importance. The several periodicals dedicated to the advancement of the industry, are publications of real worth, each enjoying a large measure of prosperity.

Within the district are a number of cold storage establishments which are operated exclusively for furs. One, which in other days was a busy brewery, is always packed from basement to roof. At the time of this writing one individual patron was paying insurance on a ten million dollar valuation.

More than fifty establishments, equipped with everything modern, and employing close upon 5,000 experienced hands, are engaged exclusively in dressing raw skins for the trade and the associated work of dyeing.

One unfamiliar with the totals of a large industry well may be amazed at the magnitude of the output of the factories. During the year 1920, by authentic association report, 26,526,231 raw skins passed through the processes of the New York dressers. Of this vast number nearly 6,000,000 were muskrat; there were more than

8,000,000 moleskins and close upon 3,000,000 minkskins. All these were in order absorbed by the manufacturers who in turn passed them along through



*Photograph by The New York Edison Company*  
Thousands of Dollars Worth of Furs Are Stored in One of the Rooms of the Fur Merchants Cold Storage Company

the regular channels of distribution.

In the dyeing field one finds another total which goes to prove that New York has established itself firmly. More than 14,000,000 pelts were treated during the year, or an average of more than 200,000 a week. Furs dyed in New York are everywhere recognized as standard. They command high prices in every market.

In Europe for a century furs in the unfinished state have been periodically assembled in large quantities and sold under the hammer to the highest bidders. A few years ago fur auctions were established here. At first a novelty, the New York auctions have grown in popularity and now they are features which are attended by buyers from all over the world. These auctions are held three times a year and it is not uncommon for 3,000,000 skins representing every known garment fur, to be disposed of during a session.

## Corrugated Paper

**T**HE tremendous increase in the shipment of packages of all sorts by freight, parcel post and express, and the regulations which the carriers have established for the prevention of breakage explain in part the new importance which the corrugated paper industry has acquired. Corrugated paper has shown itself to be one of the best materials for making boxes which shall be light and at the same time strong.

One of the largest manufacturers, in the corrugated paper industry, is the American Corrugated Paper Products Corporation whose plant at 213-227 West 26th Street is well worth an inspection by anyone interested in this industry.

The first stop is in the raw-stock rooms. Here, piled close together, stand roll after roll of strawboard weighing close to a thousand pounds each. From the stock room, the visitor is taken to the corrugating machines. These machines are the keystone which supports the whole scheme of the American Corrugated Paper Products Corporation for they transform the plain strawboard into protective corrugated sheets. It is fascinating to see them work. First, straw paper is passed

from the roll over a steaming cylinder that so dampens and softens the material as to make corrugation easier. The dampened paper is then run between three corrugated cylinders so adjusted that the ridges of each cylinder fit into the hollows between ridges on the others. After passing between these cylinders, the paper goes over another revolving cylinder, which applies the adhesive, silicate of soda. This glue-like substance is picked up on the ridges of the corrugations; the corrugated paper then picks up a lining of jute paper, which adheres to the sticky side. The two then pass over steam plates and are subjected to the pressure of a steel travelling belt, which fixes them firmly together.

Only half the process is complete at this point for corrugated paper board to be used for containers for



*Photograph by The New York Edison Company*

Motor Drive in the Finishing Department—Two Overhead Motors Operating Five Stitching Machines in the Manufacture of Boxes



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shipments by freight, express, and parcel post, must be lined on both sides. The corrugated and partly lined paper now passes to the rear of the machine and over the top to go through the same gluing, lining, and pressing process on the second side. On delivery from the machine, the corrugated paper is cut in any one of sixteen different widths and in any length required. It is now ready to

for the packing of such bottled articles as drugs and perfumes; machines to cut out the corners of the tops and bottoms of boxes so that they may be folded up square; stitching machines that fasten each corner of tops and bottoms with two firm wire stitches; corner-staying machines that tape the corners of tops and bottoms; band saws that cut through many thicknesses of corrugated paper as if they



*Photograph by The New York Edison Company*

One of the Three Combination Corrugating Machines. Rolls of Straw Paper Like Those in the Left Fore-ground Are Fed to the Machine to Produce the Slabs of Corrugated Paper Which the Operator is Piling Up on the Right. Each Machine Has Its Individual Motor

be made up into containers of all sorts.

There are scoring and slitting machines to mark the lines for folding into the box shape; taping machines that automatically cut strong tape to the length required and then glue it over two raw edges of the tube or body of the corrugated box; trimming and cutting machines that take off rough edges and cut the boxes to the depth required; special slotting machines that prepare the inside partitions of boxes having compartments

were a single sheet of tissue; and one ponderous machine, weighing a full nine tons, that is fed automatically, and combines the processes of creasing, slitting, and slotting in one operation so efficiently that it produces fifty boxes a minute.

All waste paper and cuttings are carried to the basement where a huge baling machine prepares them for shipment back to the paper mill to be remade into new stock.

The huge corrugating machines, as

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well as all the other machines in the factory, are operated by electric motors which secure their power from The New York Edison Company. The high pressure steam for the corrugating machines, is supplied from a battery of Ohfeldt gas-fired steam boilers, the installation being designed by the Utilization Department of the Consolidated Gas Company.

The machines in the factory have individual drive, engineers of the company explaining that this arrangement not only obviates such accidents as are likely to be caused by the connection with other machines, but also restricts any possible breakdown to the particular machine in which it occurs. The power installation totals thirty-four motors, ranging in size from one-quarter horsepower to thirty-five horsepower. The electrical contractors were Peters & Peters. An immense switchboard controls the power on each floor not only for the machines but also for lighting and for elevators.

When something does go wrong with

a machine, the company has its own machine shop and its own machinists to repair the damage. The company has its own garage for its immense delivery trucks; its own gasoline, oil, and air tanks; its own automobile mechanics; its own tools for every kind of repair job; and its own heating plant. Everywhere you turn, the factory shows organization and system—in a word, efficiency.

The traffic arrangement inside the plant is just one instance in point. The raw paper stock goes up on the rear elevators and the finished corrugated boxes come down on the front elevators on movable platforms. The machines are so placed and the various departments are so ordered that from the time the rolls of paper are delivered to the machine which completes the first process of manufacture until the finished product is loaded on a motor truck for delivery the materials that go into the making of each box or carton travel in a continuous curved line; not a single foot of space is traversed more than once.

### "Ifs" For Business Men

*With apologies to Rudyard Kipling*

If you can stand the old when all about  
you  
Use new, electric methods scorned by  
you.  
If you are in a rut where rivals flout you,  
Nor care to learn the things that  
motors do;  
If you are still delivering with horses  
While trucks electric wait to do the  
work,  
Nor seek to aid with current high-paid  
forces  
And save the time of workman or of  
clerk;

If you can put up with the useless  
bother  
Of ancient systems that no longer pay,  
And all because your much respected  
father  
Succeeded with no better in his day;  
If you're content with slow and costly  
service  
In line where work with power is  
cheaply done;  
Then you're the kind of man who makes  
me nervous;  
And, what is more, you're slipping  
back, my son!

*Walter S. Doty*

# The Edison Monthly



Photograph by Major Hamilton Maxwell

Battery Park as Seen from an Airplane. This Little Park at the Tip of Manhattan Island is Bordered by Big Buildings Which Use Edison Service

## An Airplane View of Edison Service

**I**N the group of big buildings discernable from an airplane passing over Battery Park are many notable structures which secure their electrical supply from the mains of The New York Edison Company. Many of these buildings can be identified in Major Hamilton Maxwell's picture of the section, which appears on the opposite page.

Nearly all the buildings bordering on the park have central station service. At the foot of State Street just opposite the bifurcation of the elevated structure stands the South Ferry Building, a few doors from which is the Cheseborough Building. Across Pearl Street stands the Battery Park Building, and to the north of that is the Customs House. Just down Pearl Street from the Battery Park Building is the Maritime Building. The big telephone building at 104 Broad Street which was occupied by the Army during the war, looms up at the right of the picture, and in front of the telephone building one can just identify the roof of the Army Building on Whitehall Street. Further up Whitehall Street can be seen the Kemble Building, and to the right of the telephone building stands the new structure just erected at 10 Front Street by the National Park Real Estate Company.

### *At Bowling Green*

The Standard Oil Building at 26 Broadway is in the heavy shadow cast by that trio of Edison Served structures, the Cunard Building, the Bowling Green Building and the Inter-

national Mercantile Marine Company Building. At the left of the picture as one looks up West Street are the Crystal Building and the new offices of the Barrett Company. A glance up Greenwich Street reveals a corner of the indoor Curb Exchange.

In the group of buildings at the centre and right background of the picture can be seen the Munson Building at Wall and Beaver Streets, the smoke stack of the U S Assay Office on Wall Street, the dome of the Consolidated Stock Exchange at Broad and Beaver Streets, the American Surety Building at 100 Broadway, the Commercial Cable Company at Broad Street and Exchange Place, the Fire Companies' Building at the junction of Liberty Street and Maiden Lane, and the plant of the New York Steam Company on Burling Street. Sub-stations of The New York Edison Company are located at central points throughout the district, but although their service is far reaching the buildings themselves cannot be seen.

In the Park itself are two other buildings, the Barge Office through which land the thousands of immigrants who have passed the Ellis Island tests, and the New York Aquarium with its marvelous collection of fish.

This airplane view shows only a small part of the great metropolis. Photographs of other sections of the city, taken by Major Maxwell, reveal the extensiveness of the territory supplied by Central Station Service. They will be published in succeeding issues.

## Armaments

**N**OWHERE in the elaborate plans for world wide peace as discussed at the Conference on the Limitation of Armaments do you find a place set aside for hearing the claims of the Kingdom of Lilliput. In giving places to Secretary Hughes and the foreign delegates, the conference agenda makers seem entirely to have overlooked the existence of this little kingdom. This in spite of the fact, that so far as naval armaments are concerned, the Lilliputians seem to have more cause for fear than any other peoples. Their fears are founded on the alarming reports made by their own secret service agents who state that even while the peace delegates are in session, the various countries represented are rushing to completion great fleets of battle ships and auxiliary vessels.

According to these agents, there is a very strong anti-Lilliput sentiment in the United States. "This sentiment" according to a report of Admiral Skyresh Bolgolom, chief of the Lilliputian spy system in the United States, to Emperor Golbasto Et Cetera Uly Gue, "is shown, not so much by hostile demonstration and outspoken adverse opinion, as by an effectively carried on program of ship building. While we feel reasonably certain," he says, "that restrictions in armament will take place so far as the countries represented at the Conference are concerned, we view with grave alarm the construction of ships which we believe are designed solely for the conquest of Lilliput."

According to the Admiral's report these ships include every type of war

vessel from submarine to battle-cruiser. Considerable space is given to the construction details of "these huge craft," which are described as being of the unheard length of 108 inches with a beam of 12½ inches. Each of the ten ships of this class will have a main



*Photograph by The New York Edison Company*  
The Reproduction of the Old Frigate "Constitution"  
Is Perfect in Every Detail

battery of eight rifles of great range and penetrating power. Supporting the battle cruisers will be ships of the dreadnought type, scout cruisers, destroyers, submarines, and air craft. These with the auxiliaries are made much of in the report of the Lilliput secret service agents to their great emperor.

Apparently spies had gained access to one of the establishments where these ships are being constructed and a

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large part of the report is devoted to a description of the plant of the H E Boucher Manufacturing Company. This plant according to the report is located at 150 Lafayette Street, in the heart of New York. "We cannot understand why a ship building plant should be located so far from water unless it is to prevent discovery. Indeed the plant has little of the aspect of the usual shipyard. For one thing there are no smoke stacks, all of the operations being carried on by electricity which is supplied by underground wires from a central station several miles away."

The report concludes with the assurance that the conference will be watched carefully for hidden meanings and that the activities of the shipyard will be observed closely.

*In the files of the Secret Service Department of the Kingdom of Lilliput, and dated one month later than the report from which the above extracts are taken, another despatch was found. Like the first despatch it is from Admiral Skyresh Bolgolom, to King Gobbasto Et Cetera Ully Gue:—*

"One month ago I reported to Your Majesty at considerable length regarding what appeared to be the indications of hostile feeling on the part of the people of the United States toward the people of Lilliput. It is with deep humility that

I write now to say that we were entirely in error in the conclusions shown by that report. There is nothing but the friendliest feeling toward your people, and the ship construction which we thought was directed against Lilliput was nothing more alarming than the making of miniature reproductions of the ships of the American Navy. The Boucher establishment which we described has specialized in the making of such reproductions for more than seventeen years. The ships which caused us so much concern a month ago are part of an order from the United States Navy Department for miniatures of every type of American Naval vessel since the Revolutionary War. These are to be preserved by the Navy as a historical record; and will be exhibited throughout the country.

"In addition to miniatures of naval vessels this company builds reproductions of cargo carriers and passenger vessels. These are displayed by the steamship companies in their ticket offices or show windows where they prove effective in advertising. A min-



*Photograph by The New York Edison Company*

Reproductions of the Electric Generating Equipment of the Hell Gate Station Are Being Made

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ature of a warehouse is also being built as are copies of the generating machinery of one of New York City's new electric power plants. The company also builds miniature yachts and power boats. The power boats are fitted with steam engines which give a speed of fifteen miles an hour or with electric motors and storage batteries. Although they are no more than four inches in height the engines are as accurately constructed as to be perfect in every detail.

"Realizing the diplomatic embarrassment that the erroneous report of a month ago may cause, as well as our own apparent incompetence, I have today accepted the resignations of all members of the staff who were concerned with its preparation and I hereby tender my own resignation from Your Majesty's service."

### The Wheels of Progress

Said Old Man Lamp: "Electric lights,  
I will admit, are worth their price,  
BUT—when the circuit's out of  
joint,  
My kerosene is pretty nice!"

Sniffed Granny Candle: "'Lectric  
bulbs  
Are useful if one wants to SEE,  
BUT—when a hostess young would  
look  
Her prettiest, she uses ME!"

The Light maligned, these Ancients  
heard,  
And chuckled unconcernedly.  
"BUT—what's the use of arguing?  
Old folks are all alike!" quoth He.

*Mazie V Caruthers*



*Photograph by The New York Edison Company*

One of the Battle Cruisers, Whose "Unheard of Length" of 108 Inches, Caused the Groundless Fears of Admiral Golgolom

## Meat Deliveries

**T**HAT advertising in its various forms is a profitable method of attracting interest is proved in the case of the Sayles-Zahn Company, wholesalers of meat at Sixth Avenue and Tenth Street. Having seen the newspaper advertising and read several pamphlets issued by The New York Edison Company to explain the benefits of electric truck service, Mr Bernard Zahn began to compare the cost of operating gasoline trucks with the probable cost of operating electric trucks. Following hard upon this, Mr Zahn in October 1920 visited the New York Electrical Exposition, at the Grand Central Palace. The electric trucks on exhibit there and the arguments advanced by the salesman proved so convincing that an order was placed for a three-and-one-half ton Walker, equipped with a 44 cell 21 M V Exide Ironclad Battery. This truck is now completing its first year's service and has more than justified its purchase.

Considering that the company handles a quantity of meat in excess of 900,000 pounds a month, it can readily be seen that both the electric truck and the gasoline trucks are kept constantly busy. The electric truck commences work at 4:30 a m and is finished at about 2:00 p m. Besides doing heavy hauling the electric makes deliveries as far as One Hundred and Twenty-fifth Street, Manhattan, carrying eighteen wicker baskets in which the meat is packed. The gasoline trucks are used for all long distance work. It may be noted here that during the winter of 1920 when the snow-

fall was so heavy that traffic was seriously impeded, one of the firm's three-and-one-half ton gasoline trucks became stuck in the drifts. The electric was sent to pull it out. Despite the fact that it was not equipped with anti-skid chains, the electric accomplished its task.

It is sometimes stated that the electric truck is not fast enough for city deliveries. As if to prove the contrary, the Sayles-Zahn electric averages twenty-five miles a day, and is capable of a speed of twelve miles an hour. While twenty-five miles a day is its average run it is called upon to go to Sixty-third Street, Brooklyn, twice a week and has often been as far as Newark and return. The Newark trip is a matter of thirty-six miles. The longest run the truck has made on one charge of the battery is forty miles; there was still sufficient current left to carry it some miles further. Regarding the load capacity of this electric truck, Mr Zahn says that it regularly carries between three and four tons and it has carried 11240 pounds.

### *Ventilating Arrangements*

An unusual feature of this truck is the ventilating arrangement. At the top of the side panels, on each side, and flanking the sliding door, are two gratings. These openings allow free air circulation and aid materially in preserving the freshness of the meats.

The electric truck of the Sayles-Zahn Company, although doing identically the same work as the gasoline trucks, and doing it satisfactorily, has a yearly repair cost of less than one hun-



## The Edison Monthly

dred dollars. The truck is garaged at the Twenty-third Street Garage of the Exide Battery Depots Company, Inc. During two hundred and forty possible working days the battery has never been out of service. Part of the business of this Company is the supplying of meats to clubs, hotels, restaurants and steamships. Many of the customers are out of town, requiring shipment by train or steamboat, and whenever a pier delivery is necessary the electric truck is used. This is a factor for economy because the truck consumes no fuel while standing in the line of vehicles at the docks.

Up to the present the electric has performed its duties so well and has shown such a marked saving over the gasoline truck for city deliveries that the Sayles-Zahn Company has decided to add other electric trucks to its fleet to handle their increasing business.

### Electric Vehicle Men Hold First of a Series of Meetings

At a meeting of transportation engineers and automobile dealers, held on December 2nd, Mr James H McGraw, President of The New York Electrical League, declared that the time is coming when "the horse will quickly disappear from our streets and the gasoline truck will have to fight hard to maintain its existence."

The meeting was held under the auspices of the Automobile Bureau of The New York Edison Company, at 44 West 27th Street, Mr Charles S Skinner, Jr, was the chairman and other speakers were Mr Henry S Baldwin, of the General Electric Company who spoke on the technical aspects of electric trucking, and Mr A Jackson Marshall, Secretary of the National Electric Light Association.



*Photograph by The New York Edison Company*

This 3½ Ton Electric Truck Is Completing Its First Year in the Service of the Sayles-Zahn Company

## The Edison Monthly

Mr McGraw's paper, which was read by Mr William H Onken, was entitled, "Looking Forward to the Future of Electric Trucks." It said in part:—

"With a growing appreciation of the service achievements and possibilities of the electric truck, we are facing a new era. Henceforth we may look for a sane and consistent development with the electric truck occupying the field in which it is supreme, where its usefulness is practically unlimited and its possibilities greatest. That field is urban transportation, and the place where it is densest is right here in New York City.

"While over half of the electric trucks of the country are being operated in the New York district, it is significant as emphasizing the economy and reliability of electrically-propelled vehicles, that their use is also increasing greatly in cities like Chicago, Boston, Philadelphia, Cleveland and Detroit. Last year the increase in New York City alone was over 400 per cent, and there seems to be no reason why that percentage should not only be increased but also maintained for many years to come.

"Where electric trucks are used there is relatively little confusion and congestion; they are self-starting, occupy a minimum of space and possess marked ability in winding in and out of traffic. The ultimate solution of our congestion problem, granting proper regulation of traffic on the streets, is to be found in some sort of container delivery, whereby the truck will simply deposit the container with its load, and move on just as is now being done on a smaller scale with the storage battery tractors equipped with

elevating platforms. The electric is the only type of vehicle which will permit of freight movement in this way and when once such a plan is carried out thereby insuring minimum-time consuming movements so far as trucking is concerned, the horse will quickly disappear from our streets and the gasoline truck will have to fight hard to maintain its existence in city delivery service."

Mr Baldwin's paper, "The Application, Field and Economy of the Electric Truck" covered very thoroughly the technical aspects of the subject. Mr Baldwin said:

"It would be futile to attempt to compare the tremendous growth and production of the gas truck during the past fifteen years with that of the slow but steady growth of the electric truck. It is true that both are motor vehicles, and that they are used for the purpose of transporting merchandise through our streets and highways. The application of each form of motive power, however, to propel commercial trucks involves certain marked structural differences which place each in a distinct and separate field of operation."

The December meeting inaugurated a series of monthly conferences planned for the coming winter. It was attended by representatives of the following electric vehicle and accessory companies: Walter Motor Truck Company, Ward Electric Vehicle Company, Walker Vehicle Company, Commercial Truck Company, O-B Company, Lansden Company, Baker R & L Corporation, the Exide, Philadelphia and Edison Storage Battery Companies and The New York Edison Company.

## Coffee, Now and Then

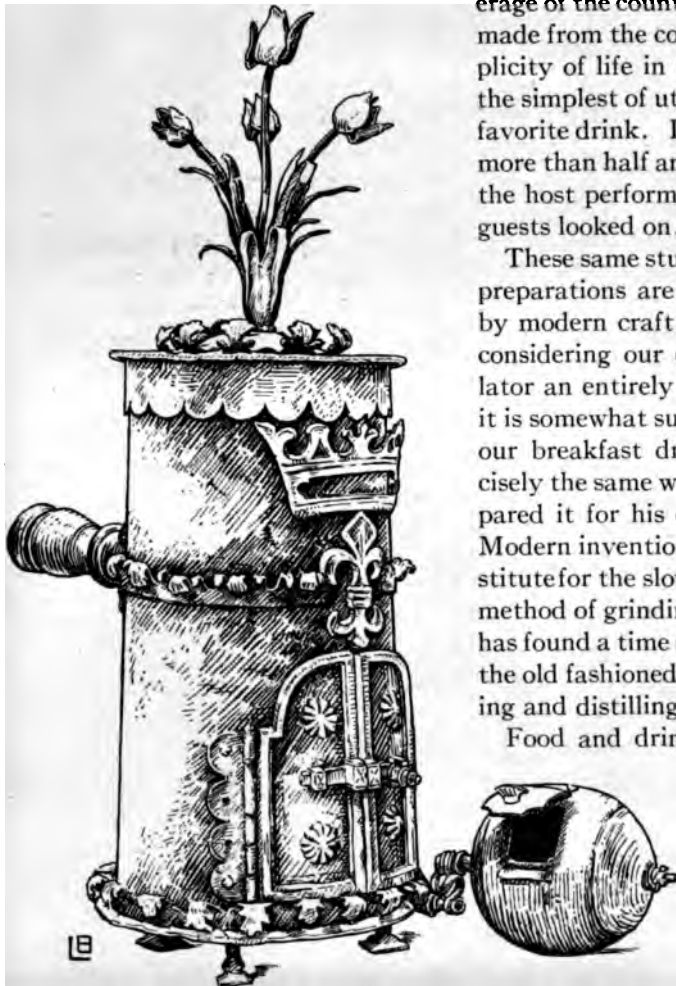
**W**HEN the world lived in a more leisurely fashion individuals took their pleasures in a ceremonious manner consistent with the times. Its men and women did not hasten through breakfast and on to the work of the day; their social engagements were not crowded into the left over hours. There was more

time to devote to the little conventions considered so important a part of gatherings for the exchange of thought.

And while wise men of far away Arabia, Egypt, Abyssinia discussed the momentous questions of the period it was the custom to spend much time over and give much attention to the preparation and enjoyment of the beverage of the country, a thick, dark fluid made from the coffee berry. The simplicity of life in those days called for the simplest of utensils in brewing this favorite drink. Its decoction required more than half an hour and sometimes the host performed this rite while his guests looked on.

These same studied and painstaking preparations are duplicated perfectly by modern craft. We are so used to considering our electric coffee percolator an entirely modern device, that it is somewhat surprising to learn that our breakfast drink is made in precisely the same way that the Arab prepared it for his distinguished guests. Modern invention has provided a substitute for the slower mortar and pestle method of grinding coffee, and science has found a time saving alternative for the old fashioned and prolonged roasting and distilling process.

Food and drink knowledge spread from nation to nation, even though travel was by camel or horse, and we discover that when efficacy of the dark looking drink was understood by the Mollahs of Arabia,



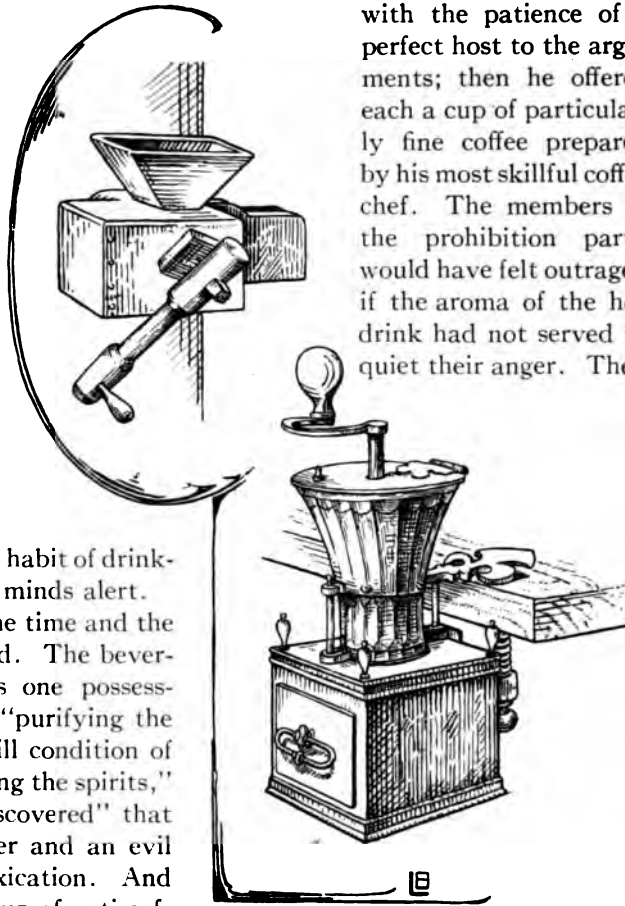
*Illustrations by Edna Hood Linnak*

**This Italian Wrought-Iron Coffee Roaster of the 17th Century Was Heated by Alcohol**

## The Edison Monthly

that country adopted the coffee drinking habit from Africa. At first the custom prevailed in those far eastern countries only among men of letters and the professions. They found brain stimulation in their draft of coffee. Those of lower station soon began to enjoy its delicate flavor and inspiring effect, and persons traveling by night, to avoid the heat of the day, made a habit of drinking coffee to keep their minds alert.

All went well for some time and the coffee custom flourished. The beverage was recognized as one possessing rare properties for "purifying the blood, dissipating the ill condition of the stomach and arousing the spirits," and then someone "discovered" that coffee possessed another and an evil property, that of intoxication. And forthwith an active group of anti-coffee drinking men set about having the national beverage prohibited. Matters apparently reached a climax when the chief priest of Egypt denounced the use of coffee in emphatic terms. The people of Cairo would not have been more perturbed even if they had been born several centuries later and faced the prohibitory Volstead Act. They raised a violent commotion. Sheik Obelek, governor of Cairo, and leader of the "wets" had a subtle answer ready for the anti-coffee crusaders. He invited them to gather at his palace and discuss the iniquity of the coffee berry. The governor listened



The Domestic Coffee Mills of Twenty Years Ago Were Not Much Different in Design than These French Contrivances of the 18th Century

sipped the beverage and with each taste their protests grew weaker and weaker. The upshot of the governor's little coffee party was that the prohibitionists went away without further ado and coffee remained the favored drink in the houses of Cairo and elsewhere in Egypt.

Coffee artists in those early days discovered three excellent ways of preparing the drink. The first was by infusion or drawing; the second, by decoction or boiling, and the third, by

with the patience of a perfect host to the arguments; then he offered each a cup of particularly fine coffee prepared by his most skillful coffee chef. The members of the prohibition party would have felt outraged if the aroma of the hot drink had not served to quiet their anger. They

## The Edison Monthly

filtration or distilling. All three methods are used today, though the third, perhaps, is the most popular one, particularly with those who employ a percolator and who switch on the electric current to perform the office of the ancient charcoal burner. In olden days and even in Colonial times a mortar and pestle were used for pounding the coffee and either an earthen or copper pot for roasting. The process is the same used in the modern household where home roasting and grinding are preferred, but the grinding is now reduced to a few swift turns of an electric cutter.

For comparative purposes visualize an Arab coffee making scene. Much formality attends the rite usually performed by a member of the Arab Chief's household. First he takes a porous earthenware pitcher, sets it upon a bed of hot ashes and leaves it until the moisture has entirely evaporated. When it is properly heated he pours in the freshly roasted and finely powdered coffee, adds a bit of salt and lets the coffee heat through. After that he pours boiling water over the powdered berries and lets the pitcher stand in the hot ashes until the coffee settles on the bottom.

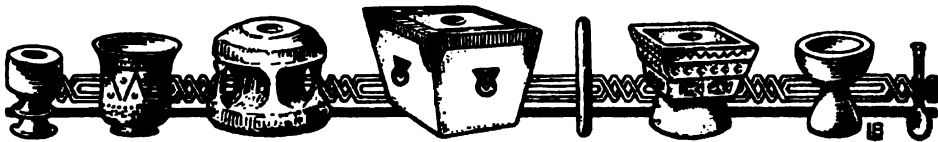


A Type of Coffee Pot Still in Use in Switzerland. The Ashes from the Wood Fires Are Kept in Great Heaps to Retain the Heat

Here is another coffee scene in an Arab household. You see bellows and glowing charcoal. The Arab selects a large metal coffee pot, fills it two-thirds full of water and sets it close to the edge of the charcoal where it slowly heats. Next he pours into a grass trencher three or four handfuls of roasted coffee, picks out the blackened berries, pours the good ones into an iron ladle and proceeds to roast the coffee. The berries redden and crackle but he does not let them get black or

burn. He takes them off the coals and leaves them to cool.

It is now time to grind the coffee. He uses a stone mortar and long thin pestle with which he smashes the berries, using care not to powder them. He pours the ground berries into the pot with the water and sets it on the fire to boil. He stirs the mixture with a small stick, adding a few spices. When the coffee has boiled the Arab strains it through palm bark fibre and serves it with the dignity of a king knighting a subject. The romance and ceremony which attended this ancient method seem to lend traditional charm to the fragrant beverage which we draw from our modern percolator.



February



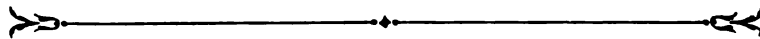
Old Watch House at Wall and Broad Streets

1922

VOLUME 14

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## The Edison Monthly

### The Edison Monthly

Published by

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WALTER NEUMULLER, Secretary  
FREDERICK SMITH, Treasurer

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Who, in the contemplation of wireless service a decade ago, would have ventured the prediction that the winter of 1921-1922 would witness a widespread and growing use of radio as a means of providing entertainment and broadcasting news to vast audiences of non-expert operators. Yet that is what is taking place.

After the principles of wireless telegraphy had been applied to the telephone, use of the apparatus was no longer restricted to those proficient in the telegraphic code, or to those desirous of learning it; the ether was filled with messages which needed no interpretation, and of sounds pleasant to hear. All that one required was a receiving set, and an evening's entertainment and the news of the day could be picked from the air.

With the war-time restrictions on the use of radio removed popular interest in the wireless telephone took a big jump last July when reports of the Dempsey-Carpentier fight were broadcasted from the arena in Jersey City to wireless receiving stations all over the eastern part of the country. Interest was still further increased with the broadcasting of special musical programs and baseball bulletins from the New York Electrical Show last October, and recently the manufac-

turers of radio apparatus announced permanent broadcasting services.

A typical program of one of the broadcasting stations consists of hourly news bulletins given right through the day, bedtime stories for the children, concerts by artists whose names are known throughout the music-loving world, addresses or lectures by men of affairs, and a special service regarding sporting and similar events.

Thus, wireless telephony, starting as a fad a few years ago, has become an accepted feature of home life.



The seventy-fifth anniversary of the birth of Thomas A Edison and the fortieth anniversary of the beginning of Edison Service in New York both occur this year. On February 11 Mr Edison will celebrate his birthday; in September the electrical industry will observe the anniversary of the beginning of the present system of electrical generation and distribution.

Central Station Service, of which Edison Service may be said to be typical, had its beginning in an old brick warehouse at 257 Pearl Street which had been remodeled to meet the requirements of an electric generating station. The plans for this station, as well as those for the distribution system which it supplied, were conceived by Mr Edison and executed under his direction. Work was carried on during the spring and summer of 1882 and the system, supplying a square mile of territory, was placed in operation on September 4 of that year. Thus the history of Central Station Service, and particu-

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larly of its beginnings, is a story of the early work of Mr Edison and lends added interest to the fact that his diamond birthday and the emerald anniversary occur but a few months apart.



A message from Washington saying that President Harding, in accordance with an old-time custom, was planning to place lighted candles in the windows of the White House was followed almost immediately by another message which stated that he had decided to forego the custom. The two news items appeared in the papers on succeeding days.

Back of the President's decision is an interesting story of the efforts of the Underwriters' Laboratories to prevent the use of the dangerous open-flame candle for Christmas decorations. As soon as the underwriters learned of the plan to place candles in the White House windows a message was sent to Washington pointing out the danger, and especially the danger in the example that would thus be set for other homes—homes where protective measures undoubtedly would be less adequate.

Fortunately for those who cherish the old-time customs the requirements of safety do not mean that windows must be darkened during the holiday season. The miniature electric light which has made the Christmas tree safe is just as adaptable to the holly wreath; in fact, many windows were observed during the holidays in which the tiny red bulbs gave an air of warmth and holiday cheer to the greens. Inquiry revealed that tree-lighting outfits had been wired to each wreath,

the usual eight lamps which make up such a series proving ample for even the largest. Where two small wreaths were used in adjoining windows, the series was divided so that four lamps were available for each wreath, a connecting wire reaching between the windows to maintain the series circuit.

Aside from its danger the lighted candle in the window was undoubtedly a picturesque Christmas decoration; electric lights on the holly wreath are just as picturesque and the element of danger is entirely done away with.



That the Philadelphia Museum was to be brilliantly illuminated every evening, and that there would be demonstrations which included chemical and electrical experiments was a matter of considerable importance to Philadelphians one hundred years ago. As Poulson's Advertiser, on Dec 17, 1821, announced:—

"The publick are respectively informed that the Philadelphia Museum will be brilliantly illuminated every evening for two weeks at early candle-light, and a great variety of pleasing and useful objects will be exhibited at 8 o'clock each evening, such as the Astronomical Demonstrations, and a variety of Grottesque Figures with the Magic Lantern. Demonstrations showing the pressure and elasticity of the Atmosphere, etc, with the Air Pumps, Experiments in Chemistry and Electricity, etc.

"The Museum has lately undergone vast improvements, with late additions, and kept always comfortably warmed for the reception of visitors, from sunrise until 10 at night. Admission: 25 cents, children, half price."



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### Song of a Street Lamp

Above the shadows that crouch at my feet  
The rays of my lamp beam out,  
And I peer down the murky, winding street  
Where noon heard the children shout.

My eye is balked by the ghostly woof  
The mist has threaded, between  
The squalid tenement's broken roof,  
And the homes where gold is seen.

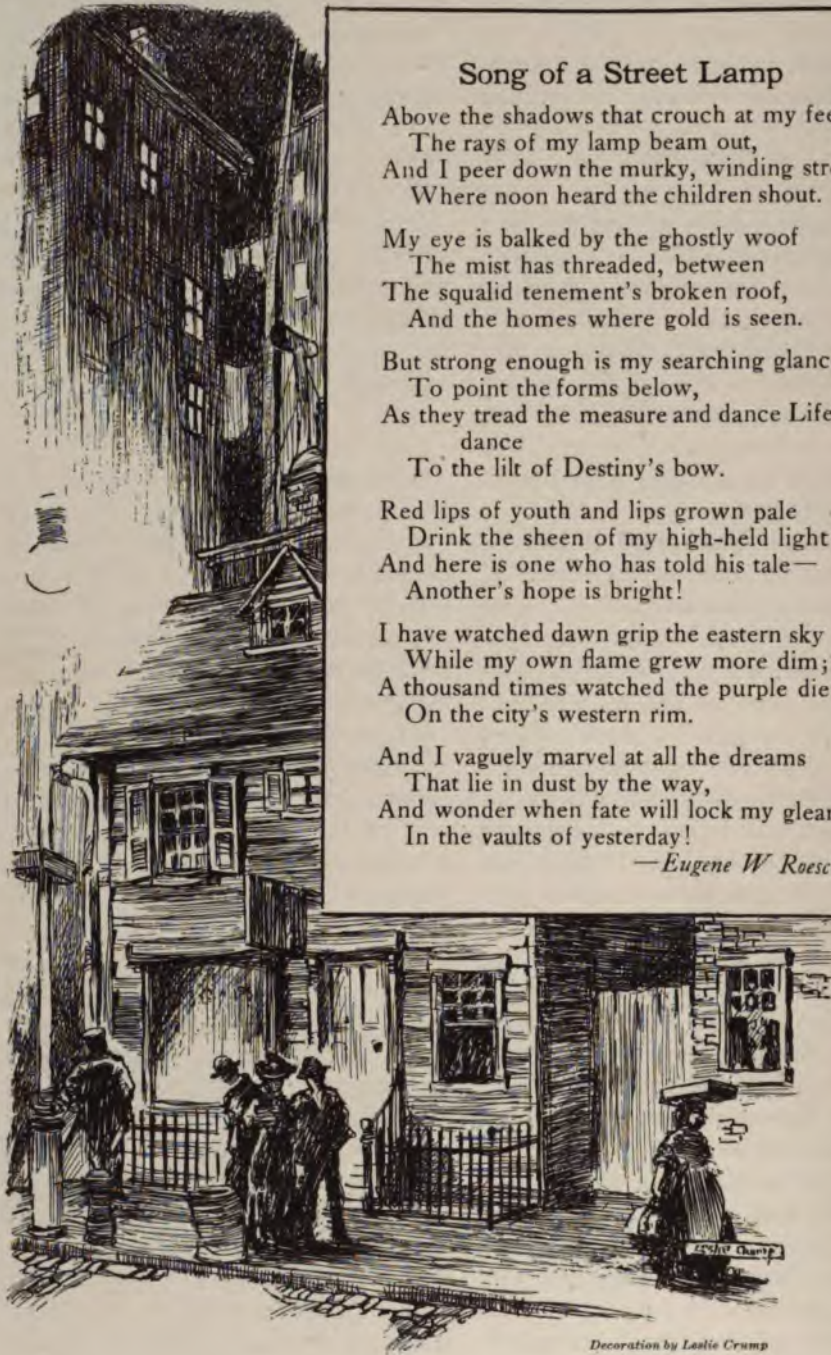
But strong enough is my searching glance  
To point the forms below,  
As they tread the measure and dance Life's  
dance  
To the lilt of Destiny's bow.

Red lips of youth and lips grown pale  
Drink the sheen of my high-held light.  
And here is one who has told his tale—  
Another's hope is bright!

I have watched dawn grip the eastern sky  
While my own flame grew more dim;  
A thousand times watched the purple die  
On the city's western rim.

And I vaguely marvel at all the dreams  
That lie in dust by the way,  
And wonder when fate will lock my gleams  
In the vaults of yesterday!

—Eugene W Roesch



Decoration by Leslie Crump

## “There’s Music in the Air”

**T**HERE are between 250,000 and 300,000 amateur operators of wireless stations in the United States. Without exception these stations were placed in service after the government lifted the war-time ban on indulgence in wireless by any but government operators. Popular interest in radio is still growing. Since early in the holiday season the demand for receiving sets has been so great that manufacturers have not yet caught up with their orders.

The tremendous popularity of wireless, either as a technical hobby or as a form of general entertainment, is entirely due to the application of the principles of wireless telegraphy to the telephone. In the days when listening in at a wireless receiving station brought nothing to the untrained ear but a meaningless jumble of harsh sounds (an operator, of course, would recognize the noise as perfectly good telegraphic code) there was little to induce the laymen to adopt radio study as a hobby. Boy scouts took it up, and those who were interested in technical matters and had learned the code found it an intensely interesting pastime.

### *Wireless Available to Everyone*

Now, in the development of the wireless telephone, the fascination of radio is available to everyone. No technical training is required to install and operate a receiving set and no deciphering need be done to understand the messages which may be picked from the ether. Of all the stations in the United States, about

185,000, according to Mr J Andrew White, president of the National Amateur Association, are east of the Mississippi River. There are 25,000 in New York City and a very large percentage of the total are in suburban or rural homes where very often they afford the only pastime.

What a wireless receiving set means to an isolated dwelling is very eloquently set forth in a letter received recently at Association headquarters from a Canadian mine superintendent. He is stationed ten miles north of Three Rivers in the Province of Quebec and his three sons, who are scouts, are with him. He writes, “We listened to your program for the first time Friday night and enjoyed it very much. Everthing was perfectly clear and you can hardly realize what it means to us here during the long Canadian winters.”

Not only does the wireless telephone bring entertainment to the lonely dwelling but it brings gayety and life to the homes of young people. Witness the letter from Connellsville, “We were dancing with you last week. Keep up the good work.” There were doubtless thousands of other couples all over the country dancing to the same music. While a great many prefer jazz, there are others who would like to have opera exclusively; still others ask for a varied program. Of these a doctor in Brooksville, Pa, is typical. He says, “I want to thank you for the pleasure your broadcasting of music, etc, has given my family and myself, including also a great number of friends. I received your first con-

## The Edison Monthly

cert and have not missed one since. I enjoy the dance and orchestra music best, although the operas are fine. It is certainly fine for people who are in the country and not able to see the different operas to be able to hear the music and have a complete description of the opera given them at the same time.

Perhaps the greatest thrill of all is that which comes to the operator as he listens to his first concert over his own outfit. Certainly there could be no greater thrill than that of the boy in Green Bay, Wisconsin. His enjoyment of the program was only tempered by his impatience to learn its source. "When, at the end of the program, the speaker said 'Roselle Park', I nearly dropped dead as I never



*Photograph by The New York Edison Company*

Sophie Tucker and Her Jazz Band Singing at the Electrical Show Station

expected to hear music from that far, let alone the fact that this was my first attempt at radiophone."

Alive to this growing interest on the part of amateurs, manufacturers are developing sets which are remarkably simple, so simple in fact that they can be set up with no other help than the printed directions which accompany each outfit. It is the manufacturers also who are arranging the broadcasting services and assuring operators that they

can depend on finding something in the air at stated intervals. Permanent broadcasting stations have been established at Boston, Newark, Pittsburgh and Chicago.

There are two stations in Newark. One is the W D Y studio of the Radio Corporation of America, and the other is the W J Z station of the West-



*Photograph by The New York Edison Company*

An Amateur Listening to a Wireless Concert

## The Edison Monthly

inghouse Electric and Manufacturing Company which is operated in conjunction with the Newark *Call*.

A typical W J Z program includes musical selections at stated hours during the day, bedtime stories for the little folks, stock market reports, weather reports, business letters, special music, a daily news summary and Arlington time signals. The W D Y service is given only in the evening and it consists, in addition to news reports, of a musical program made up of operatic airs, concert numbers, popular songs and dance music.

In addition to these broadcasting stations there are approximately 1500 amateur transmitting stations. For a receiving station no operating license is required, but for transmitting the government issues a permit and assigns a station call number. The applicant must know the continental code and be able to receive and transmit a certain number of words a minute.

There is something very fascinating in listening to music and speech just picked out of the air by a strand of copper wire one end of which is fastened to your chimney or to the big tree in the yard and the other to the compact radio-*phone* in the living room! Within a couple of hours after the set has been delivered to your house you can be listening in. Besides the regu-

lar programs one can hear conversations carried on between owners of transmitting sets. This listening in is not considered as eavesdropping for the air is free to all. A storage battery supplies the necessary current for the operation of the phone.

The uses that may be made of the wireless telephone are almost without limit. One cannot calculate the comfort it would prove to a bed-ridden invalid whose only contact with the outside world had been through the newspapers and the occasional visits of friends; or to others who like the mine superintendents will get their evening entertainment, church services on Sunday, and news throughout the day.

The broadcasting of news of special timeliness is also proving a valuable service to amateurs. The voices of opera singers are being transmitted from the Chicago Opera House and it may not be long now, in view of transoceanic development, before we can pick up our head pieces and listen to opera from Milan, Paris, or Madrid.



*Photograph by The New York Edison Company*

The Shannon Four, Singing at W J Z, Have Entertained Thousands of Audiences

# The Edison Monthly



*Photograph by Major Hamilton Maxwell*

New York's Administrative Centre, the Wholesale Dry Goods and Grocery Districts, the North River Water Front and Newspaper Row as Seen From an Airplane

## Airplane Views of Edison Service

THE administrative centre of New York City, the newspaper district, the grocery district, the dry goods district and a part of the North River water front offer an interesting picture of city life to the traveler whose airplane approaches lower Manhattan from Brooklyn.

The view, as the photograph taken by Major Hamilton Maxwell shows, is dominated by the huge bulk of the Municipal Building. The terminus of the Third Avenue L is in the foreground and the excavation for the new court house can be seen at the right. With the exception of City Hall Park there are a few open spaces in this important section of the city—its buildings range from the forty-story Municipal Building to the three- and four-story warehouses of the wholesale districts. As in the Battery Park Section, pictured in the January EDISON MONTHLY there are many fine buildings which have a common interest in the fact that they secure their electrical supply from The New York Edison Company.

### *Newspapers and Printers*

Of these, the largest is the Municipal Building. The Pulitzer Building, famous skyscraper of an earlier day, abandoned its private generating plant in favor of Edison Service more than a decade ago. The building at 150 Nassau Street, formerly occupied by the *Sun*, the Stewart Building at 280 Broadway now owned by the *Sun* and *Herald* and the *Evening Mail* on City Hall Place are all served by The New York Edison Company. The Hallen-

back Building at 495 Pearl Street, the Rhinelander Building at Duane, William, and Rose Streets and the Black Building at William and Frankfort Streets have among their tenants some of the leading printing establishments of the city. The Rhinelander Building is the home of the Hearst publications. Just to the south of this printing district is the interesting building of the New York Press Club on Spruce Street.

To the south of City Hall Park is the old Post Office. To the north are the old Stewart Building, the Emigrants Industrial Savings Bank and the M B Brown Printing and Binding Company. These three buildings running through from Chambers to Reade Street make a solid block of Edison Service. The Chemical National Bank at Broadway and Chambers Street and the Central Syndicate Building at 320 Broadway are typical of the Broadway office buildings which use Edison Service. North and east of these are the smaller buildings of the wholesale dry goods district. The grocery district, with Hudson Street as its main artery, has many fine Edison-served buildings.

To the west of the picture may be seen a small section of the North River water front. Electricity finds important uses here in the moving of freight. Many piers are equipped with electrical machinery for handling bales and packing cases, and electric industrial trucks and tractors are used on almost every dock. In the heavy traffic of West Street are to be seen big electric trucks representing almost every branch of the city's commerce and industry.

## Trucking to Ships

**I**N a business in which over six thousand separate articles are handled and must be picked up from the manufacturers and brought to ships lying at the various wharves and docks along the river fronts, transportation is a highly important factor. That the M K Bowman-Edson Company makes all its pick-ups and deliveries with electric trucks is conclusive proof of the reliability of the storage battery vehicle and the dependability of its service. The Bowman-Edson Company, with offices and stockrooms at 65-67 Dey Street, has supplied New York shipping since 1867, furnishing

all the miscellany of material called for in the outfitting of vessels.

For many years the delivery work of the company was done with horses; but finally, four years ago, comparative data pointed to the electric truck as being more economical. Accordingly two vehicles were purchased to take the places of four horse-drawn wagons. As the volume of business increased the delivery fleet was gradually enlarged until now there are four electrics ranging from the one thousand-pound wagon to the three-and-one-half-ton truck. One gasoline truck was also purchased but was discarded



*Photograph by The New York Edison Company*

The Four Electric Trucks of the Bowman-Edson Company Which Deliver Steamship and Factory Supplies to Purchasers in Every Part of the Metropolitan Territory

# The Edison Monthly

## SUMMARY OF TRUCK OPERATIONS 1920-1921

<i>Number of Trucks :</i>	One 1000 pounds, two 4000 pounds, one 7000 pounds
<i>1000 Pound Truck :</i>	Current consumption per month..... 1310 ampere hrs. Miles per month..... 436.1 Ampere hours consumption per mile..... 3
<i>4000 Pound Trucks :</i>	Current consumption per month (average)..... 1800 ampere hrs. Miles per month (average)..... 387 miles Cost per day (including all possible charges)..... \$12.28 Miles per day (average)..... 14.9 Cost per mile (low mileage)..... \$0.82 Ampere hours consumption per mile..... 4.6
<i>7000 Pound Truck :</i>	Current consumption per month..... 3070 ampere hrs. Miles per month..... 441.7 miles Cost per day (including all possible charges)..... \$13.49 Miles per day..... 19.4 Cost per mile..... \$0.69 Ampere hours consumption per mile..... 6.9

An Interesting Performance Sheet Covering Two Years of Electric Truck Operation

after its operating cost had been compared with that of the electrics.

In connection with the delivery of materials to vessels it is interesting to note that the three-and-one-half-ton electric truck is used for runs as far as Edgewater and Bayonne, New Jersey, and has covered distances of forty miles on a single charge of the battery. From November 1, 1920, to November 1, 1921, this truck averaged 19.4 miles a day at a total operating cost of 69c a mile. This included every item of expense—wages, depreciation on truck and battery, and garaging.

In speaking of the service rendered by electric trucks, Mr Marmont Edson, treasurer of the company, says, "It is an unfailing delivery service of this kind which has greatly assisted the growth of our business." He also adds, "Our electric trucks are more economical and better for us in every way than either gas cars or horses."

The one thousand-pound electric of this company is used in the pick up and delivery of small hardware, while

the larger trucks handle the heavy haulage. A typical month shows that one of the two-ton trucks travelled 387 miles with a current consumption of only 1,800 ampere hours.

One two-ton truck and the one thousand-pound wagon, which are equipped with Ironclad Exide batteries, are kept at the Exide Garage at Spring and Clarke Streets. The other two-ton truck and the three-and-one-half-ton truck, which are equipped with Edison batteries, are maintained at the 35th Street Garage of the Edison Storage Battery Company. Electric trucks of the two-ton size cost only \$12.28 a day and travel an average of 14.9 miles a day. The delivery radius includes the North and East River fronts, Brooklyn, Staten Island, Jersey City, Hoboken, Edgewater and Bayonne.

Everything, from toothpicks to heavy metal machinery and fittings, is handled by this concern which is in constant touch with more than fifteen hundred manufacturers and markets. Articles not carried in stock by the



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Bowman-Edson Company are secured by them from manufacturers, agents or jobbers and the electric trucks are called on to deliver the materials to the various ships from which the orders have come. During the war the Bowman-Edson Company, by means of its electric trucks, was able to fill all government orders, and the first eleven patrol boats sent to European waters were completely outfitted by them, as well as several ex-German liners at the Port of Embarkation.

The delivery system of the Bowman-Edson Company is "all electric", and after four years of experience the Company is convinced that no other mode of transportation could give the same consistently prompt and reliable service.

### Electrics at the Auto Show

With a 1,600 per cent increase in the number of electric trucks sold in New York last year over 1919, it is reasonable for us to anticipate a growing popularity for the electric type of passenger car in this city," declares R W Stanley, vice president and general manager of Rauch & Lang, Inc.

"The great increase in business recorded here by electric truck manufacturers took place at a time when other types of trucks recorded losses over the same period. Such a fact is a pretty sure index to my mind that corporations have been actuated by motives of economy in their motor truck purchasing. Not economy of first cost, but economy figured on a basis of ten years—the average useful life of electric car equipment.

"Nowadays sentiment is ruled out of business. To my mind the time has come when the individual in his pur-

chase of motor car equipment for personal use realizes that the chief thing connected with his purchase is transportation. Then comes the thought, 'Does he want to buy it on a basis of two, five or ten year replacement?' Isn't it sensible to suppose that if he can buy it on a basis of ten years and definitely figure his depreciation on that basis the ten year car is his logical purchase? That's what the big motor truck fleet buyers are doing. Why not apply the same rule to individual purchases for personal use?

"Such are the thoughts which give courage to the manufacturer of the electric automobile. He has always had to study and practice curtailed production. Why? Simply because he knows that when he sells a new car to a man that man in the majority of cases will not under any circumstances consider a new car for several years. The owners and users of electric automobiles to-day are quiet people of means who discriminate when they buy. Naturally, they own gas cars too but they recognize that as an auxiliary car the electric is incomparable. Nothing matches it in the city and suburbs for economy, long life, continuous service and practical usefulness for every member of the family.

"The electric is not especially popular with chauffeurs and it is seldom used by persons who let their chauffeurs arbitrarily determine for them their motor car selections. But the widespread and growing popularity of things electrical, the public consciousness that an electric appliance, whether it be an iron, washing machine, fan, toaster or what not, is the most reliable servant in his home is directly aiding the sale of the electric motor car."

## The Edison Monthly



*Photograph by H. Schoenhals*

On Watch During the Small Hours—the Night-cruising Cabby and the Edison Street Light

## The Ball Is Up

**A** SKATING season extending from early October to well into April may sound more like the lakes of the Adirondacks than New York City; yet the ice enthusiasts of this more or less temperate city, thanks to the application of science to sports, can indulge their fancy for more

surface in first class order. Two rinks in Manhattan, by reason of the perfection of their ice, have built up a tremendous patronage—Iceland, at Broadway and 55th Street, and the 181st Street Rink, at St Nicholas Avenue and 181st Street. At these rinks electricity is used in unusual



*Photograph by The New York Edison Company*

**A Detroit Electric Car. Fitted With Ice Gripping Wheels, Serves as a Tractor to Haul the Scraper Over the Ice at the 181st Street Rink**

than seven months of the year.

Swimming togs are hardly packed away before the Red Ball appears announcing that the ice is ready at the indoor rinks. And from that time on although the mercury may often climb above the 60 or 70 mark there is no interruption to ice racing, hockey matches or general skating sessions.

Artificial refrigeration provides the ice, and electrical devices keep the

ways in maintaining the ice surface. After each skating session the surface is scraped, and with the removal of the snow, the roughened ice is sprayed with water. This new water freezes very quickly and a perfectly smooth sheet of ice is ready for the next session.

The scraper at Iceland is drawn over the ice by a tractor which consists of a rebuilt Ford chassis, upon which has been installed a seven-and-

## The Edison Monthly

one-half horsepower motor. This motor is geared to the driving wheels and power is secured through a seventy-foot cable, connected with an outlet in the overhead girders. This long cable permits the tractor and scraper to cover every part of the huge skating surface; the cable arrangement is on the principle of

ened to the rear wheels, insure traction on the slippery surface.

After each session the machine pulls a long steel knife across the ice and scrapes the surface. Then, as at Iceland, the hose is turned on and after a short freezing period the ice is ready for the next skating session. For the purpose of charging the batteries a



*Photograph by The New York Edison Company*

A Rebuilt Ford, Equipped With an Electric Motor and a Seventy-foot "Attachment Cord" Helps Keep the Surface in Good Condition at Iceland

the cord for the household vacuum cleaner. In service for the past six years, the electric motor has never yet failed of its purpose and this most unusual of electric "industrial trucks" is still on the job.

At the 181st Street Ice Palace a novel adaptation of electricity is found. A Detroit electric passenger car has been secured and several Exide Battery cells added to those already in the car; heavily studded tires fast-

General Electric Company charging board is used in connection with a mercury arc rectifier.

It is a big advantage for the owners to be able to garage this car right on the premises and to be able to charge it there as well. Already in its fourth year of service, this remodeled passenger car is proving entirely satisfactory and goes to show the number of varied uses to which electric trucks and passenger cars can be put.

## Solving a Lighting Problem

SEVERAL months ago when the Rainier Motor Corporation moved into new quarters, at 235 West 50th Street, a rather puzzling and serious problem was presented by the lighting equipment already installed. Motor trucks were to be displayed in the showroom on the main floor, but the ceiling was low and the truck bodies were of such great height that it was impossible to place them under the fixtures. It was decided to change the lighting system, and the Bureau of Illuminating Engineering of The New York Edison Company was called upon for advice. After careful consideration of the conditions involved, a system, unusual in many ways, was decided upon. The Rainier Motor

Company has found the new installation entirely satisfactory.

The arrangement is unique and has brought forth many favorable comments from visitors. Twenty units have been installed flush with the ceiling, permitting the moving of trucks without danger of collision with any pendant fixtures. Each ceiling unit resembles, somewhat, a porthole. The covering is of French plate glass, ground in such a way as to allow for the passage of light through it with the maximum amount of diffusion. Endless pains were taken in the preparation of this glass and it was not until after two failures that a glass satisfactory to the illuminating engineer was found.



*Photograph by The New York Edison Company*

The Showroom of the Rainier Motor Corporation, Where the Lighting Fixtures Had To Be Placed Flush with the Ceiling to Insure Headroom for the Motor Trucks

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When the "porthole" is opened a two-hundred-watt lamp is revealed in a socket between the beams of the ceiling and the floor above. There is also a standard reflector of the corrugated, silvered glass type. Both lamp filament and reflector are arranged so that when the glass cover is in place the light rays are evenly projected through it and properly diffused. It is especially noticeable that there are no bright spots and no shadows, for the light is evenly distributed so that there is practically as great an intensity of light half way between two fixtures as there is directly under them.

The whole fixture is contained in a metal casing which, in turn, is carefully protected with an asbestos lining. This arrangement, with an especially developed ventilating system, meets all the requirements of fire-and-building laws and regulations, and was approved by the fire authorities. Along with the planning of the ventilating system there had to be taken into consideration the designing of air inlets in order to remove the dust that might filter in from the garage floor threatening to dim the light.

Besides drawing up the plans for this lighting system and supervising the installation, the engineer of The New York Edison Company advised what decorating scheme should be used for the walls and ceiling and drew up plans for lighting the show window and the two floors above.

It is a recognized fact that too much stress cannot be laid on the importance of the correct application of color to decorating. Since color absorbs light it is apparent that a study should be made of the color mixtures to be used, so that the room may obtain the

best effects from the coloring as well as from the lighting that is to be employed. The showroom walls of the Rainier Motor Corporation are done in gray produced by a very careful mixing of color pigments in which, contrary to the usual procedure, lamp black is not used.

The window in which cars are placed for exhibition purposes contains ten high-powered lamps in corrugated, silver-surfaced angle type reflectors that give an even distribution of light over the whole floor of the window. Depending upon the color of the cars on display colored gelatin screens are inserted over the opening of the reflectors. Amber and blue are used more than any other color, since these two colors may be blended to obtain a variety of tones. On the second and third floors commercially enclosed lighting units were installed.

The system has been in use since last June and has given absolute satisfaction. It shows that there is every reason why, when special cases arise where difficulties are met, problems should be solved instead of being allowed to go uncorrected. Special lighting cases demand special attention and lighting engineers are capable of giving that attention.

### Brilliance

If people would be up-to-date  
And sparkle repartee,  
It's plain that they must know the words,  
The language gives us free.  
Quick! Find a rhyme for *Light* and  
*Bright*  
(No, not as good as mine.)  
You may be right but also trite,  
Mine's *An Electric Sign*.

—Wanda Moore

# Modern Dairy Methods

**D**IRECTING pen to the subject of the cow in the pasture and what science has been able to do to improve the relation which that most valuable domestic animal bears to the milk in the bottle, the butter in the crock, the cheese in the case and the cream in the coffee as well as in the various iced forms, one discovers facts which are vitally interesting.

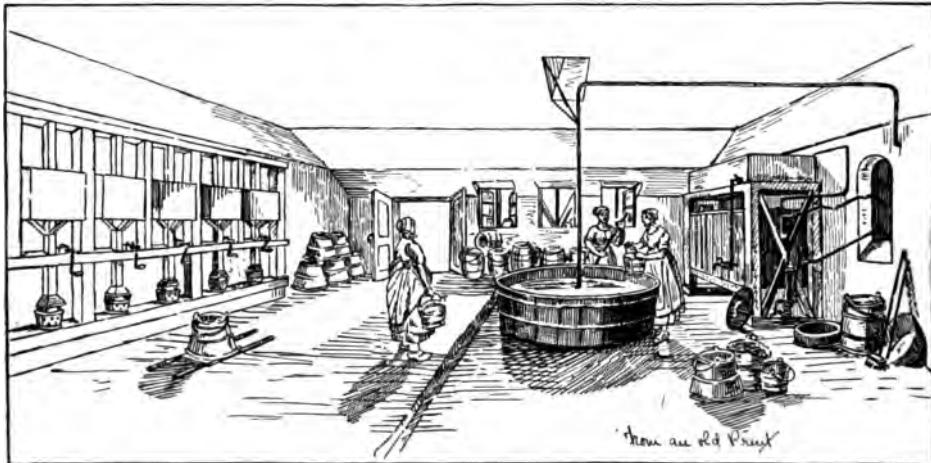
As the locomotive was destined to become the successor to the lumbering stagecoach, so it was inevitable that a way should be found to eliminate the obvious crudities of the early method of handling the products of the milk herds. It was an occasion for the inventor. The field had long been ripe for his genius. How well he succeeded may be judged by the extent to which mechanical equipment is used in the large dairies today—milking machines have replaced the dairy-maid, centrifugal separators have displaced crude

methods, and scientific processes insure cleanliness and purity.

In the Holstein District—a noble breed of cattle bears the name—the practice of placing milk in shallow pans or vats and skimming the cream therefrom with flat wooden spoons had shown no deviation since the 13th century. In Germany as late as 1871 milk for cheese was soured by means of steam heat directed into a tub, attended by robust milk maids. Other antiquated methods were still in vogue in various sections with respect to butter making.

In the seventies the attention of a young and ambitious Swedish engineer, Carl Gustaf Patrik De LaVal, was directed to experiments looking to a means for separating the cream from milk by a mechanical process. That was the beginning.

Having noted attempts to apply centrifugal motion to the separation of sugarcane juices, De LaVal ac-



*Illustrations by Edna Hood Linnak*

**The Steam Method of Expediting the Soured of Milk for Cheese-making in Use in 1871**

## The Edison Monthly

cepted the principle. He worked on it for years, and in 1878 the original separator was given its official test. It operated finely. It discharged the cream and skim milk separately while the milk was being fed into the machine. It became the first step in modern methods and practice. It made for efficiency and economy, time saving and a material enlargement of revenue.

The separator is composed of a series of sloping conical discs placed one above the other and spaced slightly apart by thin ribs much as would be the case if the bottoms were cut out of a lot of deep sloping pans and they were piled one on top of another in a pail. Fed into the centre of the receiving bowl, the milk passes outward as the machine revolves. The speed of operation makes the separation of the water and cream components almost instantaneous.

The first separator was run by hand, but the dairy business, growing ever larger and more important, power machinery became necessary. Thus the electric motor, thanks to the increasing distribution of electric power throughout the country, became immediately available.

Except on the smaller farms where there are a few cows, the mechanical milker is an accepted addition to the dairyman's establishment. It has made possible doing business on a large scale. Motor operated, a milker does the work of three men and be-

cause of the completeness of its operation adds an estimated \$10 to the yearly milk value of each cow. Throughout the entire country the total of these figures is placed at \$200,000,000, a sum which seems almost fabulous.



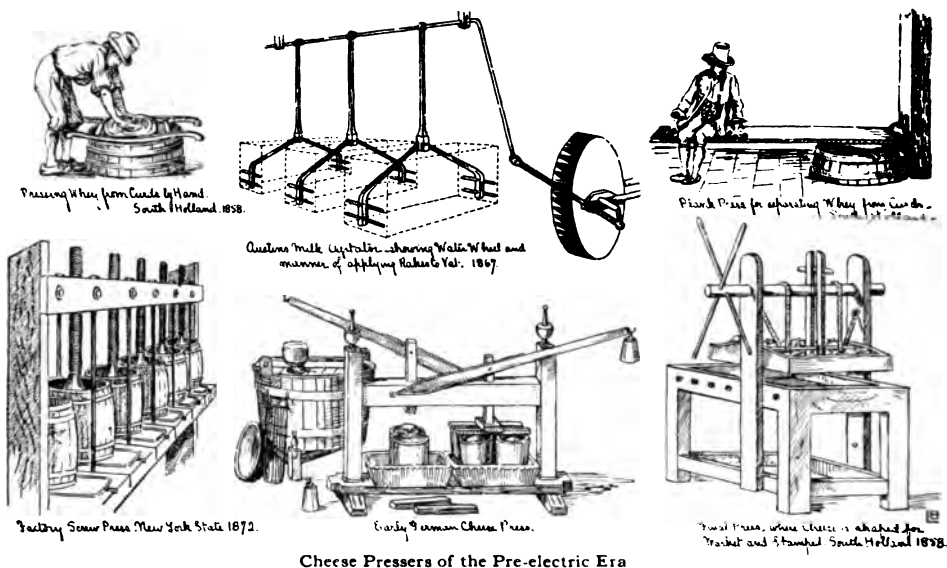
This Method of Separating Cream Has Been Used in Holstein Since the 13th Century

In the advancing movement for betterments in the dairy still another appliance has been generally accepted by the more up-to-date establishments. This is the clarifier. This machine, simple of construction and amazingly speedy in operation, removes impurities by centrifugal force but does it in such a way that the cream is not separated. It remains raw milk but with the solid impurities extracted. Pasturization follows clarification. One removes impurities and the other destroys the bacteria.

The marketing of milk and the products which find their basis in milk was once as slipshod as the way of handling was imperfect. A radical and most acceptable change was brought about when the authorities of our municipalities, coordinating their efforts with the representative men of



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Pressing Whey from Curds by Hand South Holland 1858.

Quebec Milk Separator showing Water Wheel and manner of applying Rake to Vat. 1867

Planck Press for separating Whey from Curds.

Factory Sauer Press New York State 1872.

Early German Cheese Press.

First Press where Cheese is shaped for Market and Stamped South Holland 1878.

Cheese Pressers of the Pre-electric Era

the dairy regions and the organized agencies of distribution, set themselves to the task of establishing standards all along the line. No product which comes to the consumer is now more thoroughly safeguarded than milk.

to do with preserving the integrity of this essential. Millions of bottles of milk and cream, the daily requirements of the city, conform to the rigid regulations of the Department of Health. In maintaining this high standard the great distributing concerns and the dairymen are alike dependent upon the mechanical aids which have been the outgrowth of the early De LaVal idea.

The Metropolitan district, which is undoubtedly the largest user of dairy products in the world, holds a deservedly high place in all matters having



Two-wheel Churn in use in East Woodland Germany in 1868. Dog Power was also used in Early Dairying in New York.

Various Types of Churns Which Preceded the Motor-driven Device for Making Butter

March



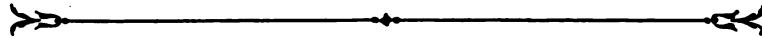
Park Row in 1840

1922

VOLUME 14

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## The Edison Monthly

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"The color organ has not caught our fancy enough as yet to make us intent upon seeing it," says Mr Heywood Broun of *The World*, "but we should like to have known the curious combinations devised by a monk of the middle ages who invented a taste symphony. He played it in the cellar. Brandies were the brass and burgundies the woodwinds. Nobody knows, we believe, what tunes he played. 'Coming Through the Rye,' perhaps. By the bye, that particular song seems to be falling into disfavor in these dry days. There are those for whom it goes against the grain." All of which is quite characteristic of Mr Broun, but it is a pity the color organ did not catch his fancy, especially as it bears such a very distinct relationship to the stage and a possible future development in scenic effects.

Here is a mechanical device so cleverly and skillfully devised that the effects it produces, by means of electricity, seem to belong to another world—a new world of dreams and imagination. This striking and wonderful example of mechanics is actually contributing to the world a new art.

Mr Thomas Wilfred, the inventor of this very remarkable instrument claims a future for it which, if it is realized, will probably revolutionize the art of stage decoration. At present the

Clavilux is a most interesting experiment, puzzling perhaps to the more hard-shelled and practical among us whose minds are filled with the clatter, clanging, hurry, and rush of twentieth century business, but fascinating to those who give free rein to their imagination.



When the electric delivery wagon—the light vehicle of 750 or 1000 pounds capacity—comes into general use by the neighborhood merchant, the horse will have been driven from his last stronghold in city delivery service. The corner grocer, the butcher, and the vegetable dealer still use horses in large numbers. One wagon and a horse have long seemed ample for the needs of the limited territory served by local merchants.

However, a start in the electrification of local delivery service has been made and in view of the fact that the electric has always made good wherever it has been properly installed, it is not too much to say that the near future will see a rapid increase in the use of the storage battery vehicle in this class of work.

One of the most recent installations of electrics for market deliveries is that of the Acker, Merrall and Condit Company. For many years this firm has used electric trucks for service between the warehouse and the various retail stores throughout the city, but for customer delivery the horse has been retained. Recently three 750-pound wagons were added to the motor vehicle fleet and assigned to retail shops serving customers in the Harlem territory. Their period of service has been too brief to make accu-

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rate comparisons possible at this time, but the service they have rendered has been so highly satisfactory that their use is bound to be extended. "We are seriously considering the replacement of all our horses by light electricians of this type," says a member of the firm.



The bachelor of other days had his various housekeeping and personal problems, not the least of which concerned itself with buttons. Shirt buttons, suspender buttons, glove buttons or coat buttons—if it was not one it was the other that had to be replaced. And now science, as represented by the electrician, has added another button to the bachelor classification—the push button. But whereas the first group of buttons formed a source of constant trouble and annoyance, the second goes far toward making bachelorhood the to-be-envied Utopia that the bachelor's married brothers think it is.

Just as it helps the wife of the bachelor's more fortunate friend and the bachelor's sister in solitude, the bachelor-maid, in the accomplishment of their household tasks, so the push button helps the bachelor in his singular housekeeping. As pointed out elsewhere in this issue, the push button has become a veritable valet in the home of the bachelor—lighting his den, preparing his shave, cooking his meals, caring for his health, and in general making bachelorhood so comfortable an institution that it is to be feared nothing can lure him from it.



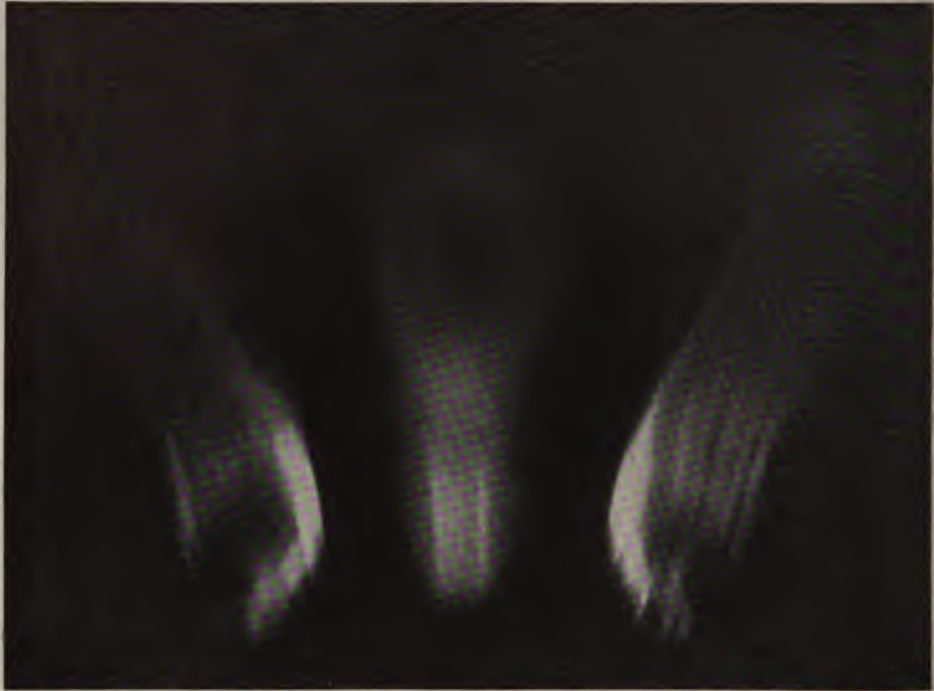
As in former years the annual report of the New York Board of Fire Under-

writers discloses "carelessness" as the principal cause of the electrical fires which occurred in New York during 1921. Careless use of appliances, careless work in installing, and carelessness in exposing inflammable materials to contact with electrical sparks are responsible for the largest part of the 275 fires of electrical origin. The total fire loss in the electrical group was \$222,024.76; of this total \$174,209.29 is, in the words of the Underwriters, "directly chargeable to new electrical equipments or alterations and extensions made to original equipments without the knowledge or approval of this Department." There were seventy-eight fires caused by carelessness with electric irons; in many cases irons were left connected and in contact with inflammable goods while the user of the iron went to answer the telephone or to talk with a neighbor; in other cases the user forgot to disconnect the iron at the completion of the work.

Another cause that comes under the "carelessness" classification is the leaving of incandescent lamps in contact with flimsy materials. Three such fires resulted in losses of \$15,847.33. The ignition of volatile fumes and liquids caused seven fires with a loss of \$59,694.63.

Yet in all this list of fires there were no great conflagrations; in nearly every case the fire revealed itself before it had a chance to spread and the average loss was less than a thousand dollars. Properly installed, and used with reasonable care, electrical equipments are safe; they are not fool proof, however, and just so long as people neglect the precautions which common sense dictates, there will be fires.

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*Photographs by Francis Bruniere*

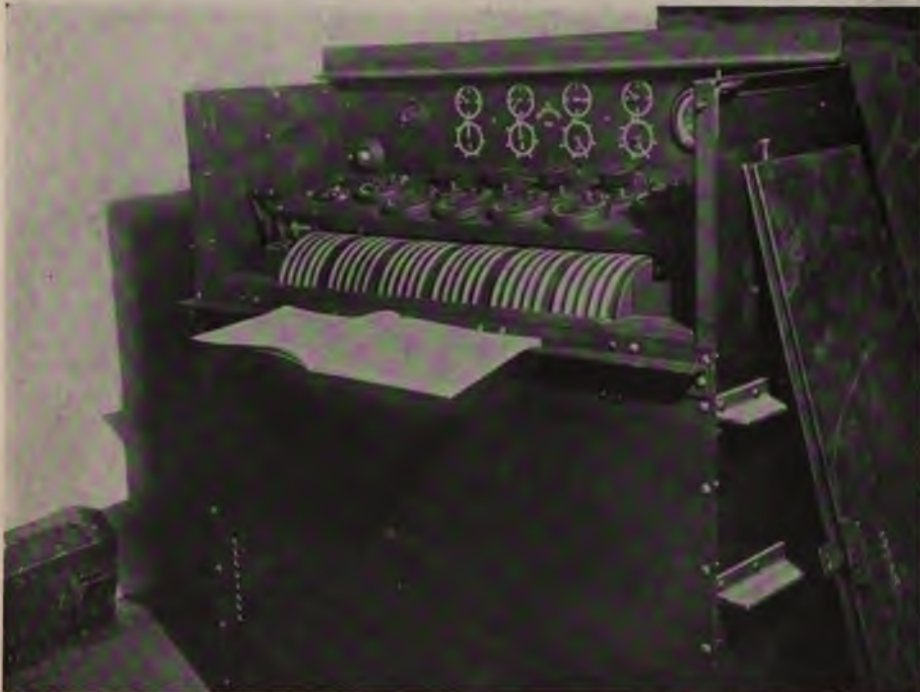
Mr. Wilfred's Compositions Are All Purely Abstract and Imaginative. These Pictures Show a Movement in Process of Formation—Misty Color Forms Which Gradually Become More Definite and Colorful

## The Clavilux

“SILENT compositions of moving color and form, played in rhythm to the vision just as music is played to the hearing”—so runs the explanatory paragraph in the program of the Neighborhood Playhouse, where the Clavilux, a new instrument invented by Mr Thomas Wilfred, entertained vast audiences during the month of January.

Sitting in the darkened theatre your first perceptions are of the proscenium arch taking form through the gloom—then a dim, pearly, fog-like light begins to take shape and in great spreading masses steals across what is faintly discerned to be a large three-

paneled screen. In the depths of this pearly light there gradually grows a blue form. It moves within itself; turns, twists, grows larger, spreads over the entire screen. The effect now is as though one were looking into the depths of a deep blue sky—cloudlike forms appear—slowly they move. Then as though affected by some strange power they are drawn together into a mass, become scarlet, and stretch forth long tentacles. Robelike sweeps of color are drawn from below. The blue of the background grows a vivid orange. The central mass divides, falling away on either side to disclose a strange bending color-mass of green.



*Photograph by Underwood & Underwood*

From the Elaborate Keyboard of the Clavilux Are Controlled Not Only the Colors of the Compositions, but Their Continual Three Dimensional Changes as Well

## The Edison Monthly

Then from the sides come stealing stray wisps of the first pearly light. The orange dims, fades, melts in the glow of the foglight. The gently moving green form spreads into a scarlet fan shape. Gradually it becomes blotted out in the thick pearly fog.

fades—and the screen is dark again. The house lights are turned up. One composition has been played.

What is it all about? What does it mean? These questions can only be answered by asking questions. Does a sunset mean anything? What is a



*Photograph by Francis Bruguiere*

The Central Figure in This Composition, a Foggy Green Oval, Produces Over and Over Again From Within Itself Forms of Most Intense and Contrasting Colors. Constantly Changing in Form, They Seem to Move in a Depth of Blue Space, Until Like Clouds They Fade and Vanish

The pearl light condenses, forms a spiral, slowly revolves and drifts away and in its place a single flame of scarlet and gold wavers in the dark. Others approach from a distance; strange patterns form, break apart, become transparent and then blaze with every conceivable color. A tremendous crescendo is reached. Then it fades—

beautiful dawn about? These things are sheer beauty. The clavilux plays sheer beauty but it is beauty under control—made rhythmical. It is music not for the ear but for the eye. It differs from a painting in that a painting is static. The colors of the clavilux are mobile and glowing.

It is difficult when describing the

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Clavilux not to refer to the compositions as color-music. Though many in the past have felt a close analogy between sound and color it must not be presumed that such is Mr Wilfred's theory. The compositions played on the Clavilux bear no relation to music or sound at all. Therein lies the novelty of the Clavilux. Color music is not new. It was recognized by the early Greeks, and Father Castel, a Jesuit, made a color harpsichord in the 18th century. In all of these the colors were accompanied with music. This may recall an attempt made in New York City a few years ago to create certain effects by throwing colored lights on a screen appropriate to the mood of the music played by a large orchestra. Unfortunately, however, the color and the music did not seem to synchronize in the minds of the audience—red, for example, suggesting sweet peace, to some, to others wild rage rampant!

### *A New Art*

Other color organs have been devised but none of them created mobile color. The colors were made to change, fade and intensify but they could not be made to spiral, for example, as is effected by the Clavilux. Mr Wilfred has constructed a mechanical and electrical instrument by which light can be determined in rhythm, color, pattern, tempo and intensity. It presents a new art.

It seems that the instrument might well be used in connection with the drama. It should prove particularly interesting to the modernists who endeavor to catch and hold the mood of a play in the scenery they create. But once designed and painted the scene

cannot be changed. In other words it cannot be made to portray the progress of the play as it unfolds. This with the aid of the Clavilux could be easily accomplished.

What wind is to the pipe organ, white light is to the Clavilux. For in white light are all the colors and combination of colors as found in the spectrum. White light from within the instrument, is projected through a series of slides and other devices, by means of stops and keys and a series of rheostats which make up the keyboard of the Clavilux, and eventually is thrown on a screen of ground glass. Motion, intensity, pattern and tempo all are controlled from the keyboard and since the operator has but two hands with which to produce the desired effects the skill necessary for the successful operation of the Clavilux may well be imagined. The whole instrument weighs about a ton and is connected with the switchboard of the theatre by means of a light cable. There is not room at the keyboard, as it is installed at the Neighborhood Playhouse, for more than one operator,—therefore the compositions are somewhat restricted in their scope. This is due not to any limitation of the possibilities of the instrument but rather to the unavoidable physical limitations of the operator.

Unquestionably the Clavilux represents the latest and most novel adaptation of electricity to the arts. Here electricity is not an adjunct to art, as for example when it is used in illuminating paintings or for the operation of the latest means for the reproduction of music, but rather is the fundamental of a new art which essentially is electricity translated into mobile color.



## For Furniture Display

**I**N the lighting of the furniture showrooms of Philip Strobel and Sons Inc, one finds an interesting example of the skill of the illuminating engineer. A furniture display, by reason of the bulk of the wares and the polished surfaces, calls for special care in the selection and installation of lighting fixtures and in the arrangement of the merchandize. All of these factors had to be considered in planning the Strobel installation.

Interest in the company, however, is not confined to its lighting equipment; its history covers a period of seventy years, and the furniture that

it produces is used all over the country.

For three generations the firm of Philip Strobel and Sons, Inc, has been owned by the family of the man who established it in 1852 in a little shop at 53 Elizabeth Street. On that same site stands the building in which the showrooms of today are located. Great changes have taken place in Elizabeth Street during the passing years. Its residences have gone and now the street is given over to wholesale and retail business. Philip Strobel and Sons, Inc, by reason of its seniority, stands out prominently



*Photograph by The New York Edison Company*

Ray-O-Day Lighting Units Have Been Installed in the Showrooms of Philip Strobel and Sons, Inc, Furniture Dealers at 53 Elizabeth Street

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among many other furniture concerns in the neighborhood.

The original building was destroyed by fire and in 1884 a seven-story structure was erected. It is here that the firm of Philip Strobel and Sons, Inc, is housed, using the first three floors for showroom purposes and the rest of the building for storage.

Entering the main room from the street one sees a display of dining room and living room sets of the very highest type of craftsmanship. The lighting arrangement here is a good example of efficient and artistic showroom lighting and the decorative scheme is attractively carried out by a novel use of chintz hangings which make a very fitting background for the display. The lighting arrangement was designed and installed under the supervision of the Bureau of Illuminating Engineering of The New York Edison Company, and has given complete satisfaction.

Twenty-six Ray-o-Day fixtures are used scientifically in the three showrooms. Eleven of these contain 100-watt lamps and the other fifteen use 200-watt lamps. In the rooms on the second and third floors there are dining room and bed room suites. The light is evenly distributed, and all bright spots or deep shadows have been eliminated, an important feature where polished surfaces are displayed. The furniture in the furthest corner of the large room shows to just as good advantage as that placed near the windows.

Manufacturers and retailers are realizing more and more the advantages to be gained from the correct usage of electric lighting systems in displaying their goods, and in all cases where this

is done there is complete satisfaction.

Philip Strobel and Sons, Inc, supplied all the chairs and tables for Childs' restaurants. These are used from coast to coast and in Canada. Many of the hotels, such as the Ritz Carlton, of New York and Atlantic City, the Commodore, the Ambassador, the Belmont, and the Astor are using tables made by this same firm. The dining room furniture for large corporations like Lord and Taylor and B Altman & Co, which maintain dining rooms for their employees, was supplied by this company as well as elaborately inlaid tables for Chinese restaurants.

A visit to Philip Strobel and Sons, Inc, will show one at a glance why it is that it has continued to live for seventy years and maintain a dignified, alert, and prosperous appearance. Progressiveness is one of its characteristics. Although it has not moved from the spot on which it sprung up it has always kept step with every advancement in manufacturing and merchandizing methods.

### The One Thing Needful

In the gray of winter's morning  
I arise, turn on the light,  
Set my percolator steaming  
With its whole electric might.

Then I loudly call my children  
While Electra toasts the bread,  
But despite repeated shouting  
Each one tightly hugs his bed.

"O, thou goddess, I implore thee,  
Give me only one thing more,  
An electric early riser  
Fastened on each bedroom door!"

*Alice Crowell Hoffman*

## For Grocery Deliveries

"We can live without friends  
And live without books,  
But show me the man  
Who can live without cooks."

WHATEVER else man may do or may have done, he always has had and always will have to eat. And so there have always been and always will be purveyors of food. From the rock caché of the prehistoric cave-man to the modern grocery store with its many ramifications and countless shelves of articles is a long step. Yet it is one that man has accomplished almost imperceptibly, due to a constant search for more efficient methods of doing business. This urge towards business efficiency has been brought to a high point of development in the modern grocery store.

One of the most important elements in the present methods of food distribution is the local delivery system, of which that of the Acker, Merrall and Condit Company is typical. Ten years ago the company began looking about for a way to reduce the cost of deliveries and finally decided upon the purchase of electric trucks. Since that time the fleet of storage battery vehicles has been augmented until it now comprises three 750-

pound cars, one one-ton truck, one five-ton truck and nine three-and-one-half-ton trucks. The three 750-pound cars are a recent addition to the fleet and were purchased as a result of earlier experience, for electric trucks had proved so economical and satisfactory in making the bulk deliveries from the warehouse to the retail stores that it was



*Photograph by The New York Edison Company*

Electrics Occupy Less Space at the Loading Platform Than Other Trucks or Horses and Wagons

believed possible to have them supplant horses for neighborhood delivery. At the Seventy-second Street and One Hundred and Second Street branch stores of Acker, Merrall and Condit Company these three vehicles are now being used and the results obtained have led to the conclusion that no type of delivery wagon is so well suited to the work. Mr Thomas B Fisher, Sales Manager and a director of the firm, speaking of these cars, says, "We are seriously considering the replacement of all our

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horses by light electrics of this type."

While the smaller size wagons are used for retail delivery work, the larger trucks are employed in the haulage of wholesale orders and are always sent out loaded to capacity. The three-and-one-half-ton trucks travel on an average of about twenty-five miles a day and most of the time is spent in carrying groceries from the company's warehouses to its branch stores. Electric trucks are used for suburban runs

truck is the best vehicle for the work it is called upon to perform.

Canned goods, fancy groceries and delicacies of almost every description are purveyed by the Acker, Merrall and Condit Company and the fact that electric trucks are used, insures the customer of the reception of goods always clean and free from gasoline and carbon odors. Haulage from railroad to warehouse is also done by the storage battery vehicles and at the

company's loading platforms charging outlets are installed which make it possible to charge the trucks while boxes, cases and barrels are placed aboard. This results in a great saving of time and eliminates possible delay in filling orders.

Here also another advantage of electric trucks is evident, for they occu-



*Photograph by The New York Edison Company*

Trucks of This Type Have Been in Continuous Service for Ten Years

py less space at the loading platform than either horses or gasoline trucks. This factor is important, for with gasoline cars or horses the platform must either be set far back from the building line, which necessitates more and costly floor room or else the vehicles project on the street and interfere with traffic. Electric trucks are free from this drawback.

As a means of reducing overhead delivery cost to a minimum, the company maintains a public garage at 532-540 West Forty-sixth Street where not only its own trucks are

as far as Greenwich, Connecticut; Yonkers and Rye, New York; Flushing, Long Island; Long Branch, New Jersey; and adjacent points. In this kind of work and in delivering wholesale orders to hotels, clubs and restaurants, the five-ton truck has a current consumption of 18 kilowatt hours a day while the three-and-one-half-ton trucks, which cover a greater territory, use about 30 kilowatt hours a day. All of the electric trucks placed in service ten years ago are still in daily operation and the company, from its experience, is convinced that the storage battery

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kept but those of other firms as well. The same care and attention that keeps the company's trucks in service every day is given the trucks of the garage customers. This is such a well recognized fact that fifty outside firms now use the service of the Acker, Merrall and Condit Garage.

Here every facility for the proper maintenance of electric trucks and batteries is at hand. An expert repair section is in operation and the trucks are gone over each night, to see that they are in perfect condition for the next day's work. It is in a great measure due to this service that the electric trucks of the Acker, Merrall and Condit Company, and the trucks of their garage customers, are proving so economical and are finding such a long term of usefulness.

### Big Order for Trucks for Express Service

With the purchase recently of 104 electric trucks, the American Railway Express Company has still further strengthened its claim as the largest user of electrics in the world. The company now has in service throughout the United States more than twelve hundred electrics—this in addition to its gasoline trucks and horse-drawn wagons.

The new equipment is for service in New York, Philadelphia and Buffalo. The New York allotment comprises twenty trucks of the five-ton size; Philadelphia is to have fifty two-ton trucks, while the thirty-four for Buffalo are of the two- and three-ton sizes.

It is planned to use the New York trucks on a twenty-four hour basis. This will be accomplished by means

of standardized, interchangeable batteries, each truck being provided with two sets of cells. Thus at the end of the first shift the exhausted battery will be removed and a freshly charged one put in its place. The battery boxes are designed for rapid changing and special devices for battery handling have been installed at the charging stations. It is estimated that the exchange of batteries will require less time than it took to fill the tanks of the five-ton gasoline trucks which the electrics are replacing.

### Second Electric Automobile Show to Be Held in April

At a meeting of electric automobile manufacturers and dealers held on February 7th, plans for the Electric Automobile Show of 1922 were discussed. The invitation of The New York Edison Company to hold the exhibit in its Irving Place showroom was accepted and April 3-15 was decided upon as the date.

A similar show was held a year ago and judging by the interest of the manufacturers the event will probably become an annual affair. As with the 1921 show the displays will be held in two parts. The first week will be devoted to street trucks and passenger cars, while the second week will be given over to manufacturers of industrial trucks. A display of electric vehicle charging equipment and automobile accessories will continue throughout the two weeks. A luncheon will be held during the first week.

The show will be open every day from 10 a m until 8 p m, and there will be no admission charge.

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*Decoration by Leslie Crump*

## A Clever Little Man

A clever little man built a pretty little house  
And set it in the middle of a pleasant little park;  
But all through the day it was quiet as a mouse  
And all through the night it was dark, dark, dark.  
Then the clever little man wired the little house one day  
And through the copper wire ran a laughing little Sprite,  
That set the sweeper sweeping and the kettle singing gay  
And lighted up the little place at night, night, night.

*T M Bray*

# The Edison Monthly



*Photograph by Major Hamilton Maxwell*  
The United States Post Office at Eighth Avenue and 33rd Street is the Centre of a Territory Which Boasts of Many Fine Buildings—Users of Edison Service

# Airplane Views of Edison Service

## The Uptown Post Office

THE Post Office, printing establishments, homes of the textile trade, a corner of the fur district, department stores, and warehouses make up the greater part of the large number of central-station-served buildings in the district of which the Uptown Post Office at Eighth Avenue and 33rd Street is the hub. As shown in the accompanying airplane view, this district extends from Sixth Avenue to the water front; in the distance it reaches from Twenty-fourth Street to Thirty-ninth, while in the foreground its limits are Twenty-eighth Street and Thirty-sixth Street.

This section includes Seventh Avenue which is rapidly becoming the needle trades centre of the city. Although many of the old three- and four-story tenement houses remain the several new buildings erected during the past two or three years indicate the future of the avenue. One of these is the Manufacturers Building extending from Twenty-eighth to Twenty-ninth Street. The Penn Terminal Building is two blocks up the avenue while at Thirty-sixth and Thirty-seventh Streets are the twin structures of the Garment Centre Realty Capitol. Also in this group is the Armion Building at 229 West 36th Street. In the Herald Square region are the old Herald Building, now occupied by Rogers Peet and Company, and Gimbel Brothers on Sixth Avenue. On Thirty-fifth Street between Seventh and Eighth Avenues is the L and G Realty Company building and farther down the street the service station of the Edison Storage Battery Company.

At Eighth Avenue and Thirty-fourth Street is the Printing Crafts Building, erected to serve as a community centre for printers and used during the war by various departments of the Army. South of this and spanning the tracks of the Pennsylvania Railroad is the Post Office. Down Thirty-fourth Street is the Manhattan Opera House and at Number 516 is the warehouse of Haywood Brothers and Wakefield. At Tenth Avenue and Thirty-sixth Street is the new home of the McGraw Hill Publishing Company, publishers of the *Electrical World* and other technical magazines. The Underhill Building is at 438 West Thirty-seventh Street while on Eleventh Avenue, extending from Thirty-sixth to Thirty-seventh Street, is the Williams Printing House.

### *Near the Water Front*

Other places on Eleventh Avenue where Edison Service is used include the Terminal Stores at Twenty-eighth Street, the W and J Sloane warehouse at Twenty-ninth Street; the Baltimore and Ohio Railroad freight station at 2 Twenty-sixth Street; and the American Railway Express Company freight station in the block between Thirty-second and Thirty-third Streets.

The Heywood, Strasser Voight Lithographing Company is at Ninth Avenue and Twenty-sixth Street; the Wolff Building extends from 518 to 534 West Twenty-sixth Street; the Caxton Building is at 229 West Twenty-eighth Street; and the building of the Printerion Realty Company at



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406-26 West Thirty-first Street looks down upon the tracks of the Pennsylvania Terminal.

Other Edison-served buildings in the district are the Cuyler at 118 West Thirty-second Street, the Herald Square at 145 West Thirty-sixth Street, the Soltman at 134 West Twenty-ninth Street, the National Railway Publishing Co at 424-438 West Thirty-third Street and the Telephone Exchange at 206-224 West Thirty-sixth Street.

To maintain electrical service to the thousands of Edison customers in this territory there are four sub-stations each directly connected with the Waterside generating station and all interconnected.

### New York Electrical Show to Be Held in Palace

The New York Electrical Show of 1922 is to be held from October 7th to October 14th at the Grand Central Palace, Lexington Avenue and Forty-sixth Street. It will open on Saturday morning and continue until the following Saturday evening.

Last year's show was held at the 71st Regiment Armory, but owing to the limited space the number of exhibits had to be greatly curtailed. This year with three floors available there will be ample opportunity to present one of the most comprehensive expositions in the history of Electrical and Industrial displays.

### Saying It With Powers

An engineer electrical,  
Once wooed a charming maid.  
No wasteful tokens he bestowed,  
But gifts that more than paid.  
When merely friendship held the two,  
The button at her door,  
He gave a pressure now and then;  
Then frequently; then more.

And when the light of her clear eyes  
Struck fire from his warm heart,  
A flash-light he presented her,  
And this was worthy start.  
She smiled at him above her fan,  
And so next time he called,  
He carried an electric-fan  
Which he for her installed.

She smoothed his difficulties out  
In such a telling way,  
His next gift—an electric-iron,  
He took to her straightway.  
And when her father's grilling he  
Must stand to fill the bill,  
His next high-pressure offering  
Was fine electric grill.

And now that they are married,  
why,  
He still keeps up the game,  
By telling her his love in gifts  
Most fitting for the name.  
The home-life like their own true  
love,  
Runs minus jars and jolts,  
And all because he still insists  
On saying it with volts!

—Blanche Elizabeth Wade

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*Photograph by The New York Edison Company*

The Home of Edgar Allan Poe. Two Trees, Dreary and Gaunt, Suggestive of Tales of Horror and Tragic Poems, Stand Sentinel Over This Quaint Little Cottage on the Grand Concourse

# Bachelor Buttons



IN their mode of living the bachelors of today and yesterday are quite different. There is, of course, a similarity in their dependence upon the alarm clock to arouse them from their last snatches of slumber; but the more fortunate is he whom electricity serves. With such a servant the modern bachelor need not worry about the many discomforts that his predecessor endured.

A decade or so ago the young man, who occupied one of the many one- or two-room apartments that were scattered throughout the city, arose reluctantly and dubiously dipped his fingers into a stream of warm water running from the "hot" water faucet. With a shake of his head he resorted to an alcohol lamp as a medium for heating his shaving water. He then quite naturally found himself in a rather petulant mood—a bad beginning for the day.

Breakfast was no better. If he did not eat in a boarding house or restaurant he prepared his own meal in a more or less clumsy fashion. He made his coffee by a very old method and if he was not an exceptionally good coffee drinker

his morning beverage was apt to have a muddy appearance and taste. Toast was almost an impossibility because of the lack of facilities for toasting his bread.

In contrast to this bachelor of yesterday, today's bachelor, a very modern person, stretches luxuriously as his alarm clock clatters out its heartless warning and, as soon as he has awakened sufficiently, arises and calls upon his electric servants for his bath and breakfast.

He turns on his instantaneous water heater and almost as if by magic a stream of hot water runs into this bath. The same holds true for his morning shave, unless he prefers to use an electric immersion heater which he inserts in a bowl of cold water in order to heat it to the desired temperature. One may be sure that not even Sherlock Holmes himself could deduce the position of this bach-



*Drawing by F. G. Cooper*

**The Modern Bachelor Proudly Serves His Guest an Electrically Cooked Breakfast**

## The Edison Monthly



The Electric Radiator Adds to the Cosiness of Bachelor Hall

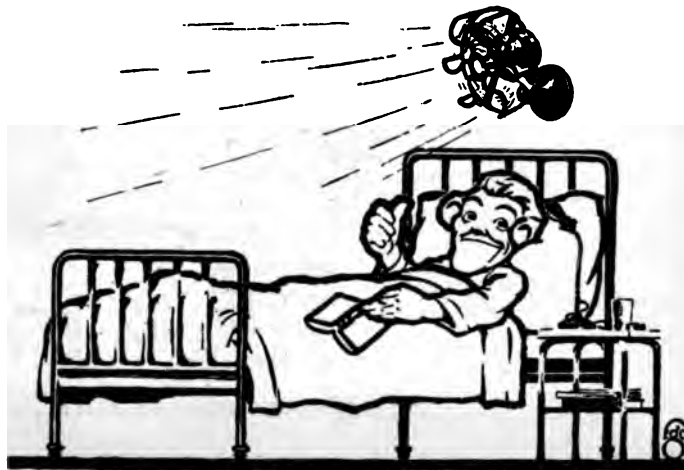
elor's windows by the unshaved areas of his cheeks, for his electric shaving mirror provides perfect illumination, and makes him entirely independent of the window.

Since the modern young man's hobby is efficiency, he turns the switch on his electric percolator, which he has filled the night before, and that little electric servant starts to make his morning coffee while he completes dressing.

Breakfast in one's own apartment is the source of a great deal of satisfaction and personal comfort and more than a little pride is taken in a meal that is prepared at home and cooked by electricity. After the bachelor has bathed and dressed he finds that his coffee is ready, as wonderfully brown and delicious as anyone could desire. If he feels in the mood, so to speak, for fried eggs and bacon he uses his electric grill, cook-

ing the eggs in the upper part and broiling the bacon under the heating element. His toast is the product of an electric toaster. Surely, the beginning of such a day is far better than partaking breakfast after the manner of the old-fashioned bachelor. Not only is it cozier and more home-like but it is also more economical.

The end of the day is just as pleasingly successful. In the hurry and bustle of the city life it is sometimes difficult to find a secluded spot where one can talk with one's friends without being disturbed. Restaurant life is not conducive to confidential chats. Discussion over the coffee cups is not readily carried on when the voices of strangers rise even above the tinkle of glassware and clatter of porcelain. Of course there are places where only quiet prevails in aristocratic dignity; but the modern bachelor cannot afford that as a steady practice. He prefers to take his guest to his den where in intimate companionship they can talk to their hearts content over a palatable home cooked dinner. With the aid of the grill again, and perhaps a



Dreams of an Evening of Cool Delight When Summer Comes

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The Modern Bachelor Prepares Home Cooked Meals

chafing dish or waffle iron, two enthusiastic young men can enjoy as good a meal as they ever had anywhere. Later in the evening they can sit under the soft light of the floor lamp peacefully puffing at their pipes, while an electric fire log adds to the general air of comfort.

After-the-theatre-suppers are always popular, for who does not like to satisfy the inner man after an evening of entertainment? The modern bachelor likes modern plays and he attends them frequently with his friends. It is with pride, therefore, that he returns to his apartment after the theatre, stepping ahead of his companions to open the door for them and press the push button in the wall panel. The room is flooded with light, or perhaps it is the shedding of mellow rays from a table lamp, and everyone steps admiringly across the threshold. Eating is once more in order and the bachelor brings forth his chafing dish and percolator.

Late in the evening when the heat from the furnace way down in the cellar has been turned off for the night, the electric radiator can be attached to a nearby socket making a veritable

miniature fireplace to supply a comfortable heat. He who likes to burn the midnight oil, or the midnight electricity as is now the case, can settle himself comfortably in an easy chair, pull this little radiator near him and enjoy an hour or so of happy warmth. If perhaps, the bachelor man is old enough to be bothered with rheumatism he finds his electric heating pad the best sort of a nurse. Sitting in his arm chair or in bed, as he wishes, he wraps the pliable appliance around his foot or arm, as the case may be, turns on the heat and chases away pain.

The wise bachelor is prepared for all seasons. Tucked away in his closet there is an electric fan which he will use as soon as the warm weather comes. From it he will receive as much delight in the sultry months as he did from his radiator during the winter months. Yes, there is no doubt that electric bachelor buttons have many possibilities and many more advantages than the old-fashioned kind worn by the bachelor of yesterday.



An Adjustable Light Facilitates Shaving

*April*



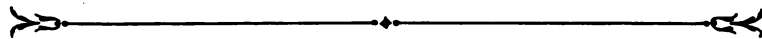
Castle Garden in 1822

1922

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## The Edison Monthly

**The Edison Monthly**  
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**N F BRADY, President**  
**WALTER NEUMULLER, Secretary**  
**FREDERICK SMITH, Treasurer**

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The prospective user of electric vehicles who, before making his decision, wishes to study trucks operating under conditions paralleling those in his own industry need look no further than New York. It is quite certain that somewhere in the Metropolitan territory he will find electric meeting in every way the requirements of his business, for New York is as cosmopolitan in its trucking as it is in its population. More than half of all the electric in the country are in New York. They are the property of four hundred different owners and serve thirty-eight different classes of business.

The seeker after electric vehicle facts who conducts his investigation in New York will find wagons of 750 pound capacity serving the needs of the retail grocer, five-ton trucks hauling coal, intermediate sizes making deliveries for department stores, spring water concerns, wholesale grocers, public utility companies, hospitals, express companies, and paper dealers, and so on through the whole thirty-eight. If he asks about comparative costs he will find that an electric truck doing the same work that a gasoline truck was doing—both owned by the same express company—cost \$118 less during a test month, or that one electric wagon, would deliver at lower cost,

more groceries than two horse-drawn wagons. If he wants to know about electric truck mileage he will find the records of the five-ton trucks that came to New York under their own power at an average speed of better than twelve miles an hour and with only two battery boosts. If he asks about hill climbing ability he will be shown the result of the recent test on the Miller Avenue hill in Brooklyn. If he asks about depreciation he will be shown the charts that reveal the interesting fact that 980 of the New York electric are more than ten years old and that twelve are getting along toward twenty-five years.

From the transportation viewpoint New York is not greatly different physically from other large cities and there is no question but that electric trucks, properly installed for the work for which they are suited, will perform just as economically, as dependably and efficiently in any other city in the country.



With the warm days of spring close at hand and the hotter ones of summer not so far off, it is well to look to one's ventilating equipment. Fans that have stood idle all winter will be better prepared for a long hot job if the brushes are put in good order and new grease supplied for the bearings. And they'll look better if the brass blades are polished with a bit of steel wool. So much for last year's fan.

In brushing up the old equipment give thought to the kitchen. The kitchen, the workshop of the home, is in greater need of adequate ventilation than any other room of the house. This condition has received the atten

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tion of ventilating engineers and manufacturers and during the past few years, several types of ventilators designed especially for the home kitchen have been developed. These are for installation either in a panel set in the window, or for use in connection with a duct system leading from a canopy over the range. Fortunately, too, in installing such an equipment you automatically provide for other rooms, for the kitchen ventilator operates on the exhaust principle, removing about sixteen hundred cubic feet of air a minute. As this great volume of air goes out it is replaced by fresh air that comes into the house through the windows of the other rooms. Thus it is apparent that an exhaust fan with a capacity of sixteen hundred cubic feet not only removes the heat and steam and odors of the kitchen but provides a circulation of fresh air for the whole house.

Ventilating equipment is absolutely essential in auditoriums and other indoor meeting places—the same ventilating principles that assure fresh air on a large scale have been applied to ventilating equipment for the home and the hot steaming kitchen should be a thing of the past.

While cooking under high-pressure steam is not new by any means it is only recently that it has taken its place among the group of electric servants in the home. The electrically heated pressure cooker is the same in design and appearance as the one which is heated on the top of the stove, except that an electric heating element is built into the bottom.

The principle of pressure cooking has

long since been established—with the provision of electric heat the apparatus acquires an additional degree of convenience which should assure it an important place in every well equipped kitchen.

Although electricity sheds its light on many strange places and on many interesting activities, it is doubtful if there is another section of New York where it lights such a contrast of old world primitiveness and new world progress as in the street where the people from Syria have established themselves. In the shadow of the skyscrapers, within a stone's throw of the financial district, always resounding with the rumble of truck-borne traffic, and watching daily the coming and going of ships carrying the world's commerce, Washington Street with its Syrian population and its red brick dwellings seems a cross between New York of a century ago and an old-world bazaar.

The brick buildings of a Colonial day have conceded very little to the demands of modern New York. The people who live and work there make their laces in the old world manner. In fact, the only striking change from one end of the quarter to the other is in the method of lighting—intricate designs in lace are worked out painstakingly by hand, but the darkness which formerly shortened the working day and threatened the eyesight of the workers is now offset by the most modern lighting methods. New York's Syrians have become as exacting in their demands for proper illumination as they are proficient in the manufacture of their alluring novelties.



## Repro-Prints

**A**N amateur printer in Munich, working with inks of various kinds more than a century ago, discovered the process which, when developed, came to be known as lithography. It is a method by which a drawing or design made on a flat stone with soapy ink is transferred to paper. The art is based on the chemical affinity of certain fatty and resinous substances for those of like nature and their repugnance to water.

Using the lithographic principle as a basis, experiments begun a number of years ago, opened the way to obtaining results without the use of the stone. In its perfected form this is called the photo offset process. As employed in the establishment of the National Process Company at 117-119 East Twenty-fourth Street, the product is called a Repro-Print.

The National Process Company was organized a dozen years ago, in full confidence that the process had commercial possibilities which would be readily accepted. The growth of the company is proof that the idea was sound. From a small beginning, the establishment has repeatedly been enlarged with additions to its

physical plant until it now occupies three floors and has an equipment capable of a wide variety of works and a force of employees who are experts in their several branches of craftsmanship.

Printing of any kind calls for good light. Since in its primary stages pro-



*Photograph by The New York Edison Company*

The Motor Driven Presses of the National Process Company

cess repro-printing depends upon photography, it demands, in the absence of permanent natural light, a dependable substitute which can be employed at a moment's notice. In the photographic room are four 20 by 24 inch cameras. Each camera is served by two lights of 32,000 candle power each, which, when focused on "copy" to be photographed, are vastly more effective than natural light would be. These lights may be adjusted on the supporting frames, so that the rays

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may fall upon the copy at the proper angle.

An original copy is reproduced in any desired size. Once photographed, the wet-plate negative is stripped on a large sheet of glass. Electric lights under the glass make every character, line and dot on the negative perfectly clear. When properly opaqued, the negative is placed in a vacuum printing frame and a sensitized sheet of

veloping trough. Here, because of certain chemical affinities, part of the ink is washed off, while the design, whatever it may be, is retained. Development of the plate follows. At this stage changes may be made, if any are necessary, otherwise the plate is ready for the press.

A battery of four printing presses, specially designed for this particular line of work, forms the company's equipment. There are two Hall and two Scott presses, the larger ones being capable of printing sheets 39 by 52½ inches and at a speed of from 1,800 to 3,000 sheets an hour, according to the character of the work. Each press takes its operating energy from an individual motor of from 4½ to 5½ horse power served by Edison current.



Electric Lights Under the Glass Bring Out All the Details of the Negative

zinc, twelve one-thousandths of an inch in thickness, is dried and placed over it. The sheet of zinc is a basic feature of the now popular process. Its employment makes for a high degree of speed, simplicity and economy. The stone of the lithographer does not figure at all.

In a matter of five or six minutes, the part of the plate exposed to the light on the negative is hardened. The plate is then removed, given a light coating of ink and conveyed to a de-

veloping trough. Here, because of certain chemical affinities, part of the ink is washed off, while the design, whatever it may be, is retained. Development of the plate follows. At this stage changes may be made, if any are necessary, otherwise the plate is ready for the press.

When ready for the press, a plate is clamped to a rotary cylinder and the motor started, the press responding to the electrical quickening. A water system moistens the revolving plate,

## The Edison Monthly

but owing to its greasy nature it does not adhere to the design. The inking system serves only the design, since a greasy substance attracts its like. Thus the design does not need to be in relief or intaglio, or on type or gravure presses. A rubber blanket on a connecting cylinder takes the inked impression from the zinc plate and transfers it to the paper.

The range of work to which the process is particularly adapted, is practically unlimited. Any form of printed matter, either in black or colors, may be reproduced, and as many impressions furnished as are required.

What may be called a specialty is the reproduction of fac-simile letters and testimonials and of forms, such as financial reports, bank statements, records of factory outputs, efficiency charts, or wide-carriage typed statements. All that is required in commissions of this kind is that the printed or typewritten copy, done in black ink, shall be clean and sharp. There being no type setting with the incidental possibility of an error found uncorrected when it is too late, the work is reproduced without a flaw.

Another feature is the production of giant "ads" enlargements of advertisements, from newspapers or magazines, either in plain black or in colors, for display in dealers' windows. The lithographer's art, adapted to the



*Photograph by The New York Edison Company*

High-Powered Lights Are Essential in Photographing Prints for Reproduction

new method, makes color work possible.

Then there is the making of Repro-Prints of maps to which the company gives particular attention. Given an original of whatever size, the big camera photograph it, reducing or enlarging it, according to order. Sections are put together in film form and the work follows the routine to the press.

# Forty Years of Edison Service

WHILE friends of Thomas A Edison are still congratulating him on the occasion of his 75th anniversary, his associates in the electrical industry are planning additional honors for later in the year, for 1922 is also the fortieth anniversary of the completion by him of the beginning of New York's present electrical system.

On September 4, 1882, New York's first central station and underground system of distribution were completed and placed in operation according to plans conceived and executed by Mr Edison. By many, this is considered Mr Edison's greatest contribution to mankind and the principles that were laid down in the construction of that station formed the basis of similar stations all over the world. Indeed there has been but little deviation from them in all the years that have passed.

The original generating station occupied a reconstructed brick warehouse at 255 and 257 Pearl Street and supplied a distribution system serving only a square mile of territory. There were fewer than sixty customers when the current was turned on in the afternoon of September 4, 1882. Current

was used only for lighting and there were but 1,200 lamps in the customer's premises. Today the Edison system in New York supplies 296,560 customers; current is used for lighting nine million lamps and for operating 688,000 horsepower in motors.

On the occasion of the thirty-fifth anniversary of the beginning of service The American Scenic and Historic Preservation Society and The New York Edison Company caused to be placed on the site of the original station a bronze tablet setting forth the facts connected with this important event in electrical history.

## Edison

*Reprinted from The Edison Monthly  
of November, 1912*

Ho,  
Ye in whom we know  
True greatness; ye whose hand  
Has given form to what the thought designed,  
In all the ages, every land.  
To make for progress of the humankind  
Here cometh one  
Who is a sun  
Among the stars; whose light  
So shines on every way,  
Art, Science, Commerce, that mankind  
From night, steps into day,  
And seeing clearly, moving free,  
Fears not to seek infinity.  
And with his light comes power,  
The force to do  
All that his light  
Directs us to.  
Behold  
This man of wondrous mold  
This prophet who foretells  
The products which shall gem  
The world, and by his faith  
Produces them.  
When others failed and wept,  
He smiled and steadily kept  
Bravely on  
Until the dawn  
Broke over him and he  
Put on the crown of victory.  
What others only thought,  
He did; he saw ahead  
And others followed where he led.  
Is genius his?  
Yes, double genius;  
That which comes unsought  
And that which may be wrought  
From toil unceasing  
And the will and faith  
That have no ending save in death.  
Hail Edison! All hail!  
Failure to him means not to fail,  
But fresh incentive, more strength gained  
To reach the goal to be attained.  
God makes such men  
At intervals as signs  
To all the lesser and the weaker kinds  
To prove that somewhere, latent  
In the human line  
Forever lives the spark divine.

*W J Lampton*

## The Pressure Cooker

ONLY comparatively recent is the adaptation of electricity to the household pressure cooker as a heating agent. Heretofore the cooker has existed as a separate device to be used on any stove over any source of heat; but now it has its own independent heating element enclosed in the bottom. It comes to delight thousands of housekeepers, for it has many qualities that make it desirable as a part of the equipment of the modern kitchen.

A pressure cooker, as indicated by its name, employs steam under high pressure. As this pressure can be regulated to meet the requirement of particular foods it offers many advantages over open utensils or lightly covered pans, both in speeding the cooking process and in preserving the flavor of meats.

The fact alone, that the appliance is electrically heated is no little indication of the convenience it offers. Like so many other electrical devices it is operated by current from a lamp socket. It is

simplicity itself and is always ready and clean.

The pressure cooker is made of aluminum without rivets or seams and can be obtained in three different sizes — ten, twenty, and thirty quarts. On top of the cover, which when in use is held down securely by thumb screws, there is a pressure gauge which shows both steam pressure and temperature. A safety valve prevents the pressure going above twenty-five pounds, and a pet



*Photograph by The New York Edison Company*

**It Is Surprising How Well a Roast, Potatoes and Vegetables Fit Into the Cooker at One Time**

## The Edison Monthly

cock aids the cook in regulating the process.

One of the first impressions received of the electrical pressure cooker is of its simplicity and compactness.

"What!" someone exclaims, "cook three or four things in that amount of space at one time? Impossible."

And yet it is possible. The pressure cooker is constructed so that in its one compartment and over its one source of heat practically an entire dinner may be prepared. Surely that is a decided advantage over the old way of cooking where two or three pots clutter the top of a stove, and in the oven a roast must spend from an hour and a half to two hours. It is surprising how well a roast, potatoes, and vegetables all fit into the cooker at one time. The roast rests on a perforated aluminum mat which allows the heat to come up through and at the same time keeps the meat out of the water. At the end of about forty minutes potatoes can be placed around the roast for baking. At the same time a pan of beans, or some similar vegetable, can be put in, resting on a wire rack near the top of the compartment.

When everything is ready to be removed, the steam is let off through the pet cock and in order to prevent the juices from being drawn out with the steam, the pressure is decreased gradually. Then the thumb screws are loosened and the top taken off.

Foods prepared in the pressure cooker are delicious in flavor for they do not lose any of their moisture by evaporation and are thus seasoned with the richness of their own juices. Meats are always tender after roasting by this method and it is because of this that cheaper cuts may be used.

Although several foods are cooking simultaneously there is no danger of mixing the flavors in the steam unless of course, too much water is used. In cases like this the pet cock should be brought into service.



The Electric Pressure Cooker Is Simple and Compact

It has been found that meats are best when only a little water is used. In order to let them absorb the juices it is wise to let them stand in the cooker with the cover on for a while after they are done. Thus it will also retain much of the nourishment.

Besides the advantages gained in every day cooking there is also a great contribution made by the pressure cooker during the canning season. So often it is preferable to put up a few cans at a time rather than large quantities. Many people like to do their canning by this method—a few jars of fruit or vegetables a day. It is surprising how quickly the collection grows and the work does not require much time nor does it consume a great amount of energy.

A space-saver, time-saver, energy-saver, and money-saver—the electrical pressure cooker is equipped to give splendid service in the household where electrical appliances are used.

The Edison Monthly



## The Edison Monthly

### The Hand Writing on the Wall

A lordly feast, a Kingly hall,  
And God's hand writing on the wall:  
The King turned pale, the courtiers fled,  
And all the songs of mirth were dead.  
Chaldeans, wise men tried to read,  
The message of that awful screed,  
Yet none could know that depth of gloom,  
Till Daniel's voice proclaimed the doom:  
    "Measured and wanting thou art found,  
    Thy Kingdom rent, thy head uncrowned,  
    Thy power which spread o'er all the land,  
    Finds its division by God's hand:"  
In flame of fire God wrote the Word  
'Twas Daniel's heart alone that heard.

A leaden sky, a purple pall,  
And God's hand writing on the wall,  
Letters of lightning flared and flamed,  
The message God to man proclaimed,  
Yet aeons passed and none could read,  
The meaning of that mighty screed,  
Till Franklin came, with vision keen,  
And read the flaming lines between:  
    "Measured art thou, and thou art chained,  
    Divided the Kingdom thou hast reigned,  
    Almost omniscient hast thou been;  
    Now art thou held by hands of men."  
Yet Franklin only dimly dreamed,  
The things that man has now unreamed,  
For fructive years have since set free  
The wealth of electricity.

*Rose Seelye-Miller*



# The Edison Monthly



*Photograph by Major Hamilton Maxwell*

This View of the Famous Midtown District of New York Shows a Building Development Which is Continually Growing. The Majority of the Large Buildings in This Picture Depend Upon Central Station Service for Their Electrical Supply

# Airplane Views of Edison Service

## Midtown

**T**HE accompanying airplane view shows the great midtown section of New York, the New York Public Library on Fifth Avenue occupying the center foreground. To the right and left of the library stretches the shopping district. In the center background lies the Great White Way, a name synonymous the world over for theatrical enterprise and brilliant night life. This part of the town is New York's laughter and fun—its recrea-

tion—just as Wall Street is its serious vein—its business. The two largest thoroughfares represented in this picture, Broadway and Fifth Avenue, are the main arteries of the life of the city. Seventeen famous hotels, clubs, and restaurants are represented here as well as thirty-seven theatres. At night the streets are as bright as day, illuminated by great electric signs which flash and glitter in thousands of colors against the sky.

### A Partial List of Edison-served Buildings

#### Office Buildings

Longacre Building—Broadway & 42nd St  
Liggett Building—Madison Ave & 42nd St  
Canadian-Pacific Building—Madison Ave & 44th St  
Borden Building—Madison Ave & 45th St  
Knabe Building—Fifth Ave & 39th St  
Woolworth, Winfield Building—Fifth Ave & 40th St  
Rogers, Peet & Co—Fifth Ave & 41st St  
Arnold Constable & Co—Fifth Ave & 40th St  
Johnson Building—Broadway 35-36th Sts  
Stewart & Co—Fifth Ave & 37th St  
Finck Building—318-26 West 39th St  
Art Color Building—209-19 West 38th St  
United Publishers Building—231-49 West 39th St  
American Press Ass'n—225-9 West 39th St  
Brokaw Brothers—1455-63 Broadway  
Knickerbocker Building—Broadway & 42nd St  
Wurlitzer Building—116-22 West 42nd St  
Engineering Societies Building—25-33 West 39th St  
Union Dime Savings Bank—701 Sixth Ave  
Franklin, Simon & Co—414 Fifth Ave  
Bankers Trust Co—501 Fifth Ave  
Heckscher Building—242-4 Madison Ave  
Carbon Carbide Building—310-14 Madison Ave  
Foster Building—278-80 Madison Ave  
Johns Manville Building—296-8 Madison Ave  
Sterling Bronze Building—16-18 East 40th St  
National City Building—316-30 Madison Ave  
Stern Bros—35-45 West 42nd St  
Postal Life Building—511 Fifth Ave

National Ass'n Building—27 West 43rd St  
Guarantee Trust Company—524 Fifth Ave  
Harriman Bank—Fifth Ave & 44th St  
Central Building—25-33 West 45th St  
Bush Building—130 West 42nd St  
Times Building—Broadway & 42nd St  
Lewisohn Building—114 West 41st St  
Tilden Building—105 West 40th St  
Worlds Tower Building—110-12 West 40th St  
Pictorial Review—528-36 Seventh Ave  
Garment Centre Realty Capital—500 Seventh Ave  
Garment Centre Realty Capital—494 Seventh Ave  
Herald Building—141 West 36th St  
Times Annex—223 West 43rd St  
42nd St Exchange—153 West 45th St  
Chandler Building—220 West 42nd St

#### Theatres

Globe Theatre—Broadway & 46th St  
Fulton Theatre—206 West 46th St  
Cohan Theatre—Broadway & 43rd St  
New York Theatre—Broadway & 45th St  
Criterion Theatre—Broadway & 44th St  
Belasco Theatre—111-21 West 44th St  
Hippodrome—Sixth Ave & 43-44th Sts  
The Republic Theatre—207-11 West 42nd St  
Forty-second Street Theatre—215-23 West 42nd St  
Selwyn Theatre—231 West 42nd St  
Lyric Theatre—213 West 42nd St  
Times Square Theatre—229 West 42nd St  
Forty-fourth Street Theatre—218-30 West 44th St

## The Edison Monthly

Shubert Theatre—233 West 44th St  
 Broadhurst Theatre—235 West 44th St  
 Little Theatre—238 West 44th St  
 Plymouth Theatre—236 West 45th St  
 Booth Theatre—222 West 45th St  
 Music Box Theatre—239-47 West 45th St  
 Morosco Theatre—217 West 45th St  
 Bijou Theatre—211 West 45th St  
 The Astor Theatre—Broadway & 45th St  
 Gaiety Theatre—200 West 46th St  
 Central Theatre—Broadway & 47th St  
 New Amsterdam Theatre—216 West 42nd St  
 The Eltinge Theatre—236-42 West 42nd St  
 Liberty Theatre—234 West 42nd St  
 Frazee Theatre—254-6 West 42nd St  
 American Theatre—260 West 42nd St  
 Metropolitan Opera House—Broadway & 39th-40th Sts  
 Broadway Theatre—Broadway & 41st St  
 Comedy Theatre—108-12 West 41st St  
 Empire Theatre—1426 Broadway  
 Thirty-ninth Street Theatre—123 West 39th St

Maxine Elliott Theatre—107-15 West 39th St  
 Loews State Theatre—1538 Broadway  
 Hudson Theatre—139 West 44th St

### Hotels, Restaurants and Clubs

Elks Club—108-16 West 43rd St  
 Lambs Club—128-34 West 44th St  
 Hotel Somerset—148-52 West 47th St  
 Hotel Somerset—113-23 West 43rd St  
 Hotel Royalton—44 West 44th St  
 Columbia Club—4-14 West 43rd St  
 Century Club—7 West 43rd St  
 N Y Yacht Club—37 West 44th St  
 City Club—55 West 44th St  
 Hotel Webster—38-42 West 45th St  
 Delmonicos—Fifth Ave & 44th St  
 Union League Club—Fifth Ave & 39th St  
 Murrays Restaurant—228-32 West 42nd St  
 Continental Hotel—Broadway & 41st St  
 Beaux Arts Restaurant—Sixth Ave & 40th St  
 Berkeley Arcade—19-25 West 44th St  
 St James Hotel—111 West 45th St

### Under the Riverside Drive Viaduct



*Photograph by The New York Edison Company*

The Riverside Drive Viaduct With the Fort Lee Ferry House, the Railroad Crossing Gates, and For a Background the Lights of Jersey's Night Industries. The S-shaped Streak of Light Marks the Course of One of the Ferry Boats

## Truck Versatility

**I**N the operation of electric trucks by the various businesses in New York, other cities will find many object lessons in the solution of delivery problems, the reduction of costs and the elimination of delays. New York is the largest user of electric trucks in the world and the work performed by the vehicles covers as wide a range of requirements as could possibly be imagined. So too, is the territory served, for it includes miles of asphalted streets in the city and hills in the suburbs and outlying boroughs. Physically the Metropolitan territory presents most of the characteristics that will be found in any other city. New York is also a city of distances, and electric vehicles, operating from the retail centres, are frequently called upon for suburban runs that total well over forty miles.

A brief glimpse at the situation in the Metropolitan district discloses the fact that 51 per cent of all the electric trucks in the United States are to be found here. More than four hundred firms use upward of 4,362 electric trucks and the number is daily increasing as merchants come more and more to the realization of the utility,

economy and dependability of this type of transportation. That the application of electric trucks is not confined to any one industry or grouping of industries is shown by the fact that the four hundred users represent over thirty-eight different classes of business. The transportation problems



*Photograph by The New York Edison Company*

Cleanliness is Essential in the Handling of Candies

which confront the electric trucks in service with these firms are varied in the extreme and range from short hauls to docks and piers to long distance deliveries in New Jersey and on Long Island.

The adaptability of electric trucks is not confined to any single industry and in those cases where company officials have made their trucking difficulties a study the result has almost always been the installation of electric vehicles.

Recently the Westcott Express

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Company made a survey of the conditions under which its trucks operated. This survey showed among other things, that the storage battery vehicle could do all the work of the gasoline truck within a certain field and do it at lower cost and to better advantage. The survey included an actual test between a gasoline truck and an electric truck of similar capacity. Each of the trucks was given the same load and routing and accurate records were kept. After a month's test the figures showed that the electric had saved \$118.69, had required much less time for repairs, and had done just as much work. As a result of this test the Westcott Express Company decided to discard all its gasoline trucks in New York City and to replace them with electrics. Although the express company had already been using electric trucks for a number of years this added proof swung the balance of opinion definitely in favor of electrics. So much for the experience of one express company.

While large trucks of great carrying capacity are required for express service, the very opposite is true of neighborhood deliveries as made by bakers, laundrymen, department stores and grocers. The statement is often heard that horse-driven vehicles are still best for such deliveries but that this is untrue in the majority of instances was shown not long ago by the investigations conducted by the Acker, Merrall and Condit Company, retail grocers. Having used horses for some time at the company's uptown branch stores, this concern decided to try electric trucks and accordingly installed three, allowing them to operate side by side with the horse drawn wagons. No great length of service was needed to demonstrate the wisdom of the venture for the electric trucks not only cost less to operate on a per mile basis but were able to do the work of two and sometimes three horses in the same number of hours. Cleanliness too, was a factor and the Acker, Merrall and Condit Company



*Photograph by The New York Edison Company*

**The Economy of the Electric Truck Has Been Demonstrated by Its Work in Express Service**

## The Edison Monthly

are continuing to replace horses with electric delivery cars wherever possible.

The element of cleanliness found in electric trucks has caused the candy making industry to regard them with ever-increasing favor and among other firms in this business may be mentioned The Mirror Company who now operate

three electric trucks of the two-ton size. The deliveries are made with greater reliability in this way while the goods are entirely free from the presence of any unpleasant odors.

Restaurants also are employing electric trucks in large numbers and the Horn & Hardart Company, proprietors of the Automat lunch rooms, may be cited as an instance in point. Your hungry New Yorker wants his lunch when he wants it, so it is essential that deliveries be made on time. Practically all of the cooking is done at a central commissary department, and delivered by electric truck to the lunch rooms throughout the city. The fourteen electric trucks which this company operates are on the streets both day and night and have always rendered dependable, satisfactory service. These fourteen electrics have been working for ten years already and a further life of at least eight years is confidently expected of them.



*Photograph by The New York Edison Company*

New York is Hungry Twenty-four Hours a Day so Trucks in Restaurant Service Must Be Dependable

Municipal authorities, too, are recognizing the value of electric trucks and the Street Cleaning Department has installed them in its Fourteenth District, a district which embraces one-eighth of the entire Manhattan territory. The electric in this case is a large tractor which hauls loaded trailers containing rubbish and ashes to the city dump. It has already seen nine years of continuous operation. Hospitals have operated electric ambulances for many years. New York Hospital has the largest electric ambulance fleet in the City. Bellevue Hospital has several cars and the Gouveneur Hospital has just placed two in service.

New York City business houses are now becoming fully awakened to the possibilities of electrical transportation just as they have recognized the possibilities of electricity in other ways and reason is not lacking for the belief that electric trucks will soon be generally used for all such work as falls within their sphere.

# The Edison Monthly



*Illustrations by Jerome Myers*  
A Glimpse of New York's Syrian Quarter, Where People from the East Make Beautiful Laces and Embroideries

## A Little Bit of Syria

**I**N the early days of the life of New York City there probably was a reason for naming the thoroughfare extending from Battery Place to 14th Street after the first president of the United States. At that time, perhaps, Washington Street was characteristically American and boasted of many fine old families whose names made up the social register of the day. Even now, so many years after, one may find an old building or two—defaced by fire escapes and signs in a strange tongue—but still retaining a suggestion of its old aristocratic spirit. But these are fast disappearing, are being crowded out, or altered beyond recognition, in an endeavor to accommodate a population from the East—from distant Syria—and to provide suitable place for these strange dark-eyed people to carry on their native art of lace and embroidery making.

Why the Syrians should have chosen Washington Street for their center is a question. There is certainly nothing about the street itself which might attract these Easterners, made up as it is of a jumble of houses high and low, old and new. Perhaps the answer lies in the fact that Washington Street runs into Battery Place—not far from the pier which daily swarms with newly arrived immigrants from overseas. And a long while ago when the first Syrian arrived in this country—there must have been a first Syrian sometime—he probably gave one frightened look around and then just happened to walk up Washington Street a few blocks, perhaps as far as Rector or Morris Streets, and there

took a room and set up housekeeping. Almost everything starts in a simple little unimportant way like that.

Of course our first Syrian sent word home about the wonderful, new country of stone houses and paved streets and in a little while over came the family. Then the news spread and more families came and of course they all settled in Washington Street. Now Washington Street is New York's Syria, just as Pell, Mott and Doyer Streets represent China; Allen Street, Russia; Mulberry Bend, Italy; and Sixty-ninth Street and First Avenue, Bohemia. Little restaurants were opened, very simple and very plain, making no pretense at native decoration, but serving Syrian food, cooked Syrian fashion and served to a clientele of very exacting Syrians. The prices are very low and the food very good.

### *Lace Making*

Conducting restaurants is not the specialty of the Syrian, however, as it is of the Italian or the Frenchman. Lace making is the industry that absorbs the interest of these Eastern strangers in New York City—laces of every sort that frequently find their way to the show windows of Fifth Avenue. Much of it, however, you may purchase in the little shops along the street, but be ready to drive a bargain, for remember that you are a foreigner in Syria when you shop on Washington Street. Most of this lace is made on the floors above the shops by girls and women long trained in the intricate art.



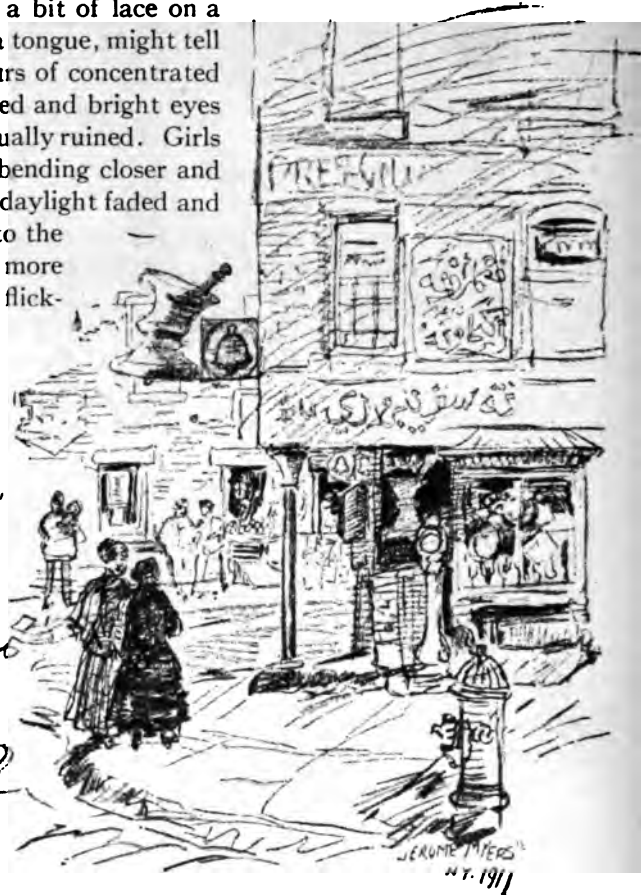
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There was a time when a bit of lace on a woman's gown, had it but a tongue, might tell a story of long tedious hours of concentrated work, young fingers cramped and bright eyes dulled and strained—eventually ruined. Girls sat at embroidery frames, bending closer and closer to their work as the daylight faded and then continued working into the night, the task made still more difficult by an unsteady and flickering light.

And now? How different it is! Lace is still made by hand and made quickly too, but backs are not bent and eyes are not strained. Modern lighting is used. Work shops, which heretofore, even at high noon, caught but a dim reflection from the sun and at night were places of dancing shadows making fine lace work a torture to the workers, are now bright and cheerful with soft white lights carefully arranged and shaded. Naturally the work turned out is better and naturally it is produced in greater quantity.

It is a revelation to go into one of the old buildings on Washington Street; to climb a flight of rickety stairs and with foreboding to open a door leading into a lace work room and instead of finding a gloomy dark room such as one half expects to find, to step into a brightly illuminated factory, alive with the gay chatter and laughter of fifteen or twenty sparkling-eyed Syrian girls.

Over every embroidery frame hangs



A Corner in the Syrian Section. Note the Strange Characters Over the Entrance to the Drug Store

a shaded light. Usually the shades are green, the most restful color to the eyes. In a number of the factories the lamps used give a light very closely approximating that of the sun. This permits perfect matching of colors.

In the old days much valuable space was lost in the factories. Certain rooms or parts of rooms were so dark as to make work impossible. Scientific illumination eliminates this condition, making every square foot of floor space yield good return and also makes for happy workers.

May



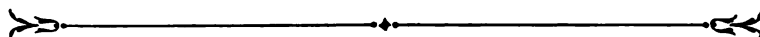
1922

Old Dutch Houses on Broad Street

VOLUME 14

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## The Edison Monthly

### The Edison Monthly

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April, with a two-weeks' exhibit of electric vehicles and a luncheon meeting which brought together a representative gathering of users as well as manufacturers and dealers, was undoubtedly one of the most auspicious months in the history of the industry in New York. The show proved a decided stimulus to the sale of electric trucks of various types and the luncheon brought forth unqualified endorsement of the vehicle from those best qualified to criticise or approve—the users. The luncheon, held at the Hotel Astor on April 4, will long be remembered by those in any way interested in electric transportation. As has already been said, it was a gathering of both users and manufacturers—but all three of the afternoon's speakers were users. All the fine things said about electric trucks on that occasion, of things done, of economies effected, and of service rendered, were said by those whose capital is invested in electric trucks.

The speakers were Mr Robert E M Cowie, vice president of the American Railway Express Company, the largest user of electric trucks in the world; Mr H F Hotchkiss representing Mr G Marks, assistant to the general manager of the New York, New Haven and Hartford Railroad, and Mr J E

Dann, president of the Pilgrim Laundry of Brooklyn. Mr Cowie described the operation of electric trucks in express service throughout the country; Mr Marks' paper was devoted to the use of electric industrial trucks in the great freight transfer stations of the railroad at New York, New Haven, Providence and Boston; and Mr Dann described the operation of light electric delivery wagons in house to house service in a local territory.

All three papers were rich in facts and figures pertaining to the operation of storage battery propelled vehicles and they showed beyond question that in their proper fields electric far outclass any other type of delivery equipment. To comment on these papers would seem almost like "gilding the lily" and while it is usually an editorial prerogative to make such comments, the privilege is foregone in this case and the following extracts are reprinted just as they were delivered.



From Mr Cowie's address:—"We have a very soft spot in our hearts for the electric vehicle,—a selfish preference for the electric vehicle, because of its satisfactory performance in our peculiar service. We find it very dependable; we find the cost compared with other types of vehicles to be reasonable; we find the necessity for carrying parts for replacement to be very much less than in connection with the gas car; and what is of greater importance than that, is the fact that on our congested streets in all of the large cities,—we have other types of vehicles, including the horse-drawn,—we have fewer accidents and personal injuries in connection with the elec-

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tric vehicles than we have with any of the other types of vehicles that I have mentioned. . . .

"It may be of some interest to you men engaged in this particular industry to know that  $83\frac{1}{3}$  per cent of all the motor vehicles purchased for this Metropolitan district in the past twelve months have been electrically propelled cars. It may further be of interest to you to know that in the last thirty days I have appended my signature to certain documents in approval of the purchase of 104 electric motor vehicles. . . .

"I might say that only recently I took 50 gas cars out of one city alone, and replaced them with 50 electrics."

In opening his address Mr Cowie commented upon its title, Electric Trucks in the Service of the American Railway Express Company. "I would probably have made the caption," he said, "'Electric Trucks in the Service of the American Railway Express Company are Indispensable.'"

From the paper presented by Mr Hotchkiss:—"It will interest you to know that the facts and methods outlined in this paper are not theories but the results of personal observation and operation; of actual results; of 'honest to goodness' use, in handling large volumes of freight in all sorts of places and under varying conditions.

"The New Haven Railroad now operates four different stations and transfers with tractors and trailers: Pier 39, East River, Providence, Boston and Cedar Hill Transfer:—

"As a combined proposition, considering the total cost at these stations prior to the introduction of any form

of drop-truck and the present cost with tractor and trailer, it has been our experience that the handling cost has been reduced between 14 and 25 cents per ton, directly due to the mechanical equipment, and further, that it has been possible to save, within a period of from eight to ten months, an amount equivalent to the entire cost of the installation."

A record of 2836 tons has been handled in one day (at Cedar Hill where there are sixteen tractors and six hundred trailers) while 350 cars can be regularly worked and freight transferred into approximately 280 cars in the outbound classifications. It would be an impossibility to approach this performance under hand-powered operation, regardless of number of men.

From the address by Mr Dann:—"We have thirty-four electric trucks. We have no horses, as I have already told you. For our purpose the electric truck is just the thing. Our calls are frequent, as high in some cases—I have it reported—as fifty-seven stops in a block, and consequently it really is the only vehicle that we could use.

"In three months' time thirty-two cars covered 34,422 miles, and the average mileage per single car per day was 10.34 miles, due to the fact, as our route superintendent tells me, that we make our collection and delivery at the same time, and so we are not obliged to cover our territory twice. The total cost per car per month is \$20.39. This item is made up of the actual fixed charges on maintenance only, and depreciation is not included."

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More Than Four Hundred and Fifty Electric Vehicle Men—Users, Manufacturers and Dealers—Attended the Annual Luncheon at the Hotel Astor on April 4th. The Speakers Included Mr Robert E M Cowie, Vice President of the American Railway Express Company, Mr H F Hotchkiss of the New York, New Haven and Hartford Railroad and Mr J E Dann of the Pilgrim Laundry. The Toastmaster Was Mr Arthur Williams of The New York Edison Company

# The Electric Automobile Show

THE second annual Electric Automobile Show was held during the two weeks beginning April 3 in the showroom of the New York Edison Company at Irving Place and Fifteenth Street. With a luncheon at the Hotel Astor on Tuesday, April 4, and the exhibit covering a period of two weeks, the electric vehicle dealers in the metropolitan territory succeeded in making April one of the most auspicious months in the history of the industry. More than thirty manufacturers contributed to the exhibit of passenger cars, trucks and automobile accessories. During the first week, street trucks ranging from 750-pound capacity up to five tons were shown. Passenger cars were also shown during this week, including the first electric ever run in New York. This pioneer of the modern electric passenger car is a three-wheeled affair steered rudder fashion by the rear wheel. The front wheels are propelled by a motor; the batteries being located behind the seat. The latest in electric taxicabs, the Electrocar, was the object of much attention and the new Steinmetz truck also proved a drawing card.

On April 9, the beginning of the second week of the show, big trucks gave way to the electric industrial trucks, which have proved so helpful in handling the ever-increasing freight traffic at railroad and steamship terminals and piers. The exhibit of accessories extended over both weeks and included storage batteries, charging apparatus, and electric control equipment. Chauffeur's uniforms were also shown.

Besides the many sales made through the show which, of course, were of advantage to the dealers and manufacturers, the Electric Automobile Show demonstrated to the public at large the great strides that have been made in this industry.

## *Electrics in Local Service*

According to Charles R Skinner, Jr, Manager of the Show, there are more than \$23,000,000 worth of electric trucks operating in the metropolitan territory today, eight hundred of which were purchased during the past two years. A roster of electric truck users includes the names of the American Railway Express with 1225 trucks, Ward Baking Company with 625 trucks, The New York Edison Company with 121 and Cushman and Sons, Inc, with 150. Some of the trucks in service are more than twenty-three years old. There are 980 that are ten years old and 106 that are more than fifteen years old. So far as the future is concerned, Mr Skinner said that if electric trucks in their field were adopted where other types are now used, there would be an annual saving in operating costs of nearly \$600,000,000.

"Just as electricity took the place of more costly, less efficient power in our railroad locomotives and street cars, so electric trucks will replace horses and other types of trucks for at least 70 per cent of all city haulage," said Mr Skinner.

The electric taxicab will doubtlessly have a place in the future. It has an operating capacity of from sixty to seventy miles on a single charge and

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*Photograph by The New York Edison Company*

A Corner of the Show, Showing the Exhibits of the Commercial Truck Company, the Baker R and L Company, the Walter Motor Truck Company and the O B Electric Vehicles Company

although this will be ample for the requirements of city work, provision has been made for the rapid change of batteries in case a twenty-four hour service should be required. The car is so constructed that it will be possible to

remove the exhausted battery and replace it with a fresh one in about the same time required to refill the gasoline tank.

How easily and efficiently electric trucks and passenger cars may be op-



*Photograph by The New York Edison Company*

Another View Showing the O B Display, the Walker Vehicle Company Exhibit and Some of the Charging Equipment

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*Photograph by The New York Edison Company*  
The Brougham Exhibited by the Detroit Car Co

erated was very eloquently demonstrated when the exhibits were driven into the big showroom under their own power. Placing them meant careful maneuvering among ten ornamental columns and six plate-glass show cases. In backing and shifting there was a clearance of less than two inches between the wheel hubs and the corners of the show cases. That three 5-ton trucks, two 3½-ton trucks, two ½-ton trucks and three passenger cars, not to mention the motorized trailers and lifts, were moved in without so much as a scratch on the walls or a crack in the glass speaks well for the control equipment of electrics.

On April 4, the annual luncheon of electric vehicle manufacturers and

dealers was held at the Hotel Astor. Among the speakers were Mr Robert E M Cowie, vice president of the American Railway Express, the largest user of electrics in the world, Mr H F Hotchkiss of the New York, New Haven and Hartford Railroad and Mr J E Dann, president of the Pilgrim Laundry of Brooklyn. Mr Arthur Williams, general commercial manager of The New York Edison Company presided. Many of the guests availed themselves of Mr Williams' invitation to attend the show after the luncheon.

In his speech at the luncheon, Mr Robert E M Cowie, vice president of the American Railway Express Company said that their Company had found that the electric truck tends to lessen traffic congestion and that there are fewer injuries per car where electrics are employed. He said that in the last twelve months, 83½% of the company's vehicles purchased for the metropolitan district were electrics. He



*Photograph by The New York Edison Company*  
The Rauch and Lang Sedan and the Taxicab Exhibited by the Electrocar Corporation



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made a point of the fact that the electric has the necessary speed consistent with safety and that their upkeep is 50% less than that of any motor-driven vehicle.

Mr H F Hotchkiss spoke concerning the trailer trucks hauled or pushed by electric tractors which, he said, have made possible radical economies through the elimination of old procedures on railway freight platforms. "Through the use of trailers" Mr Hotchkiss said "it has been definitely developed that rush hours can be protected and the actual loading kept abreast of the receipts so that at the close of the day, the quantity of freight remaining not loaded is reduced to a minimum." Mr J E Dann, president of the Pilgrim Laundry of Brook-

lyn, told the assemblage of the vast business of his company, and of the territory it served and said that the collections and deliveries are made by an all-electric fleet of thirty-seven vehicles. No horses are employed by the Pilgrim Laundry because sometimes as many as fifty-seven stops have to be made in a single block. The electric with its easy stopping and starting is especially adaptable for this work.

The movement of traffic in New York City is gradually becoming a slower process, due to the increasing number of vehicles in the streets. Any step taken to relieve this congestion is a step for the better. The electric truck is very compact and its mode of operation is so efficient as to make it the most desirable vehicle for city use.



*Photograph by The New York Edison Company*

A General View of the Main Aisle with the Ward Motor Vehicle Company's Five Ton Truck in the Right Foreground, and the Walker Truck on the Left

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*Photograph by The New York Edison Company*  
The Exhibit by the Steinmetz Electric Motor Car Corporation Attracted Much Attention

Many express company officials, superintendents, and shipping departments and others attended the Show during its second week to see the latest developments in electric elevating trucks, crane trucks, trailers and tractors. By the use of the elevating truck on freight platforms, several skids may be employed thus avoiding idleness on the part of the elevating trucks during the loading and unloading process. Such an elevating truck used in combination with an electric for delivering the merchandise or freight is the most efficient method of freight

handling now available, as was shown by Mr Hotchkiss' paper.

While as a matter of course, the electric truck manufacturers and dealers showed an interest in the show, cooperating in every way possible to make it the success that it was, the general public also evinced a very lively interest. Many hundreds of people came to the show to ask questions and to carry away literature concerning the exhibits.

The storage battery which supplied the energy for the first electric lamps ever seen by Esquimos aroused as much interest during the show as it did in the Polar regions in 1914. The Crocker Land Expedition carried the battery, part of a portable lighting outfit, and it never ceased to excite the wonder of the strange people of the north.

In a letter to Mr William Van C Brandt of the Electric Storage Battery Company, dated Etah, North Greenland, Saturday, August 1, 1914, Fitzhugh Green, U S N, engineer and



*Photograph by The New York Edison Company*  
The Lansden Delivery Wagon Shared Interest with the Daddy of Them All, the Electric Buggy Built by Mr Leon Mendel Forty Years Ago

## The Edison Monthly

physicist of the expedition, wrote:

"Our battery of seventy-six cells was shipped to New York in June. They were stored in the Navy Yard. Then by freight we took them to the ship and into the hold. Stevedores handle everything as if it were baled waste and the batteries were not expected.

"At Etah we were forced to land over the ice and rocks. Putting up the house required nearly three weeks and the motor generator meant another week's delay before we finally got at the batteries early in October. Filling the jars and giving the whole a good overcharge we switched over to our lights which we had wired throughout the house. There was a blaze of light. The Esquimos gathered for the occasion were wild with delight. It was great!

"We secured a tremendous amount of light without any extraordinary

expenditure of oil in the charging engine. When you consider that the sun is gone for one hundred and seventeen days and that even the occasional moons are only too often buried in blizzards you can realize what real light meant to our little crowd. We rigged a big reflector and 30-cp lamp over our front door. Many a time you were enjoying the bright sunshine of a winter afternoon while we were keeping in condition running over the ice of the Fiord in a daytime pitch black except for that blessed light."

The first Electric Automobile Show was a success. This year's show, the second, was a greater success, both in the number of sales made and in the enthusiasm and interest it created. The future of the electric vehicle is assured because good transportation is based on economy and reliability—and the electric has both.



*Photograph by The New York Edison Company*

The Industrial Truck Exhibits Included Tractors, Crane Equipped Trucks, Elevating Platform Trucks, Material Stacking Machines, and Platform Skids

# The Cozy Home

THERE are many things that help to make a house homelike—furniture, rugs, draperies, pictures, books, and lights. But no matter how elaborate the furnishings are, there can never be the real homelike atmosphere if the lighting system does not receive the same thoughtful planning that is expended on the rest of the house. The lighting equipment must be chosen with the same consideration for refinement and taste that is given to everything else. Most of us have not a great deal of leisure during the day and it is in the evening that we relax and seek pleasure. Therefore we appreciate the restful quiet of a tastefully arranged living room where there are no jarring notes to disturb our sense of proportion, and where the coloring is soft and the lights are soft, and everything seems to harmonize.

Friends are always grateful for a certain amount of intimate seclusion, and intimacy in lighting accomplishes this. By this intimacy is meant lighting from floor lamps, table lamps, wall brackets, or candle sticks in contrast to the more formal chandelier. Especially is this true of the living room.

Almost anyone knows the homelike feeling enjoyed while reading a favorite book in the friendly light of a reading lamp. A deep arm chair or the corner of a davenport never seems so cosily secure from interruptions as when a neighboring lamp casts golden rays upon it.

For centuries men have abused their sight because they have not

given consideration to the proper lighting of their homes, their shops, or their public buildings. But the past half century, with the improved methods of lighting, has seen tremendous advances toward the elimination of a very serious condition. There should be no glare, which like noise in sound verges on vulgarity. Glareless light is restful to the nerves, healthful to the eyes, and artistic and pleasing. The light can be properly diffused so that there is an absence of glare and its opposite, black shadows. Portable lamps meet this requirement of good lighting.

## *Match the Furnishings*

Besides supplying light, portables should be just as much a part of the furnishings as anything else, and therefore they should harmonize with their surroundings. If they succeed in this they cannot help but contribute to the homelike atmosphere of the house. For instance, a small lamp on a small table, placed at just the right angle so that it seems to belong and is not perched there like a piece of misplaced bric-a-brac, may add a much needed touch to a corner that would otherwise seem bare and lacking in warmth. A candelabra—it may be an old fashioned pewter, brass, or silver one that has been wired for electricity—goes far toward creating the atmosphere of coziness. Even before the threshold is reached the small lanterns hanging one on each side of the door beckon welcomingly to you to enter friendly portals. And lo! In the living room a long

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table holds a crystal bowl wherein lay red roses that bask in the golden light from a slender table lamp.

In the homelike house that has been wired for electricity a generous number of outlets have been distributed so that it is possible to place portable lamps in any of the rooms to

On the other hand if the surroundings are not dark they assist by reflection.

In an unusually large room two or three lamps may be placed where the light is particularly desired, and this arrangement can be made so that it is glareless and restful to the nerves, at the same time artistic and har-



*Photograph by The New York Edison Company*

In the Friendly Light of a Reading Lamp One Feels a Certain Amount of Intimate Seclusion

suit one's taste. This allows for the development of individuality and creates something interesting, breathing personality and charm, all of which are essential to the art of home making.

The amount of light that is needed in a room varies according to the color of the walls and hangings, the tastes of those occupying the room, and the size of the room. Dark colors absorb light and therefore more is needed where they are employed.

monious with the other fittings of the room.

It would hardly be wise to say that all lighting fixtures should be discarded in favor of portables but it is quite evident that portable lamps can be so arranged as to give the best possible light and meet all requirements for the decorative scheme of the home. Not only are they practical for living room and bedroom use but also efficient for the dining table.

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Very effective results can be obtained in silk and parchment lamp shades chosen in colors or color combinations to harmonize with their surroundings. Those who are blessed with artistic fingers can deftly make them at home, or selection can be made at the display room of any fixture dealer.

There are many possibilities in portable lamps. They seem to give the touch that completes the cozi-

ness of the evening at home; they supply good light that is suitable for various activities; they become as much a part of the home as any article of furniture or decoration and unlike permanent fixtures can be moved with that furniture if any change is made. Portable lamps are infinitely pleasing when tastefully chosen and their beauty as well as utility helps create a homelike atmosphere.

### The Call of the Light

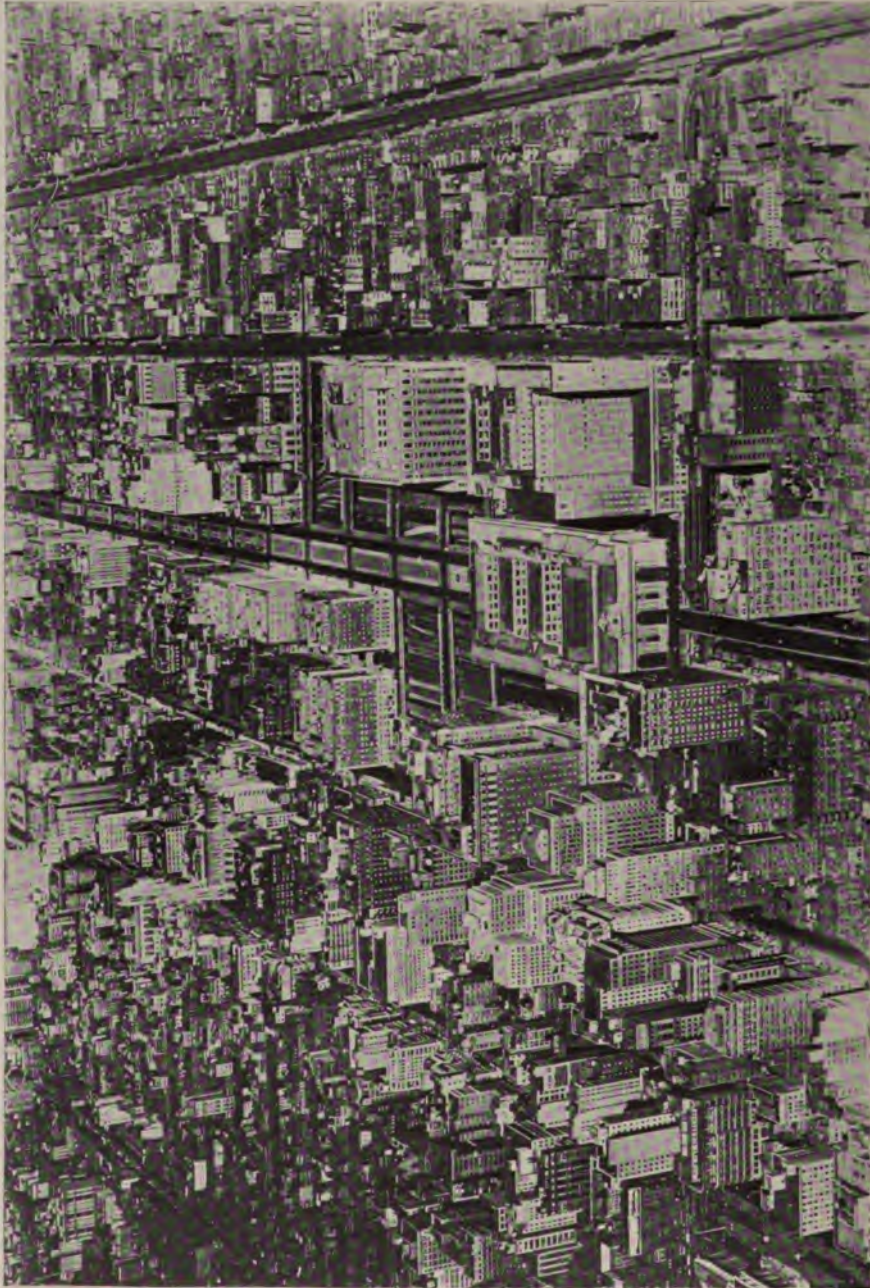
All through the busy day it stands,—  
Bronzed, or lacquered, with jeweled bands;  
Ruddy with copper or gleam of brass;  
Yet cold, as the sunlit hours pass.  
But when the twilight haze is rife,  
Swiftly it quickens to glowing life;  
Till gently, subtly, its silent call,  
In its magic circle has drawn them all!

The schoolboy comes with his evening task,  
In the mellow warmth of its light to bask;  
The tired mother sinks softly down;  
Father smooths out his work day frown;  
Grandmother peers with a smiling face,  
Silver crowned, from her wonted place;  
And little ones gather with happy look,  
For story, or game, or picture book.

The circle widens, as tender speech  
Brings absent dear ones within its reach.  
As a pebble flung by a careless hand,  
Sends the broadening ripples to distant land.  
Steadily, whitely, the home-light beams  
On hopes and wishes and eager dreams;  
And Peace and Contentment, set their stamp  
On the kindly glow of the Evening Lamp!

—*Pauline Frances Camp*

# The Edison Monthly



*Photograph by Mayor Hamilton Maxwell*

An Airplane View of the New Uptown Financial District which Bids Fair to Rival Both in Picturesque Skyscrapers and in Fame the Old District Downtown

# Airplane Views of Edison Service

## Uptown Wall Street

**W**ITH the Grand Central Terminal in the central foreground, the photograph on the opposite page represents one of the most recent and startling real estate and building developments that has occurred in New York for many years. In a city which due to its topography is rapidly approaching the condition of being greatly overcrowded in certain sections, and particularly those "where merchants most do congregate," sudden migrations of interests devoted to particular phases of business and industry quite frequently occur. Thus the needle trades, finding themselves in cramped quarters on Fifth Avenue in the Twenties and Thirties as though by pre-conceived design moved in a body to Seventh Avenue. There are rumors that the jewelers' trade which for so many years has been located on Maiden Lane is planning to move to another and less crowded locality. And now the patriarch of them all, the grave and sedate world-famous Wall Street, practically the hub of the world's financial interests, has split and moved uptown to the so-called Grand Central zone in the neighborhood of East 42nd Street and has constructed for itself a sky-scraper district which bids fair to equal that which towers into the heavens at the lower end of Manhattan Island.

The district is of particular interest from the electrical viewpoint because so many of the largest and most important buildings receive their current supply from the Central Station.

This includes both the new buildings constructed during the past few years and other buildings which have been remodeled and modernized.

It has now come to be an almost invariable rule when any remodeling or construction work is done, that Central Station Service be installed to supply the electrical requirements of the building. Practically all of these new skyscrapers of New York's uptown Wall Street are electrically supplied both for lighting and power purposes by Central Station Service.

Recent electrical power developments in connection with elevator service have proved a great boon to modern office buildings, greatly facilitating their freight and passenger traffic. The old hydraulic elevator so complicated, and unreliable, and inefficiently operated by "home made" steam has no place in the modern office building, equipped as it is with the latest type of high speed electric cars. Electric side walk lifts for handling freight, and electrically operated house pumps, sprinklers, and ventilating systems such as have been installed in almost all of these buildings tend to reduce overhead expenses to a minimum.

### *Edison Served Buildings in the 42nd Street District*

Arnold Constable and Company—453-9 Fifth Avenue  
Foster Building—278-80 Madison Avenue  
Warfield Building—461-9 Fifth Avenue  
The Architects Building—101 Park Avenue  
Fifth Avenue Branch Farmers Loan and Trust Co—475 Fifth Avenue  
Johns-Manville Building—28 East 41st Street—296-8 Madison Avenue



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Chemists Club—50-54 East 41st Street  
 Rogers Peet and Company—479 Fifth Avenue  
 Manhattan Storage Warehouse—374-390 Lexington Avenue  
 Loew's 42nd Street Theatre—385 Lexington Avenue  
 Liggett Building—315-23 Madison Avenue—35-49 East 42nd Street  
 National City Building—95 East 42nd Street—316-30 Madison Avenue  
 Transit Building—5-7 East 42nd Street  
 Seymour Building—503 Fifth Avenue  
 Columbia Bank Building—507 Fifth Avenue  
 Postal Life Building—511-13 Fifth Avenue  
 Charles Building—40-42 East 43rd Street  
 Harriman National Bank—523-9 Fifth Avenue  
 Chicago Penumatic Tool Co—6-8 East 44th Street  
 Canadian Pacific Building—342-4 Madison Avenue  
 Delmonico's—531 Fifth Avenue  
 Borden Building—16-28 East 45th Street  
 Equitable Trust Co—347-53 Madison Avenue  
 S W Strauss & Company—563-9 Fifth Avenue—7 East 46th Street  
 W & J Sloane—571-7 Fifth Avenue  
 Bristol Building—509 Fifth Avenue  
 Guaranty Trust Co—524-28 Fifth Avenue  
 Marcus Building—542-4 Fifth Avenue  
 L P Hollander Building—560-2 Fifth Avenue  
 Black, Starr & Frost—562-4 Fifth Avenue  
 Collegiate Church of St Nicholas—600 Fifth Avenue  
 Charles Scribner's Sons—597 Fifth Avenue  
 Belgravia Apartments—611 Fifth Avenue  
 Democratic Club—617 Fifth Avenue—3-7 East 49th Street  
 St. Patrick's Cathedral—Fifth Avenue and East 50th Street  
 Frances Building—665-71 Fifth Avenue—2 East 53rd Street  
 Cammeyer Building—677 Fifth Avenue  
 Criterion Club—683 Fifth Avenue  
 J M Gidding & Company—724-6 Fifth Avenue  
 Duveen Brothers—720 Fifth Avenue and West 56th Street  
 Fifth Ave Presbyterian Church—West 55th Street & Fifth Avenue  
 St Thomas P E Church—West 53rd Street & Fifth Avenue  
 New York Trust Co—East 57th Street & Fifth Avenue  
 Langdon Building—717-19 Fifth Avenue  
 St Bartholomew P E Church—Park Avenue and West 51st Street  
 Racquet & Tennis Club—360-76 Park Avenue  
 Montana Apartments—375 Park Avenue  
 Central Presbyterian Church—Madison Avenue and 57th Street  
 Sydenham Building—58th Street and Madison Avenue

Bankers' Trust Co—23-5 East 57th Street—598 Madison Avenue  
 Hotel Essex—572-6 Madison Avenue  
 Plaza Theatre—Madison Avenue & 59th Street  
 Hotel Mansfield—12 West 44th Street  
 Society of Mechanics & Tradesmen—20 West 44th Street  
 Putnam Building—2-6 West 45th Street  
 Berkeley Arcade—20 West 45th Street  
 Central Building—25-33 West 45th Street  
 Harvard Club—28-36 West 45th Street  
 Columbia University Club—4-14 West 43rd Street  
 Academy of Medicine—17 West 43rd Street  
 Brook Club—7 East 40th Street  
 Park Avenue Operating Company, Inc—104-10 East 40th Street  
 Yale & Towne Mfg Co—911 East 40th Street  
 Stafford Brothers, Inc—15-17 East 40th Street  
 Physicians Building—40-44 East 41st Street  
 300 Madison Avenue, Inc—300 Madison Avenue  
 45th and 46th St Corporation—11-15 East 45th Street

### Electrical Companies To Hold Convention

The annual convention of the Metropolitan New York Section of the National Electric Light Association is to be held in New York on Friday, May 26th. Business sessions covering the commercial, technical, accounting and administrative problems of the local electric light and power companies will be held in the morning and afternoon in the Engineering and Societies Building, 29 West 39th Street. In the evening there will be an entertainment and dance at the Waldorf-Astoria.

### Hark, Hark, the Spark!

An electric spark  
 Went on a lark,  
 One dark and gloomy day;  
 It made its mark  
 The gloom and dark,  
 And drove them both away.

—T M Bray

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*Photograph by Van der Weyde*

"When Buttress and Buttress Alternately Seem Framed in Ebon and Ivory", Is as Fitting a Description of the Buttressed Chapels of the Cathedral of St John the Divine as it was of "Fair Melrose"

## Artificial Eyes

THE thought of eye injuries and blindness seems inevitably to be associated with industry, an unhappy condition which industry has been able to reduce by various protective measures but which it has never been able wholly to overcome. But the empty eye socket antedates modern industrial conditions by many centuries and long before a blast furnace was ever thought of, or a grinding wheel driven at high speed, our Roman and Egyptian ancestors were seeking to overcome the disfigurement of an injured eye. Perhaps the goggle of today is a direct descendant of some primitive protective device, just as the glass artificial eye is a direct descendant of the painted strips of linen with which the Ancients sought to conceal their misfortune.

Yet, in spite of a very active and effective propaganda in the interest of safety—although goggles are now used in almost every industry where the menace of flying particles exists—eye casualties are still an all too frequent occurrence. They constitute fully ten per cent of the two million non-fatal accidents which occur in this country every year. Fortunately many of the eye accidents are not more serious than some of the cut limbs and sprained ankles, but just as there are accidents which cost an arm or a leg there are accidents that cost an eye. As a result of this, industry has produced an industry within itself—the manufacture of glass eyes. Happily this unusual industry is not a very large one. Three firms, all located in

New York City, find their output adequate to supply the needs of the United States, Canada and Mexico.

Although manufacturers state that one person in every three hundred has suffered the loss of an eye the layman may be inclined to be skeptical. He passes thousands of people



*Photograph by The New York Edison Company*

**Drawing Out the Tube, the First Step in the Manufacture of Artificial Eyes**

a day and he does not see many who appear to be sightless. And in this he pays tribute to the skill of the artisan who has provided so perfect a mask for hiding so unfortunate an affliction.

Artificial eyes were made as early as 500 B. C. The priests of Rome, who practiced as physicians and surgeons, included eye making in their craft. The eyes of that period were made of earthen-ware, modeled

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lifesize and painted to represent the human eye and eye-lids. This was mounted on a piece of flesh colored linen, and gummed to the face. In brief, the eyes were worn outside the socket, and though it must have proved a clumsy substitute, it was evidently appreciated by the wearers. The ancient Egyptians used a hollow globe of gold, deftly enamelled. Glass eyes were first made about 1579 and



*Photograph by The New York Edison Company*  
**Forming the Artificial Eye**

were a crude production of inferior workmanship; iris and pupil being handpainted in a far from life-like manner. In King Lear, Shakespeare mentions glass eyes, the King advising the blind traitor, Gloucester, to "Get thee glass eyes and seem to see."

The present-day industries in which the eye hazard is highest are: iron and steel manufacture, machine operation, shipping, grinding, and polishing, riveting, welding and cutting, mining and quarrying, chemistry,

metallurgic operations, glass making, sand-blasting, wood working, garment trades and agricultural pursuits. Pennsylvania, with its coal mining and iron and steel manufacturing, leads with an average of 350 eyes lost annually; California, with its logging, quarrying and agriculture, comes second with an average of 200 losses; New York with its general industries, third, and Minnesota, with its irritating and poisonous dusts in connection with its milling, fourth.

By far the greatest number of casualties is due to small pieces of steel or metal that find lodgment in the eye, causing serious injury and necessitating, in many cases, the removal of the eyeball. The war, of course, added its quota of victims. A surprising number of eyes are lost through automobile accidents, and many are lost through being struck by golf balls. At least one case a week is found where a child's eye has been lost through the agency of an air gun and "BB" bullet.

A large number of eye accidents result from contributory causes. Poor lighting of industrial work-places is a prolific cause of accidents. Men attempting to operate machinery in badly lighted places have often been injured because they could not see what they were doing.

The manufacture of artificial eyes has attained a high state of perfection and is now a distinct and recognized art. The plant of Mager and Gougelmann in East 12th Street, where eyes were first made in the United States by Peter Gougelmann in 1851, is typical of the three in America engaged in eye-making. Both Mr

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Mager and Mr Pierre Gougelmann, son of the first manufacturer, say that electricity has played no small part in their success. The firm has used all kinds of artificial illuminants in its laboratories but none but electricity has so nearly approached "daylight" which is so necessary in matching colors.

In the matter of colors, eye-making has little in common with commercial glass-blowing. Glass eyes, as a rule, are made to order and the color and marking must match perfectly the good eyes. Very often the patient sits opposite the artist as he works with his glass pigments.

Artificial eyes are made from glass tubes about half an inch in diameter. Under excessive heat furnished by an electrically operated blow torch these are drawn to the proper size and shaped. The tube is hollow and through it air is blown to maintain the form of the eye. The person for whom the eye is being made is seated beside the artist, who works with colored glass as a painter would with oils, reproducing the desired color in much the same way that a painter would a portrait. The glass pigment sticks are before the worker on his table. This table is arranged with a blow-pipe having air pressure which causes intense heat varying from twelve to fifteen hundred degrees.

The artist selects one of the tubes and draws it out into the flame, picking up the color for the background from the many sticks of glass before him. When the background has been made, small pieces of glass are fused on to represent the iris of the natural eye, or better the colored

pigment. After these colors are obtained, the pupils, pieces of black enamel, are fused. The crystal is next placed upon these colors and fused and the iris is blown to the proper size.

Since the human eye appears to change color under varying light conditions, an effort is made by the maker of the artificial member to



*Photograph by The New York Edison Company*  
Applying the Colors to Glass Eyes

strike an average. Wearers who desire the closest possible resemblance to the natural eye at all times usually have two made, one having an enlarged pupil for use at night.

The next stage, however, in the completion of the eye is the veining, which consists of a reddish tinge drawn out in very small strings. The veins vary and in some eyes it is hardly necessary to have them at all. At least one hour is required to make an eye, and even then, the artist is not always successful.

June



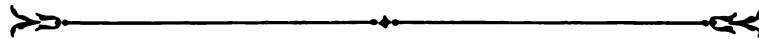
*The Old Staten Island Ferry*

1922

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## The Edison Monthly

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N F BRADY, President  
WALTER NEUMULLER, Secretary  
FREDERICK SMITH, Treasurer

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The intimate relationship existing between a prosaic electric motor and the inspired works of the sculptor is little known except to those who have enjoyed the privilege of a visit to some studio. Yet from the time the clay model is delivered by its creator to the artists who are to reproduce it in stone, the motor plays a most essential part. Considering the dependence now placed upon it one cannot but wonder at the handicaps overcome by the masters of an earlier day.

Not the least important of its tasks is the hoisting of huge blocks of marble and swinging them into position on the stone cutters' pedestals; light, too, is an all important factor in the studio that must make its minutes count. Electricity, as seen in the Piccirilli studio in the Bronx, is also used in the actual cutting of the stone—the production of the statue, or *bas relief*, or heroic figure. Through the use of measuring instruments, scales, and calipers, the reproduction of a sculptured model is to a certain extent a matter of mathematical exactness—provided, however, the workman who is using these instruments is endowed with the requisite skill. Instruments and motors do not carve figures in stone but they do help in the hands of

With the lines charted by his measuring instruments, the stone cutter has recourse to his electrical equipment—nothing less than a compressed air hammer with which he drives his varied shaped cutting tools through the material before him. He must have just as much skill as any early master, for his hand must guide the cutting edge whether the impact behind the blow is delivered by hammer or by compressed air. But when air is used through the agency of a motor-driven compressor there is no exhausting fatigue to limit the day's progress.

The modern stage owes a great deal to the genius of those electrical wizards who have done so much toward the development of realism in the world of make-believe. How much, is indicated by the difference between the lighting of the stages on the "kerosene circuit" and the elaborate equipment of the present day theatre where so many of the effects are produced by the manipulation of lights.

Obviously there is little room for economy where art asks for so much, and it is only through another use of electricity in the form of lighting and painted slides that artistic effects have been made possible at any but prohibitive costs. The new idea represents the essence of economy in settings and the height of artistic scenic effects.

The new art does away with expensive painted scenery, and replaces it with projected backgrounds, the scene to be shown being painted on small glass plates, and thrown upon a colorless screen. By means of projector and arc light the small painting is en-

## The Edison Monthly

larged one hundred times as it appears in the stage setting.

The economies of such a system are readily apparent—there is a saving of space in the theatre, a saving of time required for scene shifting, a saving in the cost of painting backgrounds, and the elimination of the cost of transporting bulky stage properties.



An interesting aftermath of the recent Electric Automobile Show held in New York in April is seen in the several letters received from those who took part in the exhibit. The actual closing of contracts is mentioned in some letters, while others tell of prospective sales that are almost a certainty. But whether reporting a sale or just a prospect the letters are all alike in the unanimity with which they speak of the benefit which must accrue to the electric vehicle industry through the medium of such shows and the closer coöperation among dealers that results.

It is thoroughly agreed among those of the industry that the one thing needed to place the electric truck where it rightfully belongs in city transportation is a continued and aggressive sales effort. Such effort would take the form of sales campaigns by individual companies, of shows arranged on the coöperative basis and newspaper publicity. A sustained advertising effort is essential for only through the liberal use of newspaper space can the merits of the electric be properly brought home to those who should use the storage battery type of vehicle.

In the matter of advertising a noteworthy forward step was taken in con-

nection with the recent show when a group of manufacturers used a two-page spread in the rotogravure section of one of the New York papers. It was the first time in the history of the industry that newspaper space had been used so liberally. It was the kind of advertising that has done so much in establishing the gasoline truck and it was the kind of advertising that must be done if the electric truck is to take its proper place in the transportation of goods through our cities.



A typical example of the modern wholesale establishment dealing in meats is the house of Edward Davis Inc on West 14th Street. Modern in every respect, this establishment offers an interesting example of the use of several types of electrical equipment required in large scale meat handling. Prominent in this equipment is the refrigerating apparatus, providing protection for more than two hundred tons of beef at a time. The motors which drive the refrigerating machinery are automatically controlled, starting or stopping according to the temperature of the meat boxes. The lighting, too, is an important factor and in addition to facilitating the handling of meats it makes for cleanliness, for no dirt can conceal itself from the searching rays of the incandescent lamp.

That the equipment is all operated from the service of The New York Edison Company goes to show in another way the extent to which city life is dependent upon the adequate and dependable supply of electricity, which is assured through the use of Central Station Service.



## The Edison Monthly



*Photograph by Van der Wyde*

A Short Distance from the Thames Embankment in London Is Cleopatra's Needle, Flanked on Either Side by Bronze Reproductions of the Sphinx

## Art and Economy

**A**RT and economy seldom go hand in hand. Particularly is this true when the twain tread across the boards of the modern stage, which has recently made a fetish of extravagance and realism in productions.

The public has been treated to the utmost truth and accuracy in its stage settings until it feels disappointed if an antique library scene does not include genuine old world articles of furnishing, if hangings are not of the richest of velvets or damasks; if pictures, objects of art and all the other details of modern surroundings in the home are not just what they seem.

But a new order of things is gradually appearing behind the stage curtain. It represents the essence of economy in setting and the height of artistic scenic effect. It owes its existence to a novel manipulation of light and color and promises to revolutionize, to a great extent, the production of plays, be they ancient or modern.

The idea was born in Europe, where stage craft has developed faster than in any other country. The idea was brought over here by Lee Simonson, the Theatre Guild artist, who studied foreign methods last summer and was the first to introduce to New York audiences sets projected upon a screen by means of painted glass slides. The glass slide has taken the place of the old-fashioned and more expensive setting, and during the past winter it was used effectively in several of the Theatre Guild productions.

One of the first plays in which Mr Simonson offered this substitute, cre-

ated by Linnebach of the State Theatre of Dresden, was in Bernard Shaw's "Back to Methuselah," a play of artistic boldness and beauty but of such extraordinary length—and Mr Shaw refused to have it cut—that the Theatre Guild arranged it in cycles.

Those who saw it will remember the first part, called "In the Beginning," where Adam and Eve, the wise serpent and the historic tree appeared in the Garden of Eden. Few in the audience, it is safe to say, realized that the mysterious towering tree whose upper branches appeared to be lost in the heavens, was not a tree at all, not even a painted tree on a painted curtain, but was a fine piece of the new projection art. In other words, it was a comparatively small tree painted on a slide and projected and greatly enlarged upon a colorless screen.

### *The New Stage Art*

This is the new and economic stage art which Mr Simonson and others have perfected to such a degree that the projection can be made close up to the screen, thus permitting the use of lights and slides on a small stage. An arc light is used instead of an incandescent lamp and it is so manipulated that the rays have a wide angle.

The Garrick Theatre, where Mr Simonson has used color and light for the Theatre Guild's plays, is old fashioned and has a limited space behind the footlights. There is no room there for workshops and experimental studios, so Mr Simonson has removed his atelier belongings to the roof of a skyscraper in West Thirty-eighth Street,

## The Edison Monthly

where he works above the noise of the city and tries out his palette effects.

"I paint with opaque colors," he said when explaining his adaptation of the new stage art to Theatre Guild plays. "Sometimes I paint three or four slides before I get just the effect I am seeking. I have found that you obtain the best results by not having too much detail. The figures should be bold and simply done. The idea is a development of the old shadow box. You project your scene on a screen, but it is really more than a projection of painted objects. You must paint it so that when it is thrown on the screen it has ambience."

The iron pier in Galway, another painted slide used in the "Tragedy of an Elderly Gentleman" in the same Shaw play, is bold-

er and more striking than the Garden of Eden scene. Mr Simonson has done this in cubistic style with sharply defined stonecapped hills and granite fields against a cloudy sky.

The projector used on the stage is an apparatus many times smaller than the screen upon which the painted slide is thrown. It is, perhaps, one one-hundredth the size of the curtain. The actual slide is 26 by 28 inches. A few years ago when the first attempt was made to project settings, the effort was not crowned with success because projecting required too much space.

The apparatus had to be so far from the screen that it was impossible in the average theatre to use it. And then a figure could not stand or pass between the projector and the screen. The new method overcomes these limitations.

The tiny rectangular box is placed on an almost invisible support and a few feet behind the screen. It is suspended in the centre of the screen and the rays of light are so directed



An Arc Light Placed Just Behind a Painted Slide Produces a Wooded Parklike Background in This Scene in "Liliom"

that they are thrown entirely over it.

In Germany, where Linnebach is called the father of the modern expressionist scenery, powerful projectors have been devised to throw across the sky, moving designs of any shape and size. The apparatus is electrically controlled and the designs can be made to travel across at any speed.

The economy of the projection plate is readily recognized. It not only affords economy of space in the theatre and in the artist's studio, but it simplifies the work and makes hitherto-impossible productions possible. It

## The Edison Monthly



No Painted Curtain Could Be More Mysterious and Effective Than This Projected Bit of the Garden of Eden in Shaw's "Back to Methuselah," Which Shows a Towering and Shadowy Tree Thrown On a Plain Screen

reduces the bulk of material to be handled and has been of tremendous help to the scene-shifting group. It is far cheaper to paint a small plate than a huge curtain, and the cost of transporting stage effects is reduced.

Mr Simonson has not only introduced the projector to the American stage but he has set a mark in modern stage lighting of other settings, so that the stage appears as a picture of which the stage folk are blended in as part of the whole, not as separate outstanding figures.

### Wanted

Though numerous inventions have  
Been coming woman's way  
There are a lot of other things  
She's looking for today.

A new magnetic clothes tree fine  
Which would draw to itself  
All caps and hats that lie around  
On chair and floor and shelf.

A washer that will dry and iron  
The clothes all in a day  
Sew on the missing buttons, too,  
And put the clothes away.

Electrical attachments planned  
For use on children's toys,  
To pick them up from chair and floor  
And deaden all the noise.

A doorbell or a telephone  
Which had a new device  
For answering itself, I think,  
Would surely be quite nice.

O, may inventors speed the day  
And make these dreams come true  
Since there's no limit to the things  
'Lectricity can do!

—Alice Crowell Hoffman



Columns That Have Great Depth and Seem to Reach to the Heavens Are Projected On a Colorless Curtain by the Linnebach Method as First Introduced Here in the Theatre Guild Plays

## Electric Truck and Automobile Page

# ELECTRIC AUTOMOBILE SHOW -1922



TO BE HELD IN THE SHOWROOM OF  
**THE NEW YORK EDISON  
COMPANY**  
IRVING PLACE AND FIFTEENTH STREET  
APRIL 3 TO 8 APRIL 10 TO 15  
TRUCKS, CABTS, INDUSTRIAL TRUCKS,  
TRUCK BATTERIES, BATTERIES  
FROM 9 A. M. TO 8 P. M. NO CHARGE FOR ADMISSION

### C-T Electric Truck

Trucks made by the C-T Electric Co., New York, for the  
purpose of carrying passengers. They are built in the  
same manner as the motor cars and are very comfortable  
and roomy. They are also very fast and economical.  
C-T Electric Co. 100 West 42nd Street, New York, N. Y.

### Ward Electrics

Save 20% to 35%

Ward Electrics have a line of electric trucks and automobiles that are built to last and are very economical. They are also very fast and comfortable. Ward Electrics Co. 100 West 42nd Street, New York, N. Y.

### Walter Electric Trucks

"100% Traction"

The Walter Electric Truck is a new type of electric truck that has 100% traction. It is built with a special chassis that allows it to operate on any surface. Walter Electric Trucks Co. 100 West 42nd Street, New York, N. Y.

### Walker Electric Trucks

Lowest Trucking Cost

Walker Electric Trucks are built with the lowest trucking cost. They are very economical and fast. Walker Electric Trucks Co. 100 West 42nd Street, New York, N. Y.

### Exide

INDUCLAD BATTERIES

Exide batteries are built with the latest technology and are very reliable. They are also very economical. Exide Battery Co. 100 West 42nd Street, New York, N. Y.

### Philadelphian

PHILADELPHIA  
QUADRANT  
BATTERY

Philadelphian batteries are built with the latest technology and are very reliable. They are also very economical. Philadelphian Battery Co. 100 West 42nd Street, New York, N. Y.

### Commercial Truck Co.

THE EDISON COMPANY

Commercial Truck Co. is a leading manufacturer of electric trucks and automobiles. They are built with the latest technology and are very reliable. Commercial Truck Co. 100 West 42nd Street, New York, N. Y.

### K. W. Batteries

K. W. BATTERIES

K. W. Batteries are built with the latest technology and are very reliable. They are also very economical. K. W. Battery Co. 100 West 42nd Street, New York, N. Y.

### The Steinmetz Truck

"Delivers the Goods"

The Steinmetz Truck is a new type of electric truck that is built to deliver goods. It is very fast and economical. Steinmetz Truck Co. 100 West 42nd Street, New York, N. Y.

### Walker Vehicle Company

Walker Vehicle Company

Walker Vehicle Company is a leading manufacturer of electric trucks and automobiles. They are built with the latest technology and are very reliable. Walker Vehicle Company 100 West 42nd Street, New York, N. Y.

How New York Manufacturers and Dealers Advertised Electrical Transportation During the Recent Electric Automobile Show. A Two-page Layout in the New York Tribune of April 2

## Automobile Show Results

SINCE the Electric Automobile Show of 1922, held in the show-room of The New York Edison Company at Irving Place and Fifteenth Street in April, manufacturers of electric cars, trucks, and electric vehicle accessories have been expressing their appreciation of and enthusiasm over the splendid results of the exhibition. From all reports the interest that was shown, during the show and since that time, continues to grow.

Several letters have been received from manufacturers who took part in the exhibit, expressing gratification for the opportunity afforded them in placing their equipment before the public in such an interesting and enlightening display. The letters also indicate the stimulation of public interest and the increase in the sale of electric vehicles as a direct result of the show.

### *A Splendid Success*

"We are pleased to say that the exhibit this year was a splendid success in every particular," writes Mr J M Gallagher, District Manager of the General Lead Batteries Company. "We were very pleased with the Electric Automobile Show last year, 1921, but this year exceeded it."

Mr Gallagher also said of the luncheon that was held at the Hotel Astor, "I think it has become a feature of the electric automobile trade and will be looked forward to from year to year."

Such an occasion undoubtedly is of value to the trade for it offers an oppor-

tunity to a rapidly rising and developing industry to be united in a large group for the purpose of exchanging ideas and giving worth while information to one another.

Manager H H Smith of the New York branch of the Philadelphia Storage Battery Company has said:

"I am sure that much good was accomplished for the industry. It is impossible to tell at the present time the extent of the benefit caused. The results will undoubtedly spread over a considerable period of time. Our battery business has shown very decided signs of improvement during the last two weeks and I am not at all sure but that at least a part of this is attributable to the show."

That these manufacturers are pleased with the show and that they believe in the great possibilities of electrical transportation is evident in the sincerity of the tone in which they write.

"We greatly appreciate the kind favors shown our company in permitting us to display our battery charging equipment," said Sales Manager, F F Loock of Allen-Bradley Company, "and regret very much that we cannot directly reciprocate such favors. Perhaps the only thing we can do is to satisfy our customers with our apparatus, so that this may help to make them boosters for Electric drive for handling big city transportation problems."

Fink-Dumont-White, Inc, are not alone in the valuation they placed on the show in which their various lines of material handling equipment and the

## The Edison Monthly

Walker Electric Truck were exhibited. A letter from Mr R D Dumont expresses complete satisfaction with the results of their exhibit.

"The first day of the show," says General Manager, Nathaniel Platt, of Rauch and Lang, "we sold one of the cars, the sedan, which we had on exhibition there, and obtained many other very good names, several of whom I feel quite confident we will make sales to." He continues:

"I want at this time to tell you that we appreciate very much the cooperation on the part of your company. This kind of cooperation will help very materially in building up a much larger electric vehicle business in New York."

Again some of the results of the show are indicated in this letter from Mr R R Clayton, Manager of the New York Office of the Commercial Truck Company:

". . . We received orders for three two-ton trucks, the contract for which was handed us at the show, and an order for two Bantams also was promised us at the show. There were a great many inquiries and a number of interested prospects at our booth."

With cooperation among the members of the industry there is little doubt that the near future will see transportation problems being solved by electric trucks. This thought has been expressed again and again by those who know what the electric can do.

Said Mr P E Whiting, District Manager of the Walker Vehicle Company:

"Such generous cooperation on your part toward bringing electric motor vehicles to the attention of the public

at large and to the possible user of such equipment, in particular, is bound to hasten the day when 75 per cent of all New York City transportation will be handled by the electric.

"We know that it will interest you to learn that we recorded the sale of sixteen Walker Electric Trucks during the week and that we are assured of many other orders in the very near future as a result of the exhibit."

Mr Otto Bahls, president of O B Electric Vehicles, Inc, said: "We believe with the continued support of The New York Edison Company—and the whole hearted cooperation of the Electric Vehicle Industry, that everything rolling on wheels in New York City and the four boroughs will be propelled electrically in the near future."

Letters of this kind, direct from the manufacturers, are a pretty good indication of the confidence felt in the development of this particular industry. And when, as Mr Bahls added to his letter, one sees postscripts like this "Now For A Bigger Show Next Time" one feels that such enthusiasm has a good reason behind it.

### Intensive Gardening

An engineer named aptly, Watt,  
Chose Battery for garden-plot.  
With sal-ammoniac he sprayed  
Electric bulbs in order laid.  
The poles he used, support to give,  
Were positive and negative.  
Up these, on insulated wire,  
Electric-plants made all admire.

In time the fruit became mature—  
Electric-current-literature !  
Magnetic; lengthy; sparkling; terse;  
And also very bright light-verse.  
Since Watt might out-Burbank, Burbank,  
The picture-men turned ready crank.  
And in Who's Whos, he found a spot,  
So now the world knows Watt is What !

*Blanche Elizabeth Wade*

## Exposition Plans

**P**LANS for the Electric and Industrial Exposition of 1922, recently announced, indicate that the show, with six general classes of exhibits, will be one of the largest and most important ever held in New York.

Exhibits showing the industrial uses of electricity will have a prominent place on the program; the radio section will include working exhibits by leading manufacturers of wireless apparatus; the household exhibits, the electro-therapeutic display, and the electric vehicle exhibits will have the same prominent places they have held in past shows. In addition to these there will be a historical exhibit portraying the forty years of progress in the electrical industry from 1882 to 1922.

### *Working Demonstrations*

In the industrial section there will be displays showing actual production, one of these exhibits demonstrating the manufacture of soda water. In the home section there will be the exhibits of the various manufacturers, and in addition there will be model apartments wherein the "Little Electric Servants in the Home" are shown performing the one hundred and one tasks that are a part of housekeeping. A model hospital will show the latest uses of electricity as a thera-

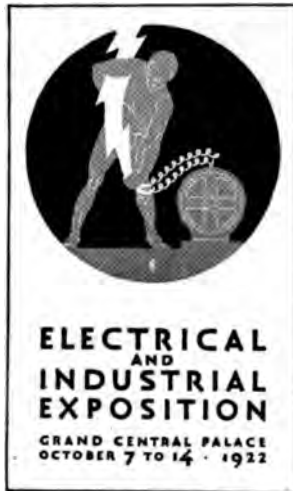
peutic agent. Automobile displays will include the big trucks for hauling goods through the streets, and industrial trucks for transferring freight at railroad and steamship terminals and for handling materials in factories.

A large section of the main floor has been set aside for the display of radio apparatus. Each exhibitor will maintain receiving equipment and show visitors will be able to hear the news bulletins and concert programs sent out from the various broadcasting stations.

The historical exhibit will be arranged by those who were associated

with Thomas A Edison in the early days of the lighting industry in New York. The primitive apparatus will be shown in contrast with the equipment of the present day power stations and the whole history of electrical lighting will be portrayed. Manufacturers of household appliances will also contribute to the historical interest of the show by exhibiting some of the early models of their apparatus.

Thus with many of this year's exhibitors repeating their displays, and with six main departments—industrial, household, electro-therapeutic, radio, transportation, and historical, and with general and specialized displays in each group, there is every reason to believe that 1922 will witness the most important exposition in the history of the electrical industry in New York.





## In the Piccirilli Studio

A COLOSSAL figure of James Monroe just inside the door; close by, with a religious appeal in its symbolism, an angelic form, almost ethereal in its pose; at one side, a dolphin, with its dorsal fin cutting the waves; nearby a great eagle a-wing, free, defiant; beyond, in the white dust haze, workmen swinging huge squares of stone on cranes and others preparing blocks for the artisans.

This is the vista which greets the eye as one enters the studio of the Piccirilli Brothers, sculptors, in East 142nd Street. A unique place this—unique in that it is known the world over for the famous examples of its craftsmanship, and likewise unique in its retirement and unpretentiousness—almost in obscurity in the neighborhood.

The story of the brothers—there are six of them, Feruccio, Attilio, Furio, Thomas, Horace and Getulio—and the inspiring work to which they are collectively dedicated, tempts to extravagance. Since the passing of their

pioneer father, who brought with him from his native Italy close upon forty years ago that refinement of execution by which all good cutters of stone are measured, they have occupied a place in the forefront of the monumental field. They have collaborated with the most distinguished sculptors and the work of their artistic hands, commemorative of the great deeds of men, stands in historic places both here and abroad.



*Photograph by The New York Edison Company*

This Is the Vista Which Greets the Eye as One Enters the Studio of the Piccirilli Brothers, Sculptors, in East 142nd Street

## The Edison Monthly



Photograph by The New York Edison Company

Motor-Driven Cutting Tools, and Measuring Devices, Plus the Skill of Artisans Born to the Craft Make Possible the Reproduction in Stone, of the Works of the Great Sculptors

When a commission is given to a sculptor, the thing to be visualized is presented in model form as a miniature of that which is to live. The Piccirillis are the interpreters. With infinite patience and mathematical accuracy they shape the slow yielding marble, giving to every detail of the subject that painstaking care which makes for harmony in the completed work and gives distinction and nobleness to statues and memorials.

Except for three small designs set in the outer walls of the studio, no one would imagine the establishment to be dedicated to creative art. There are no signs. Private residences stand opposite and on either side.

On the occasion of this visit the much discussed statue of Civic Virtue, that spirited and dignified conception of MacMonnies, had just been waved a *bon voyage* for its journey to City Hall Park. For three years it had been taking form under the sculptor's eye and the friendly and sympathetic Piccirilli hand. In the faithfulness of the translation of the artist's design into enduring stone it is without a flaw.

From the days of the ancients, whose noble statues adorn our galleries throughout all the years until quite recently, dependence was placed on odd-shaped wooden mallets of various sizes to serve the cutting tools.

## The Edison Monthly

Every chip from a stone was the result of a swing of an arm and an impact of a mallet held in hand. It made the sculptor's task one of real labor.

The introduction of modern appliances in the studios and the adoption of new methods for their use has changed this. Compressed air, directed through a flexible tube provided with devices for its control, now gives the power which once called for the use of the human muscles.

In the Piccirilli establishment an air compressor of forty-five horse power is operated by an electric motor. The sculptor, with his two score or more of chisels available, some large and some small, some shaped in the cutting edge for oval gouging and others so delicate as to be almost like needlepoints, has only to select the required one, attach it to the tube connecton, open a valve, and he is ready for work. The old weariness of arm, which took a share of the joy of an otherwise pleasing work, is no more. Motors do not get tired. They are as fresh at the night whistle blow as at the day's beginning.



*Photograph by The New York Edison Company*

The Colossal Figure of James Monroe, and the Assortment of Cutting Tools Required to Evolve It From a Great Block of Marble

The method by which the proportions of a memorial, even to the most delicate line and depression, are scaled from the artist's model is one of the things which are learned only by long years of practical experience. Pointing machines are employed in some phases of the work but accuracy is largely dependent upon skill in the use of the proportional calipers. In all fine cutting of stone the calipers and the chisels are alternately brought into use, the one being guided in its operation by the markings established by the other. These same measuring

## The Edison Monthly

appliances are also used in giving accuracy to models, either of clay or plaster.

A commission which at the moment is engaging the attention of the Piccirilli is one quite to their liking. It is the Piave statue which will commemorate the valor, heroism and sacrifice of the soldiers of Italy. Full sixty thousand gave up their lives on the historic Piave battle line in the great War and the Austrian advance was halted. The memorial, designed within the studio, shows a youth erect, brave, his head thrown back, his poise that of defiance. It is full fifteen feet in height and it will surmount a hill in the Pincio, the great park in the northernmost section of Rome. It was this group of brothers who made the equestrian statue of Lafayette designed by Paul Bartlett, the gift of the Knights of Columbus to France. The impressive and appealing Lincoln memorial in Washington is another example of their skill. The great Princeton monument, which tells in sculpture how Washington turned defeat into vic-

tory on the rising hills beyond the town, is now slowly taking form at the place where it is to stand. Still another striking example of the Piccirilli genius is the heroic group in the Botanical Gardens in Washington. It is a memorial to Gen Meade and has a base measurement of 100 x 100 feet. Wherever one turns in the settings of sculpture, whether it be in a park, or plaza, the work of this firm is almost sure to be represented.

None of the brothers has arrived at the zenith of his professional activity, measuring it, as is the custom, by years, and all look forward to new and even more noteworthy achievements in their chosen field. Besides, they find a degree of satisfaction in the fact that there are five nephews, all happily of the temperament and with the ambition to take their places in the concern when their skill, upon which they are patiently building, shall have reached the master's degree. Thus, the name of Piccirilli in sculpture is destined to artistic perpetuation.

### INGRATITUDE

When "they" say the thermometer is touching ninety-four;  
When perspiration you exude at every separate pore;  
When collars are anathema, and callers are a bore:  
You're sure it is the hottest day that you have ever known—  
And you are forty-five and—well, you're passing fourteen stone—  
And for a cancelled postage-stamp you'd quit and go straight home;  
Or to the links, or ball-game; but you stay and play the man:  
And you hand yourself the credit—but 'twas the electric fan!

—R E Alexander

# The Edison Monthly



*Photograph by Major Hamilton Maxwell*  
A Notable Group of Buildings—Including the United States Rubber Building, Fisk Rubber Building, the Gotham National Bank, Apartment Houses, Automobile Showrooms, Restaurants and Theatres, Surround Columbus Circle. All Are on Edison Service

# Airplane Views of Edison Service

## Columbus Circle

**A**LTHOUGH Broadway, north and south of Fifty-ninth Street, and in the general neighborhood of Columbus Circle, is popularly conceded to be the automobile district of the city, the motor vehicle interests by no means monopolize the section. Fine apartment houses, studio buildings, art centres, theatres, restaurants, and office buildings are all to be found either on the two main north and south thoroughfares which cross at the Circle, or on the side streets nearby.

Of course the automobile group predominates. As shown in the accompanying airplane photograph the skyscraper of the Fisk Rubber Company at Broadway, 57th Street and Eighth Avenue, and the United States Rubber Building at Broadway at 58th Street, dominate the neighborhood. The Goodrich Rubber Company is at 1780 Broadway. Other automobile interests include the General Motors Company at 224 West 57th Street, the Bosch Magneto Building at 44 West 60th Street, the Locomobile Service Building at 16 West 61st Street, the Cadillac Motor Car Company at Broadway and West 62nd Street, and the Electric Garage at Central Park West and 62nd Street. The new skyscraper of the Gotham National Bank is just to the west of the Circle and the Miller Building is at Broadway and 63rd Street.

Among the apartments and hotels are the Grenoble at 886 Seventh Avenue, the Osborne at Seventh Avenue and West 57th Street, the Hubert

Apartments on Central Park South, the Hotel St Paul on the Circle, the Pasadena at Broadway and 61st Street, Reisenweber's at 971 Eighth Avenue, the Circle Hotel at 987 Eighth Avenue and the Hotel Montrullo on West 64th Street.

The theatres include the Century Opera House on Central Park West, Al Jolson's on Seventh Avenue, the Colonial on West 62nd Street, and the Park at Columbus Circle.

### *Many Interests in this Neighborhood*

Other well-known structures include the Broadway Tabernacle at Broadway and West 56th Street, the Twelfth Regiment Armory, on Columbus Avenue, the American Fine Arts Building at 215 West 57th Street, the Gainsborough Studios on Central Park South, the Society of Ethical Culture Building on Central Park West and Harperly Hall at Central Park West and 64th Street.

As varied as are the purposes of these buildings they are all alike in one important respect—the source of their electrical supply. Running the elevators in the tall Gotham Bank Building, or charging electric vehicles in the Electric Garage; producing spectacular stage effects in the theatre or lighting an art exhibit at the studio; lighting the apartment house or lighting the church; all of these make a fair series of contrasts and represent to a degree the diversity of operations which are supplied by Edison Service.

## Beef a la Mode

**T**HE many ways in which electricity serves the wholesale dealer in meats and kindred products are strikingly shown in the establishment of Edward Davis, Inc. This firm has moved from Chambers Street and now occupies a remodeled building at 420 West 14th Street, where the latest meat handling and storing methods are carried on.

From the bustle and hurry at the curb where trucks are loaded with great baskets of meats for delivery at hotels, restaurants, institutions, and steamships, to the quiet and one might almost say impressiveness of the several coolers in the building, there is a decidedly characteristic atmosphere of efficiency prevailing. It is evident in the way in which



*Photograph by The New York Edison Company*

**One of the Coolers in the Wholesale Establishment of Edward Davis, Inc., 420 West 14th Street, Containing Great Quantities of Meat Ready for Shipment**

As for electricity—it lights the rooms, operates a call system, ventilates the building, runs the elevators, and serves what is probably the most important part of the wholesale establishment, the refrigerating system. This electrical load, amounting in addition to the lighting to about eighty horse power in motors, is supplied by The New York Edison Company.

thousands of pounds of meats are handled daily, being brought in, cut up, temporarily packed away in the large refrigerating rooms, or sent out to fill customers' orders.

In any of the rooms where the meat is to remain for a matter of hours before being sent out the temperature is low, even on a warm spring day. In the one freezer it is kept at four degrees above zero. The coolers are

## The Edison Monthly



*Photograph by The New York Edison Company*

Three Hundred and Fifty Thousand Pounds of Beef Can Be Corned at One Time in These Large Cement Vats in the "Processing" Room

not so cold, the temperature being maintained at about 40 degrees. The freezer and coolers each cover about 4000 square feet of space and each is capable of holding enough meat to keep more than one large community from starving.

On the ground floor there are the large receiving room and the shipping room, which also is cooled by the refrigerating system. During business hours there is meat everywhere. Great quantities of it! Baskets filled with delicacies of every sort. Whole carcasses hanging from hooks on heavy steel racks or quartered animals fresh and cool

clean and fresh and delicious looking.

In the basement next to the room containing the refrigerating machinery there is the "processing room" where beef is corned in large cement vats. The meat is always carefully

waiting to be seasoned and hung away until they are ready to be sent out. In the cooling rooms there are large bins filled with delicacies soon to be roasting in some proud chef's mighty oven or gracing the board of an ocean going steamer. The sight is enough to make any visitor's eyes widen with delight and surprise for everything is so



*Photograph by The New York Edison Company*

The Indicator in the Call System is Suspended From the Ceiling Where the Person Being Called Can Easily See the Colored Light That is His Particular Signal



## The Edison Monthly

selected and is packed in the vats into which brine has been poured. Since the process takes about a month it is necessary that the temperature of the room be kept at a low degree.

In each of the large rooms throughout the building there is suspended from the ceiling an indicator which is part of the call system. It is simple and efficient, quite characteristic of its surroundings. When any one of the officers of the company is wanted on the telephone or in the office the telephone operator gives a signal which buzzes in all the indicators in the building. There are six different colored glass disks in the apparatus, each color representing one officer.

The lighting in the building is splendidly arranged, for each room is so

equipped that shadows and glare are eliminated. Nor is there any chance for dirt to elude the eyes of the cleaners, a matter of great importance where meat is being handled.

The refrigerating plant includes two 8" x 8" York compressors of approximately sixteen tons, operated by two 30 horsepower direct current motors.

The action of these motors is automatically controlled by thermostats so that when the temperature of the refrigerating boxes lowers to a fixed degree or rises above it the motors stop or start respectively. The refrigerating piping runs throughout the building and it is interesting to note that there are 14,000 feet of 2" piping used for this purpose.



*Photograph by The New York Edison Company*

Two 8" x 8" York Compressors of Approximately 16 Tons Each Are Operated by Two 30 Hp Motors at the Rate of 150 RPM. They Are Controlled Automatically

July



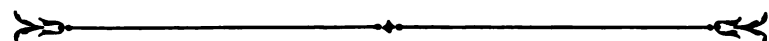
1922

One Hundred Years Ago  
Atlantic Garden Store at 9 Broadway

VOLUME 14

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NUMBER 7



*The Edison Monthly*

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## The Edison Monthly

### The Edison Monthly

Published by

The New York Edison Company

General Offices

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New York City

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N F BRADY, President  
WALTER NEUMULLER, Secretary  
FREDERICK SMITH, Treasurer

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When THE EDISON MONTHLY in 1914 recorded the installation of an electric delivery wagon by the Coca-Cola Bottling Works interest lay principally in the fact that it was the first motor vehicle purchased by the company, that it had replaced a number of horses, and in a year of operation had brought about a great improvement in the delivery service of its owners.

Again it is the privilege of this magazine to tell something of the delivery methods of the beverage company and of the history of the veteran truck, but this time the electric of 1913 must share interest with nine other electrics, for in the years that have passed the Coca-Cola delivery fleet has increased many times over. Since its installation in 1913 the original electric has done more than deliver its daily quota of bottled goods. It has shown the way to economical transportation and it is because of the lessons learned from this vehicle that the others have been purchased to meet the demands of an increasing business.

The present electrics are maintaining the same standards of economy and dependability set by the first, and, as compared with gasoline trucks for city delivery service are saving more than six dollars a day in operating

cost. This is why electrics will eventually replace the gasoline trucks just as they have already replaced horses and the delivery organization of Coca-Cola will be all-electric.



Shades of Captain Starlight and the Six Men of Dorset! What memories must stir them as they hold their ghostly rendezvous on the old convict ship *Success* now on exhibition in New York. The *Success*, despite the implements of torture that still remain—the maddening cells, and the other relics of a cruel past—is far different from what she was eighty years ago when the Captain and scores of others, convicted of various offenses, were confined on board.

There can be no doubt that ghosts do foregather on the *Success* and between sessions of their conclaves study in wraithy gloom the implements which caused them such suffering—the whipping posts, the lashes, and leg irons, the musty cells and all the other devices which a cruel system used in the task of breaking men's wills and spirits. But the purpose of the old ship is far different now. Instead of serving as means of punishment it is dedicated to the task of education and in this capacity has done much in the interest of prison reform.



Physically the *Success* is still very much as she was during a half century or more of service as a floating prison. In one great respect, however, the vessel is different and it is this difference that gives rise to ghostly wonder. The flickering ship lanterns that gave light where light was wanted—and

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that did not include the cells on the lower decks—have been replaced by electric lights, and the airless cells are now ventilated by electric fans. The lights not only outline the ship as an advertising device but provide an adequate illumination by which the lower holds can be studied. They reveal the occupants of the cells, life-like figures in wax, which are said to be remarkable reproductions of the unfortunates who spent so many years of their lives in the old vessel. Each cell has its chained occupant; the dispensary shows a group of prisoners and the ship surgeon; another group shows a condemned prisoner, the chaplain and the guards; still another reproduces the murder of Captain Price, who commanded the ship; while another shows the members of the Kelly Gang.

Living prisoners are more hardy than their wax reproductions. Some prisoners survived thirty or more years of short rations, foul air, constant darkness and the suffocating heat of the Antipodes. But not the wax ones. They don't mind the rations and they are not afraid of the dark, but they insist on fresh air and specify that it must be cool. So the present owners have installed electric fans for each group and all day long through the warm weather they provide a degree of ventilation which proves a veritable life saver for the wax prisoners. Here again, the shades of Captain Starlight and the Six Men of Dorset shake their heads in wonder.

Unfortunately, the first half of the past century—the heyday of the career of the prison-ship—did not know electric lights and electric fans and even if such comforts were avail-

able it is very much to be doubted if the system which sponsored the things that are represented by prison ships would have permitted any such pampering of convicts.



Behind the advertising phrase "Fifteen Degrees Cooler Inside," which adorns most moving picture theatres during the hot weather, is another case of the genius of the electrician in adding to the comforts of a sweltering world. It is not the darkness and the freedom from the sun's rays that make the auditorium cool, but an elaborately planned ventilating equipment which delivers a constant supply of fresh air to the building.

Shut off the ventilating equipment and in a very few minutes the temperature of the auditorium would rise to an unbearable degree. The discomfort would be caused not alone by the warmth of the day but by the heat given off by thousands of sweltering individuals. Thus, to maintain a comfortable atmosphere, ventilating equipment must counteract these two conditions. It accomplishes one by driving the vitiated air from the building; it takes the heat of the summer from the outside air by driving it through sprays of cold water and the air thus cooled replaces that which it forces from the building. There are several systems of cooling and ventilating used by the theatres of New York. The air-washing system of the Capitol Theatre, described elsewhere in this issue, is worthy of the careful consideration of anyone confronted with the problem of auditorium ventilation.

## “Do You Remember When - - - ?”

WHAT is here set down aims to be a simple word picture of New York at a time although but little more than a generation ago which is now definitely historical;—of New York in the early eighties, slowly approaching the period when it would bulge with the consolidated importance of three hundred and odd square miles of five-borough greatness, but as yet with only a hazy vision of its ultimate destiny.

It is of New York in a day before street cars, telephones, skyscrapers, elevators, automobiles or electric lights. Some of these things, which we of forty years later know so well, were not yet dreamed of—others were in the first stages of development.

It is not altogether unprofitable to

turn back the calendar from time to time to consider the city as it was before it set its hand to major accomplishments and particularly to note its cautious aloofness from what may be called the exclamation point.

A pleasing, rather easy going city, New York of that time. For the most part it seemed satisfied with that form of development which kept well out of the range of the spectacular. It offered no distinct challenge. It was not fully alert to its potentialities. It did not seem to be aware that its increasing metropolitan stature demanded a loftier civic dignity and a widened outlook. It had not the inspiration of large purpose. The day of its awakening was yet to dawn, its program of things on a scale which



Newspaper Row With Its Tall Buildings of Four and Five Stories, Its Stage Coaches, Its Horse Cars and Its Marching Troops

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would give to it the stride of definite progress was still to be formulated. Thus the city as a whole. As to individuals, it was different. Thinking minds were busy.

What was New York like at that time?

More ancient than modern surely. Around Bowling Green, along the river fronts, on the cross streets downtown and even along lower Broadway, the quaint gable roofs of the architecture known to the Dutch of New Amsterdam were quite as familiar as structures of a newer kind. Local historians could point

out the cramped and unpretentious dwellings, still not much changed as to exteriors, where a score or more of men identified with the nation's beginning once had lived. If one wanted to turn from the weather beaten landmarks to the newer, there were perhaps a dozen structures which rose to hitherto unheard of heights—the Western Union Telegraph building at Broadway and Dey Street and the *Tribune* building, then the dominating monument of Printing House Square, being representative. Skyscrapers as



Broadway and Maiden Lane Forty Years Ago

we of 1922 know them, were not even in the dream stage. Steel construction had not been adopted. Elevators were novelties. It was the brick and mortar age.

The monotonous crack of iron-shod hoofs and rumbling wheels on the cobble-stone pavements—*asphalt* was still an experiment—were the city's most familiar sounds. Horse-drawn busses, fitted with cash boxes just back of the drivers' seats, zig-zagged from Fulton Ferry to Broadway and then up to the centre of amusement

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and gaiety at Twenty-third Street, pulling in to the curb at the signal from an upraised finger. Most of the hotels were at that time below Madison Square, as were the theatres and the more important shops and retail stores. There was as yet no indication that at a later day changed conditions would compel an exodus which would carry the social centre northward and establish it in palaces where now were mostly the shanties of squatters. Lower Fifth Avenue was as distinctly residential and exclusive as its upper reaches are today. The opera knew no other habitat than Fourteenth Street. A dozen old time dwellings, set well back from the curb and approached through iron gates

and along gravel walks, maintained a dusty and sombre sort of respectability on Broadway and refused to be elbowed out. Indeed, at this period there were not a few who looked upon the slow advancement of trade along the city's main natural highway as an intrusion upon long established privacy and as such not to be tolerated by conservative property owners.

An era of dramatic fame, the early

eighties! Booth and Barrett were doing Shakespeare; Wallack and Augustin Daly were putting on the newer English comedies; spectacles of the



Another View of Lower Broadway, When Sodas Were Five Cents a Glass and When Telegraph Poles and Overhead Wires Encumbered the Streets

Black Crook order were at Niblo's Garden; Harrigan and Hart and Tony Pastor, both then on Broadway, were laying the foundation of present day vaudeville; and musical plays were becoming popular through the efforts of Gilbert and Sullivan. A score or more of players, now retired with the full honors of the stage, were at the time just starting on their careers.

Horse cars were the main reliance

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of the traveling public—horse cars with drivers and conductors, and others of the so-called jigger variety which, like the Broadway busses, had no conductors, and wherein the relation of a passenger to the fare box was one of conscience and civilian duty.

The first elevated, upon which some people still refused to trust themselves, holding that riding on a railroad built on stilts was bound to be a hazardous undertaking, had pushed its way first to Fifty-ninth Street and then on to Harlem. Three-car trains were hauled by little chugging engines, dwarfs of the locomotive species. The struggle of these miniatures on an upgrade with a loaded train seemed to street observers as likely to end in failure as otherwise. Broadway had yet to have the experience of a rapid transit line. The busses, limited alike as to capacity, head room and comfort, were to hold on for a year or two before the cable cars began operations.

### *Brooklyn Bridge Under Construction*

Brooklyn Bridge was slowly nearing completion. An engineering feat of the first order and a lasting monument to its designer, John A. Roebling, who, dying, left to other able hands the work of its construction, it marked the beginning of highway connections with the sister borough. There were people too who were in doubt of the stability of the bridge, just as others had doubted the elevated.

New York in the early eighties!

A city which had not yet dreamed what the sound of an automobile horn would be like and which had but recently read that an inventor somewhere was figuring on a contrivance which he hoped to be able to install

under the seat of a carriage and from which power would be forthcoming to propel the vehicle. That made many people smile.

The telephone was in its experimental stage. Perhaps a thousand people all told had installed the new device and were waiting somewhat impatiently for the time when conversation between distant points could be carried on efficiently.

New York in the early eighties!

Down on Pearl Street, in a drab environment of warehouses and lofts, a man in a collarless shirt standing expectant alongside an electrical apparatus. He looks at his watch, touches hand to a switch and the filaments in pear-shaped bulbs in a few nearby buildings connected by wire with the apparatus burst into radiance. The man studies the whirling machinery and nods his head. He is satisfied. He has demonstrated the practicability of the central station and proved the potency of the electrical generator which in time was to provide power not only for illumination but for a wide range of industrial purposes.

This is but an incidental reference to that epochal accomplishment, for more is not required in an article broadly reminiscent. The man in the collarless shirt was Thomas A. Edison; his, one of the thinking minds.

It was written in the beginning of this article that New York in the early eighties had only a hazy vision of its ultimate destiny and that the day of its awakening was yet to dawn. They are truths. New York did not know at that time that the hand of Edison held the wand of magic under whose spell the city of 6,000,000 would live today.



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*Photograph by The New York Edison Company*

The Statue of J Marion Simms, M D, L L D, "Surgeon and Philanthropist," in Bryant Park

# Auditorium Ventilation

IT is only since human beings abandoned the empire of the great out-doors and began to congregate in structures of wood and stone that the problem of ventilation has become acute. Although Rome and Athens and the other cultural cities of an early day, with their amphi theatres and stadiums were probably not bothered particularly by fresh air problems, it is certain that audiences of this day would suffer the utmost in discomforts if it were not for the science of the ventilation engineer. It is ventilation that makes possible the gathering of large crowds of individuals in enclosed rooms. If it is a small gathering in a small room the solution may be found in a single fan of the familiar household type. For a theatre, the problem is not so simple; questions of air distribution, of purification, and of heating in winter and cooling in summer must be considered.

## *Air Washing*

One of the methods which has been found effective for the ventilation of auditoriums provides that the air be actually washed, all dirt being removed by a shower bath. This leaves the air as pure and fresh as the invigorating air after an April shower. The proverbial showers of that month are but Nature's way of making April air the sweetest and cleanest of the year. And so, following Nature's example, man has evolved a similar system which purifies the air within buildings.

Take the Capitol Theatre, for ex-

ample! Here one may sit in perfect comfort during all seasons of the year. Even in summer the temperature is barely more than 76 to 81 degrees—often ten to fifteen degrees cooler than the outside air.

The system in use at the Capitol Theatre was installed by the Lynn Air Conditioning Company of New York City. It is a "blow-down" system, a study of which, by contrast, recalls the blow-down method in use at Newgate Prison in London years ago. There was a windmill on the roof of the gaol connected with ducts leading to the cells. On windy days the air within was fine but on hot quiet days the prisoners used to pray for hurricanes to start the mill. The audience of the Capitol is not dependent on the whims of the temperamental winds for its supply of fresh air. The "powers" behind the throne of the ventilating system are six ever faithful electric motors on the roof. They total 140 horse-power and are operated by current supplied by The New York Edison Company. There are two 35 horse-power motors for the supply fans and two 25 horse-power motors for the exhaust fans and two re-circulating pumps, each operated by motors of 10 horse-power.

The journey of the fresh air from the time that it is made a prisoner by the suction fans on the roof until it is ushered out of the auditorium, carrying as its luggage the impurities which it collects is a very interesting one. It is first taken into a chamber and is then drawn by suction through thousands of little sprays of water which

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are at play—sending their fine sprays against a series of slender longitudinal baffle plates of galvanized iron. Being continually chilled by the water these plates are kept cool enough to condense the moisture from the air as it passes by them, thus leaving the air dry and clean. The air is hurried

is a complete change of this tremendous volume of air every seven and one-half minutes making eight changes each hour. The two suction fans which supply the air each has a capacity for moving 65,000 to 100,000 cubic feet of air a minute while the two exhaust fans expel the air at the



*Photograph by The New York Edison Company*

An Extensive System of Ducts Through Which Washed Air is Delivered to All Parts of the Auditorium

along on its journey by an eight-foot suction fan which forces it through a duct of such huge proportion, that a man could easily walk through it. Leading from this duct is another encircling the great dome and still others which encircle the smaller domes. The fresh air introduced from above gradually spreads itself as a cool soft blanket over the auditorium to refresh and make comfortable the occupants.

The Capitol is the largest theatre in the world. There is an air space of 1,250,000 cubic feet. With the introduction of 140,000 cubic feet of washed, cooled air each minute, there

rate of 50,000 cubic feet per minute each. All air is expelled through mushroom outlets underneath the seats. There are 2800 of these.

The air conditioning system has been so perfectly worked out that every condition affecting the temperature of the air has been overcome. For instance, an average approximating 250 heat units are given off by the human body

per hour. Within an hour the temperature of the auditorium may be increased 11 degrees by the heat given off from the audience. The ventilating system must take care of this increased temperature and supply the necessary amount of cool air to free the auditorium of the warm air. It has been found that humid air is much more difficult to cool than dry air! The conditions of the atmosphere affect very definitely the work demanded of the controlling motors. Humid air may be cooled only from 6 to 14 degrees while dry air may be cooled from 14 to 18 degrees.

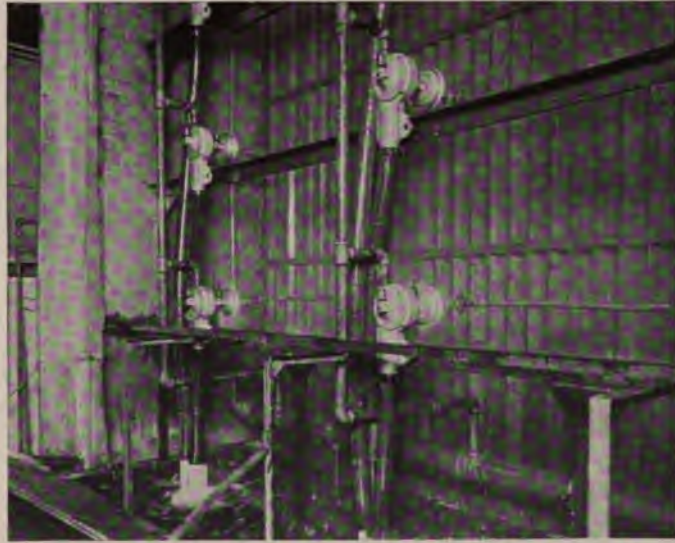
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But we wonder what happens to all of this clean fresh air which is continually pouring in from around the various domes. Its life of purity is very short, for within little more than seven minutes it is laden with dust and smoke and is ready to make its exit. The experience of some little dust

grains from Broadway which made their way into the theatre tells the story. It was their first visit to the "cinema" and they settled down—dust has a way of settling—for an enjoyable evening. However, they soon became conscious of a disturbance which was attempting to stir them from their seats. Finally they found themselves traveling at a steady rate toward a

mushroom-shaped affair which appeared to be growing out of the floor. They were drawn toward it and into it. A dark mysterious journey began. First they went down a cavernous passage-way where they were jostled against millions of other little dust "persons." They were all going somewhere but none of them knew exactly where. It was a long dark journey that took them underneath the theatre, up the side and across the top of the great building. At last light appeared, and revolving vanes of a great exhaust were seen, and in another instant they were ushered

out under the skyblue dome of New York over the roofs of great buildings. But even in this, their fate was much better than it might have been. In Winter weather the inside air is purified and re-circulated because it is warm and doesn't have to be heated as would fresh cold air. The method is



*Photograph by The New York Edison Company*

The Air Washer and the Nozzles Which Deliver a Fine Spray of Water Through Which All the Air Passes

economical as well as efficient; in using the heated air almost \$3,000 is saved each year by the Capitol in coal bills.

The germ laden air is washed out thoroughly and mixed with ten per cent of fresh air. The air thus refreshed is again drawn into the great intake duct by the same great fans, and its journey made again to the auditorium. In this event the little dust grains may never see daylight again, they are carried off to their sad fate from dust to dust in the stream of water which flows away in a grimy black stream. It is their voyage down the River Styx.

## The Dodge Building

**T**OWERING above the old fashioned five-and six-story loft buildings of the surrounding neighborhood, the Dodge Building, West Broadway between Murray Street and Park Place offers an interesting study in contrast between present day commercial buildings and those of half a century ago. The building has just been completed and its lower floors are

occupied by the Dodge Sales and Engineering Company a subsidiary sales organization of the Dodge Manufacturing Company of Mishawaka, Indiana, manufacturers of power transmission machinery.

The building extends eastward half a block toward Church Street and because of the width of both West Broadway and Park Place, and also the fact

that all of the buildings in the vicinity are six stories or under, the Dodge Building naturally will be assured of excellent light and ventilation.

Its electrical equipment is most modern and complete. There are four electrically operated passenger elevators, a freight elevator, two electrically driven house pumps, one sump pump, a ventilator and six hundred lamps all operated by current supplied by The New York Edison Company. The freight elevator operates only to the third floor, however, as it is meant to serve only the owners.

The Dodge Sales and Engineering



*Photograph by The New York Edison Company*

The Dodge Building on West Broadway Was Planned by Shape, Bready and Peterkin, and Erected by the Owners Improvement Corporation. The Electrical Equipment Was Installed by the Ames Electric Co. Cross and Cross Were the Consulting Architects

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*Photograph by The New York Edison Company*  
Detail of the Park Place Entrance to the Offices of the Tenants

Company occupies the first three floors of the building, with separate entrance at 49 West Broadway. Their part is entirely cut off from the remainder of the offices, the entrance for which is at 53 Park Place.

In deciding on the design and construction details, great care was exercised in providing a structure not only of imposing appearance, but of convenient arrangement and affording ample floor space to provide not only for present business, but future expansion.

The building is twelve stories high, and of steel and concrete construction.

The exterior is of granite up to the third floor, and the upper portion is faced with light brown brick ornamented with terra cotta panels. The main entrance of the building, on Park Place, and the lobby are imposingly finished in marble and bronze. The building was designed by Shape, Bready and Peterkin. Cross and Cross were the consulting architects. It was erected by the Owners Improvement Corporation and the electrical equipment was installed by the Ames Electric Co.

The floor arches are of concrete and are supported on extra heavy steel girders designed for a floor load of 120 pounds per square foot, instead of sixty pounds, which is the normal floor load for office buildings, thus affording ample provision for the storage of emergency trade service stocks as well as the display of samples.



*Photograph by The New York Edison Company*  
Four Electric Elevators Provide Rapid Service for the Building Tenants

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*Photograph by The New York Edison Company*  
The Street Fair on Park Avenue, North of the Grand Central Terminal, Conducted by the Association for the Aid of Crippled Children Had All the Attractions That One Would Expect on an Exposition Midway



*Photograph by The New York Edison Company*  
From the Standpoint of the Illuminating Engineer the Lighting of the Street Fair Presented Many Unusual Problems; for the Spectator it Was a Thing of Beauty and Novelty

## The Last of the Convict Ships

**P**ALED into insignificance are the stories of the Black Hole of Calcutta and the Spanish Inquisition, beside the history of horror and iniquity that held forth on the prison ship *Success*, during the first half of

the nineteenth century. The 132-year old brigantine, used for the transport of convicts to Australia as part of England's penal system, is now at Pier No 1, the Battery, on its tour of the principal ports of the world as an educational object lesson in prison reform.



Photograph by The New York Edison Company  
A Grim Reminder of an Outgrown Penal System, the British Prison Ship *Success*  
Now on Exhibition in New York

The ancient vessel has been on public exhibition throughout the English speaking world since she was raised from the bottom of Sydney Harbor, Australia, where, in response to an outraged public sentiment, she had been sunk in 1885. On being reconditioned she was wired throughout for an installation of four hundred electric lamps, and now at whatever port she touches, connection is made with Central Station Service for the supply of this lighting service. It is a strange contrast of modern convenience and ancient prison methods.

The ancient vessel has been on pub-

lic exhibition throughout the English speaking world since she was raised from the bottom of Sydney Harbor, Australia, where, in response to an outraged public sentiment, she had been sunk in 1885. On being reconditioned she was wired throughout for an installation of four hundred electric lamps, and now at whatever port she touches, connection is made with Central Station Service for the supply of this lighting service. It is a strange contrast of modern convenience and ancient prison methods.

The old ship, launched at Moulmein, Lower Burma, in 1790 served originally as an armed merchantman. Twelve years later she was taken over by the British Government to convey the overflow of the British jails to the newly established penal settlements in Australia. She continued in the traffic nearly fifty years and during the gold rush to Australia, she was converted into a floating prison and permanently stationed in Hobson's Bay. Cells, strong and gloomy, were built in her hold and prisoners were immured for long



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terms, generally starting with two years of solitary confinement.

Cruelty seemed to be the order of the day and many of the devices required for the practice of man's brutality constitute this interesting exhibit. Airless dungeons, condemned cells, whipping posts, manacles, branding irons, punishment balls, leaden-tipped cat-o'-nine tails, and the coffin bath suggest the hardship and torture which the prisoners endured. Likenesses in wax of the most notorious of the inmates are on exhibition in the cells.

The prisoners survived for twenty and thirty years—some of them! There was no light and no sanitary accommodation, no "room and bath", of which some penal institutions brag in these days of prison reform. Prisoners were allowed on deck only one hour out of twenty-four. And that hour of daylight tended to blind, for, like mine donkeys and other beasts and humans that live in darkness, their sight soon failed.

The daily ration consisted of water, oatmeal, and bread with meat once a week. In defending this meagre ra-

tion the prison board explained that if they fed the prisoners too much, they would be too strong and healthy and that it was better to keep them weak and avoid the danger of mutiny.

Only last year, the last of the convict ship's survivors died. That is, the last of the prisoner alumni so far as records indicate. He was William Jones, colored, and died at Sydney, Australia, June 2nd, 1921, at the age of 98.

He "did" thirty-two years aboard the *Success*. Originally sentenced



*Photograph by The New York Edison Company*

The Lower Deck of the *Success* With an Unbroken Row of Cells. Until Equipped for Exhibition Purposes There Was No Light in the Cells and No Ventilation Except That Provided by the Small Barred Space Over Each Door

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from Cardiff, Wales, for ten years for attempted arson, he escaped, but was caught outside of Melbourne on his way to the gold diggings after "sticking up" stage coaches. For this he got twenty-two years. After serving the combined sentences with as much solitary confinement as would have killed a dozen others, he was freed. Leaving Melbourne, he established himself in the cigar business in Lower George Street, Sydney, and kept well the secret of his past. When the *Success* was on view in Sydney, his curios-

ity overcame his discretion, and he ventured aboard. He made himself known to the lecturer and remarked that in his youth he was much better looking than the figure shows him to be.

The day Jones made himself known, he told the lecturer that he was lured by the advertisement of Captain D H Smith, American citizen, present owner of the ship. The handbills and announcements of the *Success* always carry the prominent line that "The *Success* is electrically lighted throughout and can be inspected at night as well as by day."

"Despite my thirty-two years

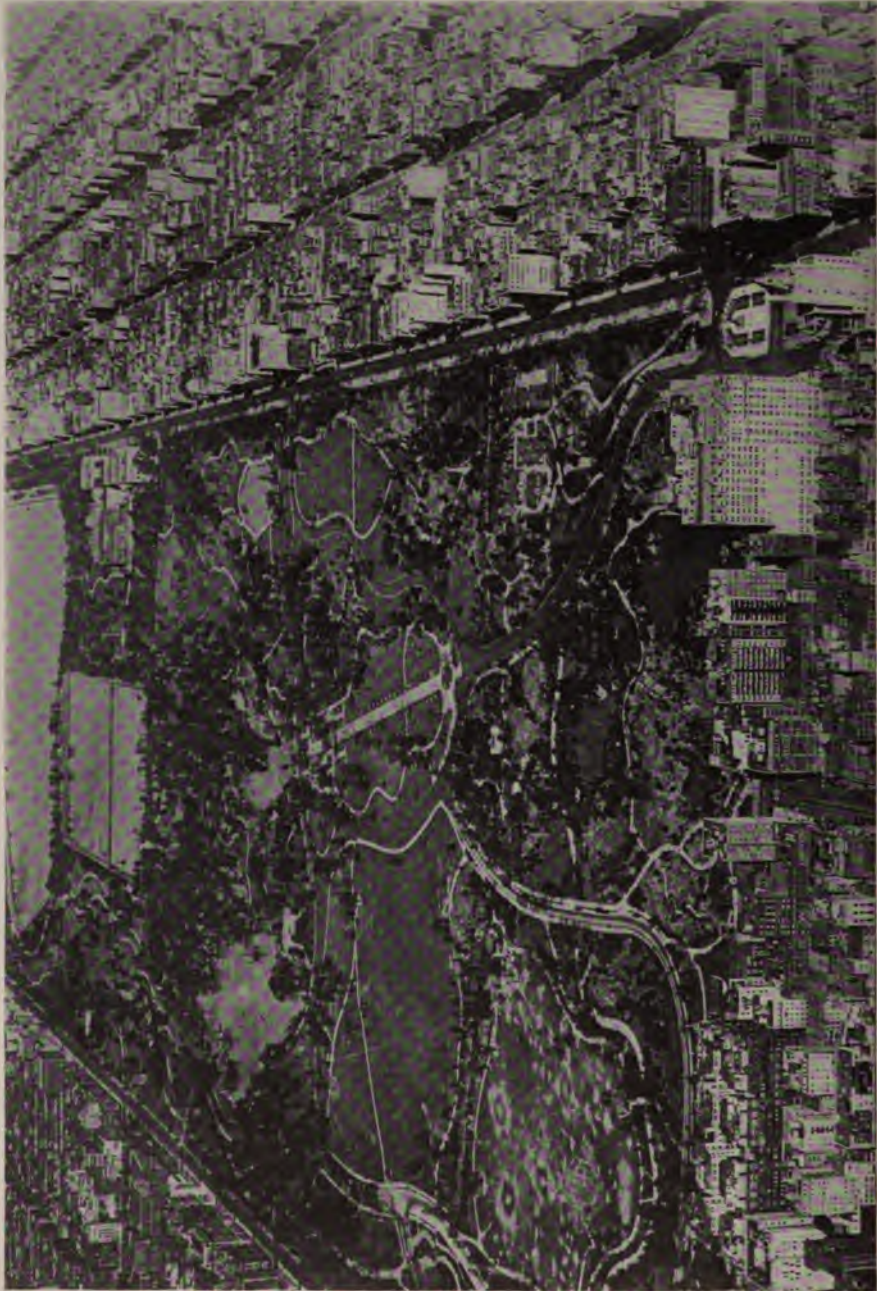


*Photograph by The New York Edison Company*

One of the Wax Groups, the Preservation of Which Depends Largely on Electric Fans

aboard the old 'hellion'," he told the guide, "I never got a chance to see what she looked like. I was carried aboard at night. It was always pitch dark in her hold, and whenever I was allowed on deck I was so blinded by daylight that I could not see very much. It took me a year or so to regain my sight once I was freed. I couldn't help but come to see the place I had lived in for thirty-two years. The privations that we fellows endured cannot be realized when the old boat is so brightly illuminated from stem to stern, aft, fo'ard, amidships, in the holds and everywhere."

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*Photograph by Major Hamilton Maxwell*

**An Airplane View of Central Park, Showing Some of the Finest Residences, Apartment Houses, Hotels and Clubs in the City. In Many of These Buildings Edison Service Is Used for All Electrical Purposes**

## After Nine Years

IN February, 1914, there appeared in THE EDISON MONTHLY an article entitled "From Mule to Motor". It dealt with the purchase, in 1913, by the Coca-Cola Bottling Company of New York, of one two-ton electric truck. The article says in part "The two-ton electric truck is used for the delivery of Coca-Cola in New York. It does the work of five horses at a cost of \$26 a month as compared with \$100." Commencing with this first installation the number of electric trucks has been continually added to until now the Coca-Cola Bottling Company owns five two-ton electric trucks, three three-and-one-half ton and one of fifteen hundred pounds capacity. It is interesting to note that the original electric truck which went into service in May of 1913 is still in operation today.

Few people, in drinking Coca-Cola at a baseball game, in an ice-cream parlor or anywhere else, stop to consider who makes it or how it is distributed. The Coca-Cola Company is the originator and manufacturer of the product and the New York office is located at 330 West 27th Street. The Coca-Cola Bottling Company of New York with its offices at 341 East 46th Street operates under a franchise from the parent company and is the local bottler and distributor of the beverage. Having but little transportation to do, the Coca-Cola Company owns but one three-and-one-half ton electric truck. The others are all owned and operated by the Coca-Cola Bottling Company and are used for distribution to the jobber, dealer

and the retail refreshment dealers.

The territory covered by the electric trucks of the Coca-Cola Bottling Company includes the Bronx, Manhattan, Coney Island and points in Brooklyn. Gasoline trucks are still used for long distance hauls, but the purpose of the Company is to discard the gasoline truck wherever possible.

### *Economy of Electrics*

Mr Charles E Culpeper, manager of the Coca-Cola Company and president of the Coca-Cola Bottling Company states that "Truck operation costs are fifty per cent lower by electric trucks than by gas cars." Just how efficient and economical the electric trucks are can be seen from the fact that the cost of delivery of a case by the three-and-one-half electrics is twenty cents while with the gas cars the cost is twenty-two cents and seven mills. This cost includes expenses of advertising, bottling, driver, and salesman's commissions, and is a total representative cost with the exception of manufacturing expense. The saving effected on each case by the use of electrics might not appear very large but as there are one hundred and twenty cases on each load the saving amounts to \$3.24. Two loads a day is the average during the summer and thus the saving in favor of electric trucks becomes \$6.48 a day.

Recently the bottling company added an unusual electric truck to the fleet. This is the fifteen hundred pound car, and it is used primarily as an advertising medium, though some few deliveries are also made by it.

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*Photograph by The New York Edison Company*

The Newest Member of the Coca-Cola Delivery Fleet Is Used Principally as an Advertising Medium

The vehicle is equipped with two batteries; one furnishes the motive power for the wheels and the other supplies electricity for lighting bulbs inside tall glass bottles.

The Company's local deliveries were originally made entirely with horses. Upon the advent of the first electric truck, began the elimination of horses, for it was seen that the electric cost less and was more reliable. Shortly afterward gasoline trucks were experimented with for city work, but they proved unsatisfactory in a service which was one essentially of local deliveries. The extreme reliability of the electric vehicle has been

partially responsible for its popularity in this connection. The fact that during the quiet season, electrics are more desirable than either gasoline cars or horses because of their lower fixed costs, such as insurance, and depreciation also adds to their popularity.

The mileage of the trucks varies greatly by reason of the fact that the business is to a

large extent seasonal.

The value to others of the experience of the Coca-Cola Bottling Company is clearly evident. From one electric truck in 1913 the fleet has grown to nine electric trucks in 1922, and Mr Culpeper, states that they expect shortly to add still more.



*Photograph by The New York Edison Company*

This Veteran of the Coca-Cola Fleet Has Been in Service Since 1913

August

1922

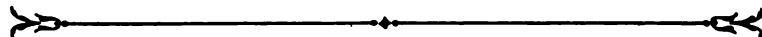


*Sunday Afternoon in Central Park  
In the Early Eighties*

VOLUME 14

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NUMBER 8



*The Edison Monthly*

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## The Edison Monthly

**The Edison Monthly**  
Published by  
**The New York Edison Company**  
General Offices  
Irving Place and Fifteenth Street  
New York City

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N F BRADY, President  
WALTER NEUMULLER, Secretary  
FREDERICK SMITH, Treasurer

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There are not many industries or professions which have grown from the laboratory stage to national importance under the directing genius of the same minds and hands. The first steam railroad operated more than one hundred years ago; the forerunner of the *Leviathan*, the *Majestic* and the *Berengaria* sailed up the Hudson in 1809; city transportation had its beginnings in horse-drawn stage coaches; chemistry and medicine have come down through the ages; printing goes back several hundred years, but the business of supplying electric light and power for homes, factories and offices is wholly of the twentieth century. It was in the late '70's and early '80's that Edison did his preliminary work for the central station industry. In September, 1882, New York's first central station was placed in operation.

The building which housed New York's first central station still stands; one of the original Jumbo generators is a never failing source of interest whenever it is shown; Edison himself retains a keen interest in the work which he started; and many of the men who were associated with him in the early days now occupy positions of importance in the industry which they helped develop from infancy to national necessity.

New York's first central station gave a service which was available only to the few buildings in territory of less than a square mile in lower New York, and then only for the purpose of providing illumination. Today there is not a city or town without its central electric power plant and there is hardly a task which is not lightened by its magic.

To those who served during those trying pioneering days there must be a tremendous satisfaction in looking back and contemplating how thoroughly they planned and how well they have executed.

To an automobile driver who had picked his way carefully over the ruts and holes of a neglected macadam road a recent ride over the same road in an electric was a distinct revelation. There was no easing down into the holes, no shifting of gears to come up out of them and in fact very little reduction of speed during the rough journey. The electric sped right along, passing many higher powered cars on the way.

And with all the speed that the electric was making there was no great discomfort. The car went in and out of the holes without the tossing about of passengers that was causing the other cars to stop. The explanation lay in the fact that the heavy storage battery served admirably as ballast while the springs were designed essentially for passenger comfort on rough roads rather than to meet the requirements of high speed.

To those who would try out the riding qualities of their cars, this same road is recommended—the two-mile

## The Edison Monthly

bit of corrugated and pock-marked macadam on Ocean Avenue, Brooklyn, extending from Kings Highway to Sheepshead Bay. After that, try it in an electric.



Although the history of mechanical devices for washing clothes goes back more than one hundred years, it was not until the electric motor entered the field that real progress was made in eliminating the drudgery of this age-old household task. How welcome this contribution of inventive minds has been to the realm of household management is seen in today's tremendous demand for washing machines. The washing machine today is firmly established in the modern home. In the rural districts it is displacing the old wooden tub that from Monday to Monday hangs on the woodshed door—in the cities it is making the stationary kitchen washtub with its running hot and cold water an almost useless encumbrance of apartment or dwelling.

Inventive minds have not limited themselves to the problem of getting the dirt out of fabrics—they have been just as much concerned with methods of ironing and with equipment for drying. As a result the properly equipped laundry today has its electric washing machine, its drying cabinets, its electrically heated iron for smoothing small pieces and its ironing machine for handling heavy wash. The earliest types of mechanical washers followed closely the principal of the strong arm and the corrugated rubbing surface, a method which dates back to prehistoric times. The machines of today follow principles laid down a hundred or more

years ago when oscillating or tumbling tubs, operated by hand levers, forced soapy water through the garments to be cleaned. To these the electrician's contribution has been the electric motor and the methods of transmitting power to washtub and wringer.



Of all the factors that make for inefficiency in the profession of the burglar or hold-up man, there is none that he dreads quite so much as light. And close behind light as a crime preventative comes noise.

A burglar will hesitate a long time before breaking into a building where the lights are turned on, and he will quit any job at the first untoward sound. This explains why so many buildings leave a night light burning after closing hours and why so many others are installing sirens to sound the alarm when a hold-up threatens. Light prevents crime and the siren calls for help.

As described elsewhere in this issue, there has recently been perfected a howling device by which a call for help can be sent from any part of a bank or other building. Signal stations are installed under tables or desks and may be operated by the knee or foot without any perceptible movement of the body. The contact thus established sets the siren to howling and all within hearing distance know that help is needed. An important feature in the design of the alarm is the arrangement which prevents tampering with the wires; any break in the circuit starts the alarm and the effect is the same as though a harassed teller had stepped on the contact under his desk.



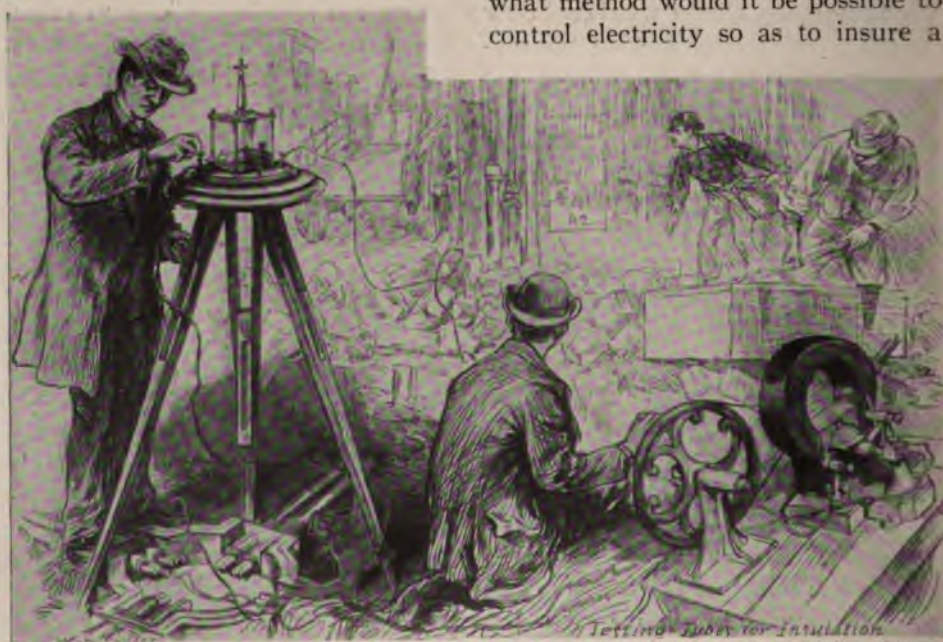
## Beginning of Central Station Service

**I**N a recent issue of this magazine an attempt was made to tell what New York was like a generation ago and to describe some of the things which gave it character. At that recent historical period the city was at the threshold of its consolidated greatness, but with little eagerness to go forward to its new responsibilities and with only a clouded vision of its metropolitan destiny. Community problems which soon were to become of seemingly insurmountable magnitude, problems created by the rapidly increasing population and involving the comfort and well being of all the people, were just beginning to press for solution.

It was clearly a time for men of poise and purpose, for men capable of esti-

imating the varied and urgent requirements as they took the measure of the municipal stature.

There was the interesting subject of a new light, a light of electrical origin and so simplified that it could be used in the house, at office desk or workshop table—anywhere in fact that illumination was needed. Reports had come from the Edison laboratories at Menlo Park showing that rapid progress was being made with the new light, and a project to illuminate a portion of the city was under way. Arc lights—those great balls of radiance which crackled and sputtered through faulty contact of the big carbon pencils—were to be seen on a number of thoroughfares—were the new lights to be anything like these? If not, by what method would it be possible to control electricity so as to insure a



*Testing Tubes for Insulation. This, and the Illustration Opposite, Are From a Drawing by W. R. Snyder in Harper's Weekly of June 21, 1882.*

At Work on the Underground System of the Edison Electric Illuminating Company in the Summer of 1882. This Illustration from *Harper's Weekly* Shows the Test of the Insulation, Connection Being Made at One of the Junction Boxes

## The Edison Monthly



In the Trenches in 1882. The Underground System of Forty Years Ago Served Less Than a Square Mile of Territory in Lower New York.

One of the Workmen is Pouring the Insulating Compound Over the Copper Conductors at a Junction Box

permanent light suited to individual requirements? The public was deeply interested and it wanted to know about these things—which was in every respect natural enough.

The newspapers, alert to the importance of a new method of lighting and of its incalculable benefit to civilization, were it to prove satisfactory, became aware that the men behind the enterprise, fully convinced by the results of experiments which had been carried on for many months, were about to put the light to its first commercial test.

*Harper's Weekly*, in its issue of June 24, 1882—published full page pictures from the artistic pen of

W R Snyder showing the laying of the first wires underground. This was on Spruce Street and the system embraced the territory between Wall and Spruce Streets, Nassau Street and the East River. A canvass of this district had been made to discover primarily what its light requirements were. One is apt to smile as he looks at the figures of that canvass and considers them in connection with the requirements of the district today. All told there were only 90 elevators—mostly for freight. Some were operated by steam power and others by hand. Besides these eighty horses were daily employed on the roofs of buildings in the leather district to hoist bales of hides through

## The Edison Monthly

hatchways to various floors. Some of these animals had been in service for years. To raise a load from the street a rope was fastened around the bundle, the other end passing over a pulley and being attached to the horse. At a signal from below, a boy would drive the horse along a track for a distance equal to the height that the load had to be raised. That was the old time way. In the light of the modern method how archaic it seems. A total of 18,043 gas jets lighted the district. There were 80 sewing machines, 742 small hoist engines and 129 engines for running machinery.

The text which accompanied the *Harper's Weekly* illustrations told of the groups of citizens that gathered along the curb and of their expressions of wonder at what was going on. They saw the copper wire and the iron pipe through which it passed, the junction boxes at the intersections of streets and all the physical evidences of something new.

"It's an invention of Thomas A Edison," said one man, "and from what I hear he's done something big—something that is going to revolutionize our ideas of lighting and, maybe, of power."

While street gangs were busy with the conduits, others were making connections with the buildings which were to have the distinction of being the first to use the incandescent light.

They included the old Drexel building, the *Times* office, then at Nassau Street and Park Row, the Park Bank, and the *Herald* office, which at the time occupied the old site opposite St. Paul's church on Broadway.

The summer passed. The city had become familiar with the laying of pipes and now awaited with expectancy the fulfilment of the promise of the new thing in lighting.

Little had come from Edison himself. The doors of the city's first power station at No 255-257 Pearl Street closed him in every morning and did not swing to let him out until most of New York was in bed. He lived in that important period with his dynamos and engines, busy throughout the long days working, experimenting, getting everything in readiness for the certain day when the world would know what he had accomplished.

The day was September 4, 1882, and the specific hour 3 p. m. At a signal from Edison himself, the generators—crude Jumbos of 125 horsepower each—sent forth the current



The Forerunner of Our Present Electric Locomotives. An Experimental Train Operated at Edison's Home at Menlo Park, New Jersey

## The Edison Monthly



*From the Scientific American, August 20, 1892*

The Six Jumbos Comprising the Generating Equipment at New York's First Central Station. Each Generator Had a Capacity of 125 Horsepower. One of These Jumbos Is Still in Existence and Will Be a Centre of Interest at the Coming Electrical Show in New York

which following underground lines with a total length of thirteen miles, simultaneously gave light to all the establishments with connections.

It being impossible to be in two places at once, a group of distinguished citizens, including men prominent in the electrical world, foregathered at the plant, there to greet Edison and enjoy the privilege of being present on an occasion of historical importance, while other groups found equal interest in a personal view of the "small blazing horseshoes that glowed within pearshaped globes, pendant beneath porcelain shades" in one or another of the buildings equipped with the light.

In July of that same year, a group of men notable in the field of science, had visited Menlo Park to witness the operation of a new kind of locomotive. It was an iron horse without boilers or firebox, cylinders or smoke stack, which received its power from electricity fed by wire leading from the Edison Laboratory to the rails upon which the wheels ran.

The driver took his place in the cab. The guests took seats in the small car attached to the locomotive. At signal the train moved down the short line that had been built for experimental trials of the new Edison device and then returned. It was the first electrical ride on record. Everybody present was amazed but there was some

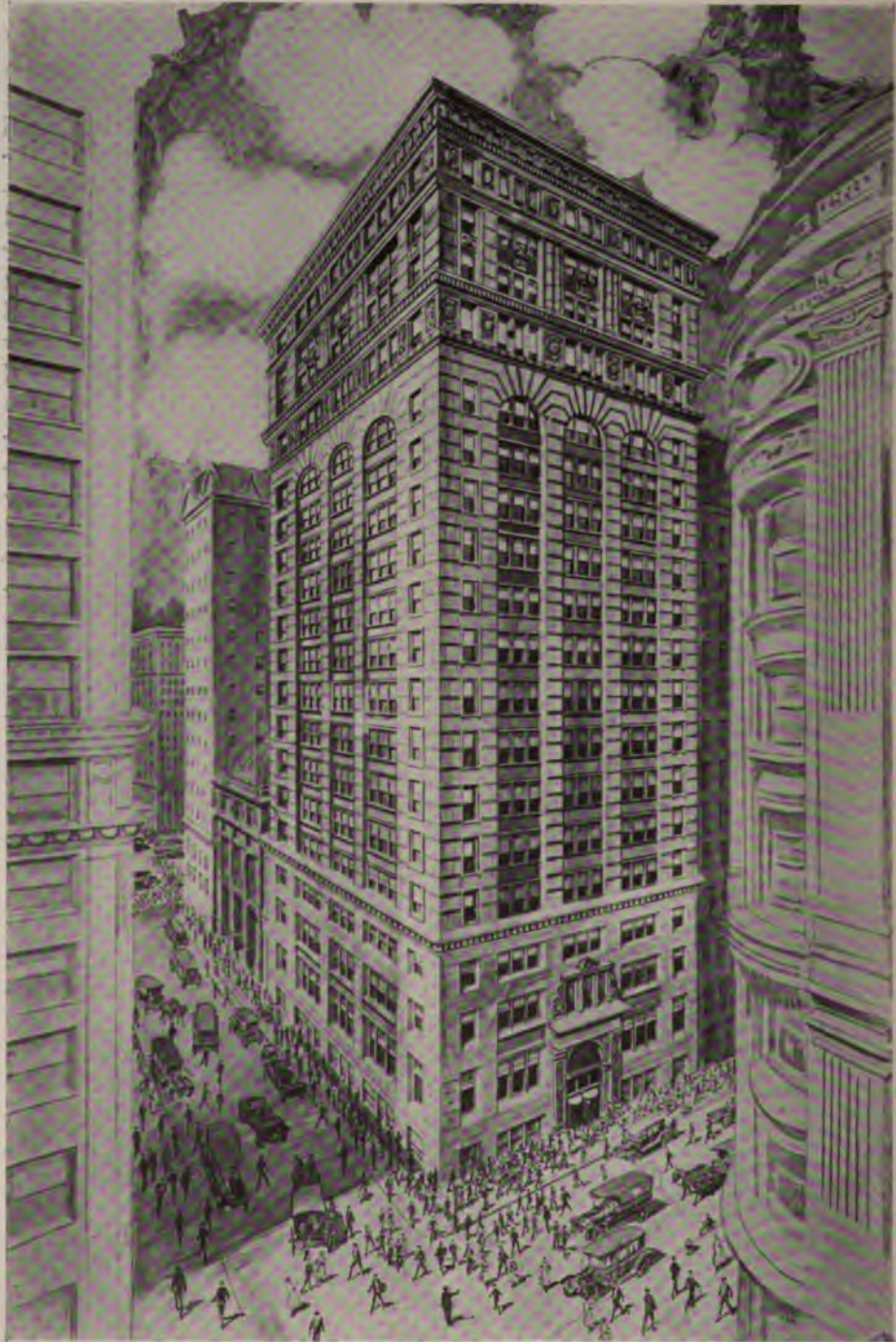
shaking of heads. Always there are doubters, always some who hesitate to accept the evidence of a new way of accomplishing an old result.

The electric locomotive whose operations at Menlo Park amazed those who were privileged to be present at its trial was the forerunner of its kind. One has but to contemplate the present systems of subway and elevated railroads and the electric locomotives, which operate out of the great trunk-line terminals to realize the vital importance of the Edison inventions of that early day.

Forty years ago! And Edison, with his new light blazing the way to a new era, still was able to find time (and, possibly, relaxation of a kind) to put electricity to work as a power agent.

The light of '82 now shines around the world and wherever there is light there also is power. Here in New York the story of our amazing growth during the past four decades never could have been recorded had it not been for Edison and his work.

## The Edison Monthly



*Illustration by Courtesy of the National Bank of Commerce*

The National Bank of Commerce at 31 Nassau Street Has Arranged to Discontinue Its Private Electric Generating Plant, to Convert Its Hydraulic Elevators to Electric, and Equip the Building Pumps With Electric Motors

# National Bank of Commerce

**J**UST a quarter of a century ago the National Bank of Commerce completed and moved into its new twenty-story home at Nassau and Cedar Streets. The skyscraper occupied the historic spot on which Aaron Burr had his home during Revolutionary times, and the bank is the proud possessor of the original parchment deed made in the name of Aaron Burr and his wife. In erecting the building, the bank installed its generating plant for lighting purposes. The high pressure steam plant also supplied power for hydraulic elevators, pumps and other equipment. After a quarter century of service this apparatus has been discarded in favor of electric motors and Central Station Service.

## *Chartered in 1839*

Chartered in 1839 the Bank of Commerce, as it was then known, had its first offices in the Merchants Exchange Building at 46 Wall Street. Three years later the bank leased half of the building of the Bank of the State of New York at Nassau and Wall Streets adjoining the sub-treasury. This property was purchased by the government in 1845 and the bank then obtained the present site on which it erected a four-story marble building which at that time was considered to be one of the finest in the city. Forty years later additional land was secured at 33 Nassau Street and the erection of the present building was begun. Recently the bank added to its holdings by acquiring the Postal Life Insurance Building at 35 Nassau Street and now owns all of the frontage on the west side of Nassau Street from Liberty to Cedar

Street. The first president of the bank was Samuel Ward, whose daughter, Julia Ward Howe, wrote the "Battle Hymn of the Republic." How the bank has grown since those days is seen in the records of deposits—\$831,392 in 1839, and \$386,379,208 in 1921.

Since the purchase in March, 1919, of the fifteen-story Postal Life Insurance building the question arose with regard to the power and light supply for both buildings. The Postal during its previous ownership had discarded a plant in favor of Central Station Service. After a very lengthy and thorough investigation of both types of electrical supply, the bank decided to abandon its own plant and adopt Edison Service for its own building also. This, notwithstanding the fact that it would mean a 100% change in the mechanical equipment and expenditure of thousands of dollars for new apparatus. Plans for the extensive alterations are in the hands of the Thompson Starrett Company of 49 Wall Street and the new elevators will be installed by the A B See Electric Elevator Company of 52 Vesey Street.

The combined electrical installation of the two buildings totals 5660 lamps and 820 horsepower, of which 3660 lamps and 510 horsepower are for the bank building proper. The electrified equipment includes eleven elevators, replacing hydraulic machines and an older type electric elevator, a side-walk lift, house pumps, ice machines and several ventilating fans.

The adoption of Edison Service continues without abatement in large office buildings and manufacturing plants. More and more, as in the instance of the National Bank of

## The Edison Monthly

Commerce, owners are realizing the dependability and economy of Central Station Service and superiority over the isolated plant.

Nassau Street in the past quarter of a century has become one of the main thoroughfares of the downtown

district and boasts of many banks along its way. The new Federal Reserve Bank now in course of construction will be located on the east side of Nassau Street, taking in the entire block from Maiden Lane to Liberty Street.

### The Electrical Goblin

(The Goblin called "electrical" is a fairy up-to-date;  
Believes in current miracles and works at lightning rate.)

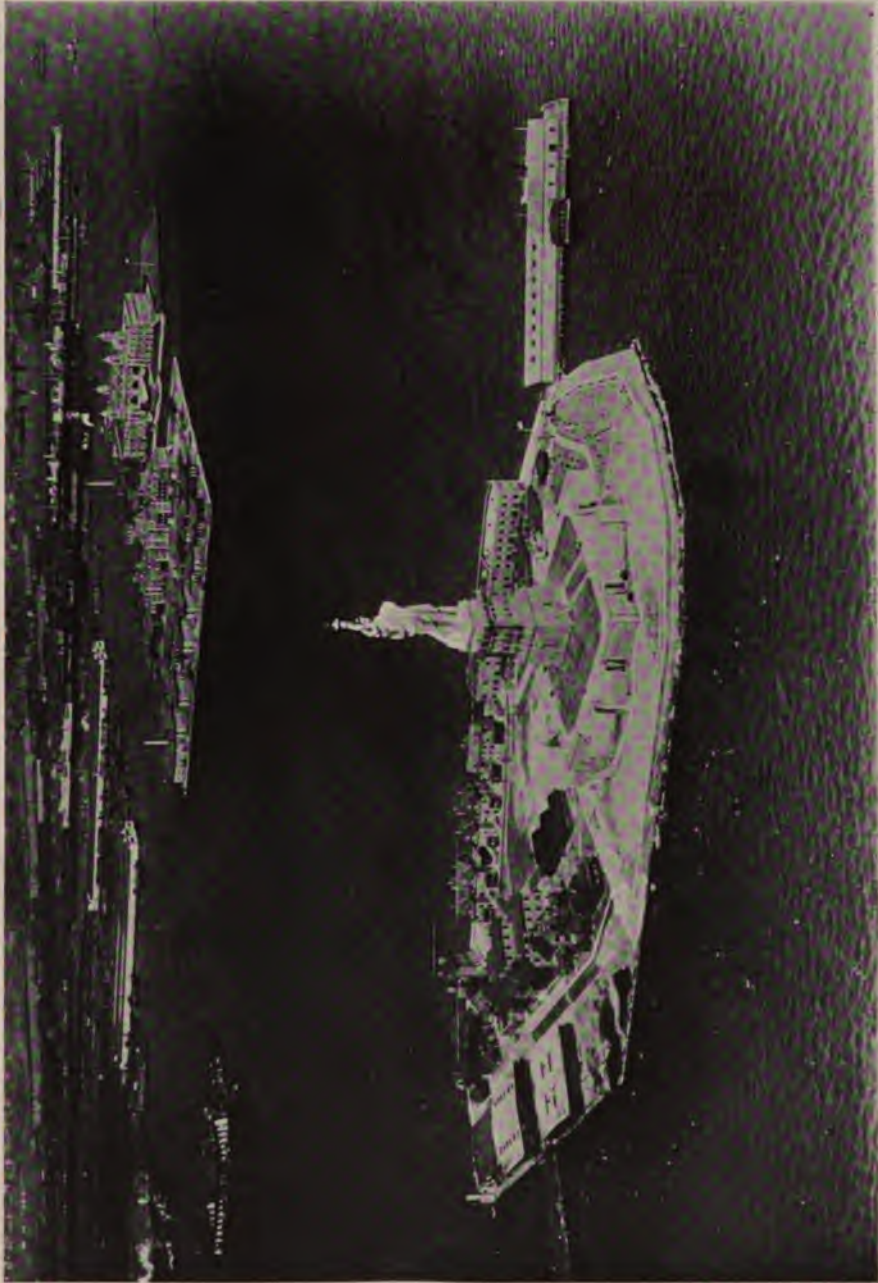
"Now "why-r" said this Goblin  
"Do you toil the live-long day?"  
He was speaking to the house-wife  
Who was wiping tears away.  
"For you should wash and iron and sweep  
And still have time to play!"  
"Oh how? bright elf", the house-wife cried  
"There are no maids to hire  
The work is always roundabout,  
Achieving it, I tire" . . .  
The Goblin only winked at her  
And chuckled "Why'r *WIRE!*"

\* \* \* \*

"Now why'r" said this Goblin  
"Don't you make the biddies lay?"  
He was talking to the farmer  
Who was making nests of hay,  
"A hen will eat and then repeat  
As long as it is *day*,  
The more she eats the more she'll shell  
Out eggs that make her pay!"  
"How, brilliant elf", the farmer cried  
"With zeal a hen inspire?  
How make the henhouse light as day.  
The sun won't stay up higher?"  
The Goblin only winked at him  
And chuckled "Why'r *WIRE!*"

—Stella Knight

# The Edison Monthly



*Photograph by Major Hamilton Maxwell.*

The Statue of Liberty, Ellis Island, and the Freight Docks of Communipaw, New Jersey, as Seen From an Airplane



THE NEW YORK TIMES, FRIDAY, JUNE 2, 1922

# A Knockout Offer on Electric Trucks

Sensational Reductions  
Old prices were 35 to 40% more

New terms: \$100 with order  
balance in 21 months

Money-back offer



3/4-ton Model, \$2255  
Including chassis, battery and body  
New York City delivery. Tax extra

1 1/2-ton Model, \$2485  
Including chassis, battery and body  
New York City delivery. Tax extra

HERE at last is the complete solution of your delivery problem—a solution that saves 20% to 50% of your vehicle-operating costs on frequent-stop city-street deliveries. Complete delivery units so cheap to run and so long-lived that if you had got your original horses or light gas trucks for nothing, you couldn't afford to operate them on such routes. Units that have cost 35% to 40% more—now offered on a Pay-as-you-save Plan and a Money-back Basis.

**Here are the Facts**

1. **Unconditional Reduction** on vehicles which—  
even at their highest prices—previously carried more than 40% of their operating costs. The reduction of these multiple maintenance, battery and fuel—plus the profit instead of their cost—enables us to sell on a pay-as-you-save and a money-back basis.

2. **A Payment Plan** that no one can refuse who wants to operate a truck. Terms: \$100 with order, \$100 and tax on delivery, and the balance payable \$100 in 20 monthly payments, depending on whether you choose the 1/2-ton or the 3/4-ton unit.

3. **Quantity Discounts** 5% discount for 2 trucks, 10% discount for 10 trucks. These discounts apply whether you take all of the trucks at once or use one here and one there on a pay-as-you-save basis.

4. **Money-Back Guarantee**. Based on your own data furnished on our Analysis Form—indicate on each truck, number of trips a day, approximate number of stops, loads, load of 1000 lbs., etc.—we will tell you what size Ward Electric Truck will do for you. If they do not do so and so guarantee they will bring it to us, not to you.

**Cheaper than Horses**

These Ward Electric cost less—delivered costs 80% to 85% less. They cost less than horse teams for the same work. Current costs less than horse feed. They do more work and make better time than teams. They will do more and cheaper of your loading, unloading, delivery and return. They require no fuel and no maintenance—no repairs. They require no feed and no stable care. They require no feed and no stable care. They require no feed and no stable care.

**Cheaper than Gas Trucks**

These trucks are not built for frequent-stopping and starting while numerous gross the conventional engine-gasoline trucks, etc., and use about the full value of all maintenance for repairs.

When Ward Electric stop to make deliveries, it is essential for a Ward Electric to be out of service half that long, even including reworking.

for repairs, replacements, tire changes, etc. In parking, moreover, it is essential for a Ward Electric to be out of service half that long, even including reworking.

Gas-truck life averages only 3 years for all gas trucks. "Cheap" light gas trucks often have to be traded in every 2 or 3 years. Could anything be more ridiculous than buying trucks that last only 3 to 4 years, when it is possible to get electric trucks that last 12 to 15 years, and operate about as expensively as the 1915 or 1916 year as in the last year?

Maybe you think that gas-truck speed is a good thing. We ask you: Can you run 20 to 30 miles an hour when you are stopping every block or so?

Assuming that you could run gas-truck speed on city streets—can you afford it? Do you know that time and money saved of a gas truck cost nearly four times as much as 20 miles an hour as at 10 1/2 miles?

Even if you do afford such extravagance, wouldn't it be more likely better today in your profit account?

**Ward Electric for Economy**

In proportion to the number of gas trucks and electric that have been built, there are more electric trucks in operation over 10 years old than gas trucks over 3 years old.

You can safely depreciate Ward Electric at 7 1/2 to 10% a year. When horses and gas trucks have to be depreciated at 40% and cheap light gas trucks at 30% to 35% a year to frequent-stop service.

Next comes the marked saving of Ward Electric in monthly operating costs—usually 80% to 90%—a saving as good as some business—landlords, laborers, doctors, for example, etc.—that is 10 to 15% off total gross sales.

Ward Electric operate at controlled speeds—about twice the speed of teams and about as fast as traffic conditions and frequent-stop service permit. Controlled speeds prevent excessive driving, accidents, and the depreciation of high speed. Public liability insurance on electric trucks in New York City is \$105 less than on gas trucks.

When Ward Electric stop to make deliveries, it is essential for a Ward Electric to be out of service half that long, even including reworking.

Building Ward 3/4-ton Model, Model 2000, and 1 1/2-ton Model, Model 2200, and 2-ton Model, Model 2400, and 3-ton Model, Model 2600, and 4-ton Model, Model 2800, and 5-ton Model, Model 3000, and 6-ton Model, Model 3200, and 7-ton Model, Model 3400, and 8-ton Model, Model 3600, and 9-ton Model, Model 3800, and 10-ton Model, Model 4000.

Building Ward 3/4-ton Model, Model 2000, and 1 1/2-ton Model, Model 2200, and 2-ton Model, Model 2400, and 3-ton Model, Model 2600, and 4-ton Model, Model 2800, and 5-ton Model, Model 3000, and 6-ton Model, Model 3200, and 7-ton Model, Model 3400, and 8-ton Model, Model 3600, and 9-ton Model, Model 3800, and 10-ton Model, Model 4000.

There's no engine to be left running. Yet they start quick, get away faster and maneuver in less time and space than gas trucks. Nearly five records of "days' service" average as high as 300,000, even including reworking. This means better service, greater volume of business with the same trucks, or less extra equipment. The unit system of spares and replacements, on truck talked about for gas trucks, is unknown with Ward Electric.

**Edison's famous Battery**  
Any good battery can be used with Ward Electric. The battery furnished with these complete units is Thomas A. Edison's famous nickel-iron-alloy battery, which has been chosen for its remarkable economy, splendid durability, strength and durability, high efficiency, light weight and its long life. In care and operation it requires very little attention—it has been called practically "forgotten".

Nothing succeeds like Success  
We shipped more Ward Electric in 1921 than ever before in our history—more than 1000. You are dealing with a successful, established company that has the organization, facilities and financial strength to make good its guarantee—an important consideration in buying vehicles that you expect to use for 10 to 12 years or longer.

- This reputation has three advantages to its credit:
- 1. Trucks with the famous Edison battery.
  - 2. Trucks that can be purchased for less than the cost of most gas and electric.
  - 3. Trucks with maximum power maintenance per amount paid for truck.
  - 4. Trucks that last longer than any other trucks on the market.

Trucks are rapidly built that can be set up on any commercial.

**75% Repeat Orders:**

Edison Battery Co., Brooklyn	20
Edison Battery Co., New York	15
Edison Battery Co., Philadelphia	10
Edison Battery Co., Baltimore	5
Edison Battery Co., Washington	5
Edison Battery Co., Boston	5
Edison Battery Co., Chicago	5
Edison Battery Co., St. Louis	5
Edison Battery Co., Cincinnati	5
Edison Battery Co., Cleveland	5
Edison Battery Co., Pittsburgh	5
Edison Battery Co., Newark	5
Edison Battery Co., Jersey City	5
Edison Battery Co., Elizabeth	5
Edison Battery Co., Paterson	5
Edison Battery Co., Hudson	5
Edison Battery Co., Albany	5
Edison Battery Co., Syracuse	5
Edison Battery Co., Rochester	5
Edison Battery Co., Buffalo	5
Edison Battery Co., Erie	5
Edison Battery Co., Scranton	5
Edison Battery Co., Binghamton	5
Edison Battery Co., Elmira	5
Edison Battery Co., Cortland	5
Edison Battery Co., Hamilton	5
Edison Battery Co., Saratoga	5
Edison Battery Co., Warren	5
Edison Battery Co., Rensselaer	5
Edison Battery Co., Schoharie	5
Edison Battery Co., Hamilton	5
Edison Battery Co., Fulton	5
Edison Battery Co., Montgomery	5
Edison Battery Co., Otsego	5
Edison Battery Co., Warren	5
Edison Battery Co., Rensselaer	5
Edison Battery Co., Schoharie	5
Edison Battery Co., Hamilton	5
Edison Battery Co., Fulton	5
Edison Battery Co., Montgomery	5
Edison Battery Co., Otsego	5

Send for This Free Book  
If it is possible for us to see your vehicle, then we can offer you a special opportunity. Make up your mind to investigate—write for full details and our book that shows where to look for extra savings and how to effect substantial savings. Use the form below.

**Ward Motor Vehicle Company**  
Factory, New York City  
Sales Office, New York City  
Phone, New York City

# Made here in New York—Six sizes: 750 lbs. to 5 tons. Ward Electrics

The Full Page Electric Vehicle Advertisement Published Early This Summer by the Ward Motor Vehicle Co. Proved Remarkably Effective as a Business Getter

# Electric Vehicle Advertising

**I**NTEREST of the motor trucking world has been centered recently in the sales campaign of the Ward Motor Vehicle Company in which a substantial price reduction, deferred payments, and a money back guarantee were among the elements used to draw public attention to electric transportation.

Of particular interest in connection with this campaign was the method of the company in placing its message before the public—a method doubly interesting because of the infrequency with which it has been employed by the electric vehicle industry—the use of a full page newspaper spread.

This advertisement occupied a full newspaper page and outlined the terms and conditions under which electrics could be purchased. Not alone did this advertisement dwell upon the extremely long life of the electric truck and its numerous other advantages, but it quoted prices and explained the details of the deferred payment plan under the terms of which the monthly sums paid out would about equal the saving of the electric over other methods of transportation.

## *The Ward Campaign*

For the Ward campaign a complete plan has been mapped out whereby an advertisement relating to the advantages of electric trucks will appear in a city newspaper at least twice a month while reprints of the published advertisement will be enclosed with the company's regular follow-up letters. The advertising campaign of the Ward Motor Vehicle Company is in the

hands of the John O Powers Company of 50 East 42nd Street.

In all the advertisements the economy of the electric truck will be heavily stressed and emphasis will be laid not on the low first cost, but upon the economy of operation and maintenance as compared with other types of trucks. All told, the Ward Company distributes about 2,000 pieces of its electric truck literature a month in New York City. The mailing list used now numbers nearly 16,000 names and while many of these are scattered throughout the country, at least 2,500 are located here in Manhattan and the Bronx.

Mr E J Ross, New York Manager of the Ward Motor Vehicle Company has stated that the advertisements sent out by his company, and particularly those which appeared as newspaper "spreads" have continued drawing business as long as two months after their initial release. This would indicate that New York City merchants are beginning to realize as never before, how necessary it is that their transportation systems be placed upon an economical basis. In other words, that horses be used where horses belong, that gasoline trucks be employed for long distance haulage and that electric trucks be used in their proper place.

Competent authorities have stated that electric trucks can profitably replace 85% of the gasoline trucks now in service on our city streets. Such advertising and selling campaigns as that of the Ward Company will go far toward effecting this important replacement.

## When the Eagle Screams

**T**RULY, if one judges by our daily newspaper reports, these are great days for the bandit and the hold-up man with his brother highwaymen in armed motor cars waiting nearby for the get-away, great days for burglars ordinary and extraordinary, and all those like the robber barons of old of whom Shaw says in one of his prefaces, "They considered it a good life to rob and pill." But inventive brains have been at work with the result that the Hold-up Alarm is now ready to protect the lives and property of bankers, jewelers and furriers and others whose wares prove too strong a temptation to the hold-up gang.

The device, a strident voiced siren is already installed on several banks and on warehouses containing valuable stocks. It is known as "E J Electric Protection" and is made by the U S E M Company.

One thing marauders dislike most heartily is noise and the siren blast of this system screams with such persistence that every policeman and detective within a quarter of a mile is instantly called to the scene of trouble. This was recently demonstrated when a cashier of the Garfield National Bank at Fifth Avenue and 23rd Street, on finding himself confronted with a would-be passer of forged checks, stepped on a button, setting in action the siren in front of the bank. This SOS, which the newspapers described as the eagle's screams—there is a bronze eagle perched over the bank's door—soon assembled a curious crowd of several thousand persons and

brought up a battalion of policemen and detectives.

The interest aroused brought many requests for information regarding the system and has led to its being commercially developed and so it has



*Photograph by The New York Edison Company*

**The Eagle, Whose Siren Screams Summoned Assistance When a Bad Check Was Offered at the Garfield National Bank Recently**

already been installed in important banks and jewelry stores.

The underlying idea is that whereas bells are stereotyped and meaningless amid a city's noises, the penetrating howl of a siren will always attract attention and stop traffic.

The Hold-up Alarm is described by an expert as follows: "This system is designed for the protection of bank employees and others against hold-ups

## The Edison Monthly



*Photograph by The New York Edison Company*

**The Pressure of the Foot on a Rod Under the Desk Sets the Siren in Action**

and robberies, by the installation of a motor-driven siren with suitable control equipment for its operation from a number of stations.

"These stations are arranged for knee or foot operation. The system is provided with suitable equipment to guard against failure due to interruption of current supply or malicious interference. Failure of current, from any cause, results in the ringing of a bell by a mechanical spring for a considerable period, after which, a signal light calls attention to the fact that the system is out of operation.

"Provision is made for daily silent tests to insure that the system is in proper working order, without actual full blast from the siren.

"The operation of the system from one of the stations results in a fluctuating screech from the siren."

The great bugaboo of old-fashioned open circuit burglar alarms, was maintenance, renewal of batteries, and not knowing whether or not the system was in working condition.

The E J system is on a closed circuit in which a small amount of current from the house lighting wires is flowing all the time and should anyone tamper

with the alarm or should a wire be broken accidentally or intentionally, a signal is given inside the bank by means of a mechanical bell operated by heavy springs and independent of the electric system. This bell differentiates by ringing continuously if the trouble is inside of the bank, and intermittently if there is interference with the siren circuit from the outside. The "trouble bell" rings for fifteen minutes and if after that time the cause of the disturbance has not been adjusted, it changes to a visual signal and lights a lamp.

The control cabinet of this system is placed in some convenient part of the building, accessible to authorized persons only. From the control cabinet circuits run to the siren and to various operating stations back of the tellers' cages and under executives' desks. The siren is operated by depressing one of the stations (which are made in both the bar and mushroom type) with the foot, hand or knee, and these stations are so protected as to prevent accidental operation and false alarms.



*Photograph by The New York Edison Company*

**The Apparatus for Testing the E J Electric Device**

## The Edison Monthly

The current supply for the system comes from the same source which lights the building and the wiring is installed in a manner similar to that for electric light wires.

The daily test is made by means of a small dial on the control panel. This dial has three positions, one for the siren, one for the stations and the



*Photograph by The New York Edison Company*  
A Signal Station Operated by the Knee

third for resetting. The old trick on "inside jobs" of using jumpers would not withstand this test.

For the test the siren is sounded at such slow speed that it is just barely audible from the main entrance, or, if the control panel is located too far away for the siren to be heard at the testing point, a testing device indicates whether the siren is running or not, and shows immediately if there has been interference of any kind. As soon as the test is finished, the dial resets itself so no reliance has to be placed on the memory of employees.

An objection in the past to placing alarm systems on electric light mains,

where the service might be interrupted and then re-established, was the frequency of false alarms. However, with the new system, the mechanical bell, already mentioned, would ring until the supply was renewed, when the mechanism would reset itself.

The motor of the "howling device" is mechanically operated by heavy springs, connected with special contacts which will light up a trouble lamp in case of accident.

When set in operation this howling siren—which is driven by a  $\frac{1}{8}$ -horse power motor—emits the most terrifying noise ranging in pitch from a low growl to a high screech. Whatever the wind or atmospheric conditions may be, some of these alarming tones will carry a great distance, and of course such a variation of sound will penetrate over a much wider range than a single note.

During the war, sirens were used in cities to give warning of air-raids, and on the battle-front of gas attacks.

One would say after hearing its roaring screech tried out that any reasonable hold-up man, on hearing it, would change his tactics immediately from the offensive to the defensive and, if possible, fold his tent like the Arabs and as "silently steal away."

An aviator said that the last sound he heard as the plane got out of range of the city's noises was the barking of dogs. Surely the Hold-up Alarm was not in operation that day.

### Gratitude

It always sort o' seems to me  
That Mr Moon should grateful be  
For all the faithful 'lectric lights  
That help him with his job at nights.

—Alice Crowell Hoffman

## Blue Monday Indeed!

**L**ONG before the advent of the Chinese laundry ticket, the wet wash, the energetic washwoman or the modern electric laundry, civilizations of ancient development had their methods of washing and ironing garments. By methods peculiarly their own they got the dirt out of their fabrics and managed after a fashion to smooth out the wrinkles. Different as the processes were from those of today they were effective after a fashion, and a study of them offers an inter-

esting series of contrasting methods.

The story of the primitive washing of garments and the development of mechanical methods takes one to the forum of Rome, to the streams of India, to the rivers and canals of Holland, to the public streams of England and Scotland; it was even influenced by the French Revolution, and finally like everything else that is essential to human progress it reached the age of electricity; then rapid strides toward perfection followed.



A Public Washing and Bleaching Ground in Great Britain in 1562

The Roman of the days when the toga designated a man's station in life was very proud of the garment that he wore draped about him in graceful folds as he wandered among the politicians in the forum. The Romans sent their togas to the fullones or fullers who washed, whitened or redyed, and pressed them. The Roman fuller placed the garments in vats where he stamped upon them to loosen the dirt. No soap was used but alkalis were applied to separate the dirt from the materials being washed. The gar-

## The Edison Monthly

ments were then hung up to dry in the streets in front of the fullones' house. If they were of wool they were carefully brushed to have the nap raised. If they were white they were put over a large wicker basket under which sulphur had been placed as a bleaching agent. When this part of the process was complete the garments were pressed in a wooden press which is not unlike their wine and oil presses. It was manipulated by two hand screws and was called a cochelia because of the spiral form of the screws.

The primitive method by which clothes were probably washed first is still found in some countries today. The housewife takes her laundry to the nearest stream and, on public wash days, exchanges gossip with her neighbors while she stamps upon and beats the garments vigorously. In India, Ceylon, and Java the washing is done by washermen whose system is said to be very effective, although rather hard on the clothes. The materials are wetted and slapped upon flat stones, then rinsed and slapped again. Foreign visitors have been surprised by



The "dhobes," the Human Washing Machines of India, Cleaned Their Garments so Thoroughly That They Removed the Color as Well as the Dirt



the thoroughness of the operation, especially when they received their clothing back with no color left in them.

The clothes washing of the ancient British was doubtless like that of the Scots where the women, with their coats tucked up stamped on the linen in the wash tubs. Sometimes two women stood in one tub with their arms thrown around each other's shoulders for support. Here, too, men launderers and children performed the operation with their feet. The work was done in the rivers or perhaps in wash houses. In parts of Scotland the same method is followed to this day.

In the seventeenth century in Dutch New York one might have stumbled upon very busy centres on washing day for the "bleaching grounds," relics of days in Holland, were at stated intervals covered with linens of which the Dutch housewife was justly proud. Great hampers of articles to be washed were carried out to the canals and creeks nearby and afterwards were dried on the pasture land.

All the time that the housewife in Iceland stamped in her tub of wet garments and the Indian "dhobe" beat the colors out of the clothing he was washing in the river, progress was being made in other lands whereby the laundering could be done by machinery instead of by hand or foot as the case might be.

Before 1789 two

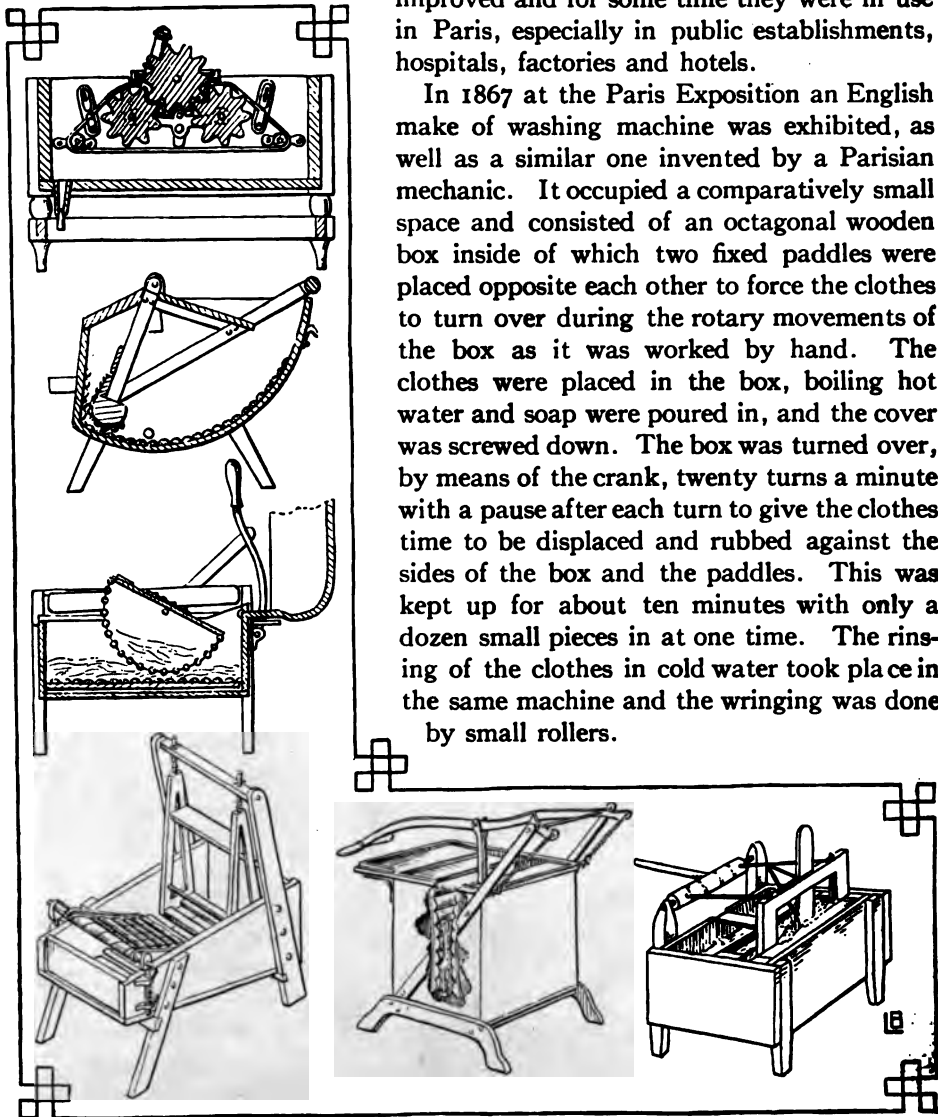
## The Edison Monthly

establishments were started near Paris to wash clothes by steam. The French Revolution interfered and it was not until later that steam apparatus was invented and used in general. The first device for washing clothes by this system was that of Rouget de Lisle,

who is said to have been the grandson of the author of the "Marseillaise." It was too complicated, however, and was followed by simpler machines a little later. At first the steam processes that were used spoiled the clothes, a tragedy which was due to too high a steam pressure; but the methods were

improved and for some time they were in use in Paris, especially in public establishments, hospitals, factories and hotels.

In 1867 at the Paris Exposition an English make of washing machine was exhibited, as well as a similar one invented by a Parisian mechanic. It occupied a comparatively small space and consisted of an octagonal wooden box inside of which two fixed paddles were placed opposite each other to force the clothes to turn over during the rotary movements of the box as it was worked by hand. The clothes were placed in the box, boiling hot water and soap were poured in, and the cover was screwed down. The box was turned over, by means of the crank, twenty turns a minute with a pause after each turn to give the clothes time to be displaced and rubbed against the sides of the box and the paddles. This was kept up for about ten minutes with only a dozen small pieces in at one time. The rinsing of the clothes in cold water took place in the same machine and the wringing was done by small rollers.



The American Washing Machines of Fifty Years Ago Were Operated by Hand. They all Employed the Rubbing Principle, in Adherence to the Time-Honored Method of Rubbing by Hand Over a Corrugated Board



## The Edison Monthly

In 1859 a washing machine was patented by David Parker of Shaker Village, New Hampshire, for use in hotels and laundries. An interesting pamphlet regarding this invention is to be found today containing letters of recommendation regarding this machine and a detailed account of the care that should be taken in setting up the apparatus as well as the way in which it should be used.

The following amusing extract is from that same pamphlet:

"Too much care can not be taken to keep out of the machine at all times, pieces of bone, knives, forks, spoons, cork-screws, peach stones, nails and tacks, broken glass of any kind, or any other hard substances."

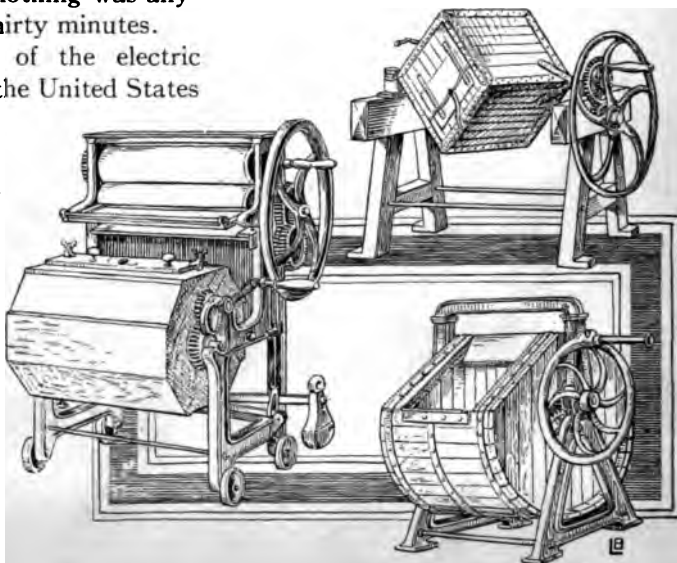
The machine could be operated by steam or any other power. It ran at from sixty to eighty revolutions a minute or sixty to eighty vibrations a minute, and required one horsepower to operate it. The time needed to wash one set of clothing was anywhere from ten to thirty minutes.

The development of the electric washing machine in the United States has completely revolutionized laundry work. It is the outgrowth of the nineteenth century hand machine and it has been improved so that it is now a device of exceedingly high efficiency. In the modern home it does the work tirelessly and uncomplainingly, and thoroughly and quickly.

### Art and Economy

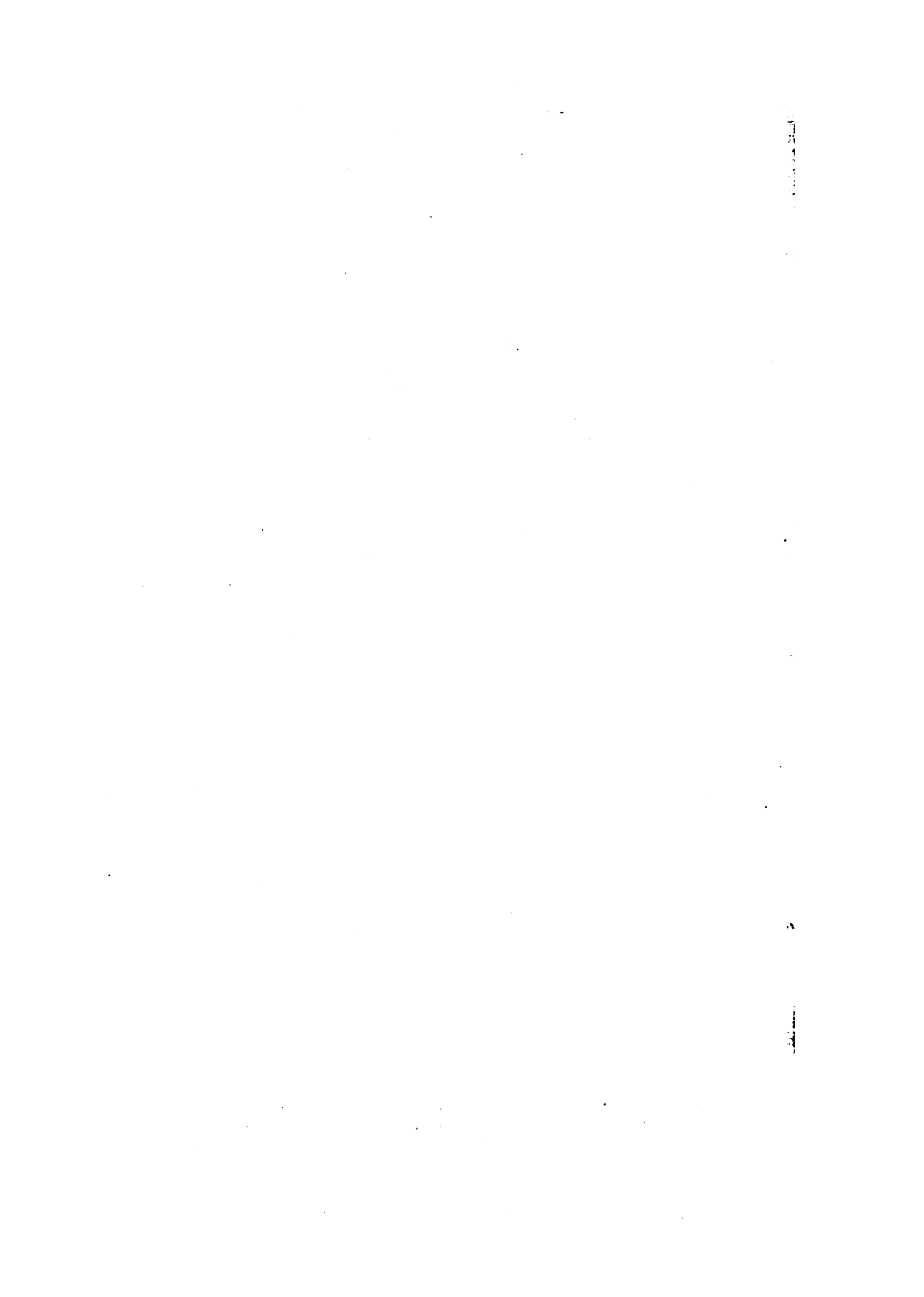
The Theatre Guild lighting apparatus used under the direction of Mr Lee Simonson is not, as described in a previous issue of the magazine, supplied with a lens but is an open boxed arc used at a minimum of fifteen feet behind the screen. This method of stage lighting is an invention of Linnebach and was perfected at the Dresden Theatre, Mr Simonson explained, adding that the apparatus is in itself a great advantage because no wide angle lens has as yet been found practical on the stage which will cover the stage from this distance.

The park scene in "Liliom" is done with a gauze drop and not a projector. This technique was invented by Hewlett and Bazing, who first used it in "Chanticleer." Ordinary floods behind the gauze give all the needed transparency. In the temple scene in "Back to Methuselah" only the shadow of the prophetess is projected.



The Octagonal Machine and the Tumbling Cube Were Shown at the Paris Exposition of 1867. The Open Rocker Was Developed in France in 1881.





September

1922

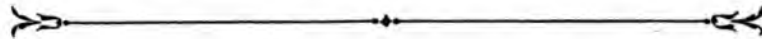


Central Park by Moonlight, 1864

VOLUME 14

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## The Edison Monthly

### The Edison Monthly

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N F BRADY, President  
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While the growth of the electric lighting industry as typified locally by The New York Edison Company is phenomenal in itself, one must consider the central station in its national aspect to gain even a slight conception of what electricity means to the country as a whole.

The central station industry had its beginning in New York just forty years ago in a rebuilt brick warehouse, from which six generators of 125 horse-power each sent current to some 1200 lamps in the surrounding half mile of territory. Today the generating stations in New York which have taken up the responsibilities of that pioneer are rated at more than half a million horse-power and they supply the equivalent of more than twenty-one million lamps.

The industry, young as it is, covers every part of the country. A network of transmission lines carries current to every city, village and hamlet and there is hardly a task but is lightened by its magic.

Electric power stations, either steam plant or hydro, are no longer housed in rebuilt warehouses. They are great brick and steel structures of striking architectural appearance, and within they represent the highest development of a highly specialized profession.

The Central Station Industry of the United States, today represent an investment of approximately five billion dollars.

It is small wonder then, that the pioneers of forty years ago, proud of their work and proud of what it has come to mean to the country should unite on this fortieth anniversary to do honor to the genius whose vision inspired it all.

When a manufacturing plant of any kind approaches the 100% mark in operating efficiency it is a reasonable certainty that electricity is one of the factors which makes it possible. In the case of the American Book Binding Company, whose plant is described in this issue, the individual electric motor has done much toward eliminating operating waste in the binding of books. In this plant there are one hundred and fifty machines—gatherers, stitchers, folders, case-makers, in fact machines for every part of the process from folding the flat sheet of paper to finishing the volume—and every machine has its individual motor. Some of these motors are only one sixth horse-power in size; others are seven horse-power. Each is ready to take up its task at the touch of a button, and another touch stops it. Should a period occur during the day's work when all the machines are idle there is no consumption of current. In another five minutes the whole plant can be running at capacity.

Thus is illustrated the great advantage of the individual motor over group drive or the steam driven plant. With the former the one large motor must be running to supply its group of

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machines, even though only a small part of the group it serves has work on hand. The steam plant must be kept at working pressure at all times.

Not only does the American Book Binding Company use individual motors throughout its plant but the company also uses electric heat for cooking glue and for maintaining it at a working temperature. Electrically heated dies are used for stamping the book covers.

In the light of the service rendered by electricity in this plant, the words of the superintendent will well bear repetition. "In work performed month by month it shows a real economy. The troubles of other times are not with us now. We do not know what waits and stoppages are these days. Every motor in the plant has its own work to do and is suited to its job. A man-size motor isn't put on a boy-size job. When the work of a particular machine is done the motor stops instantly. There is not a second's waste of power. That is real economy just as it is economy to be able to begin or resume operations by the same instantaneous touch of a button. One thing more. Notice the lighting units. On a dark day we can provide a very satisfactory substitute for sunlight—a light which is uniform on every floor and in every part of every floor. Yes, we use electricity here in three ways for heat, light and power and we get results, and they are what count."

Users of trucks for city haulage will do well to heed the word of Mr Charles Morris, president of the Van Owners Association of Greater New York,

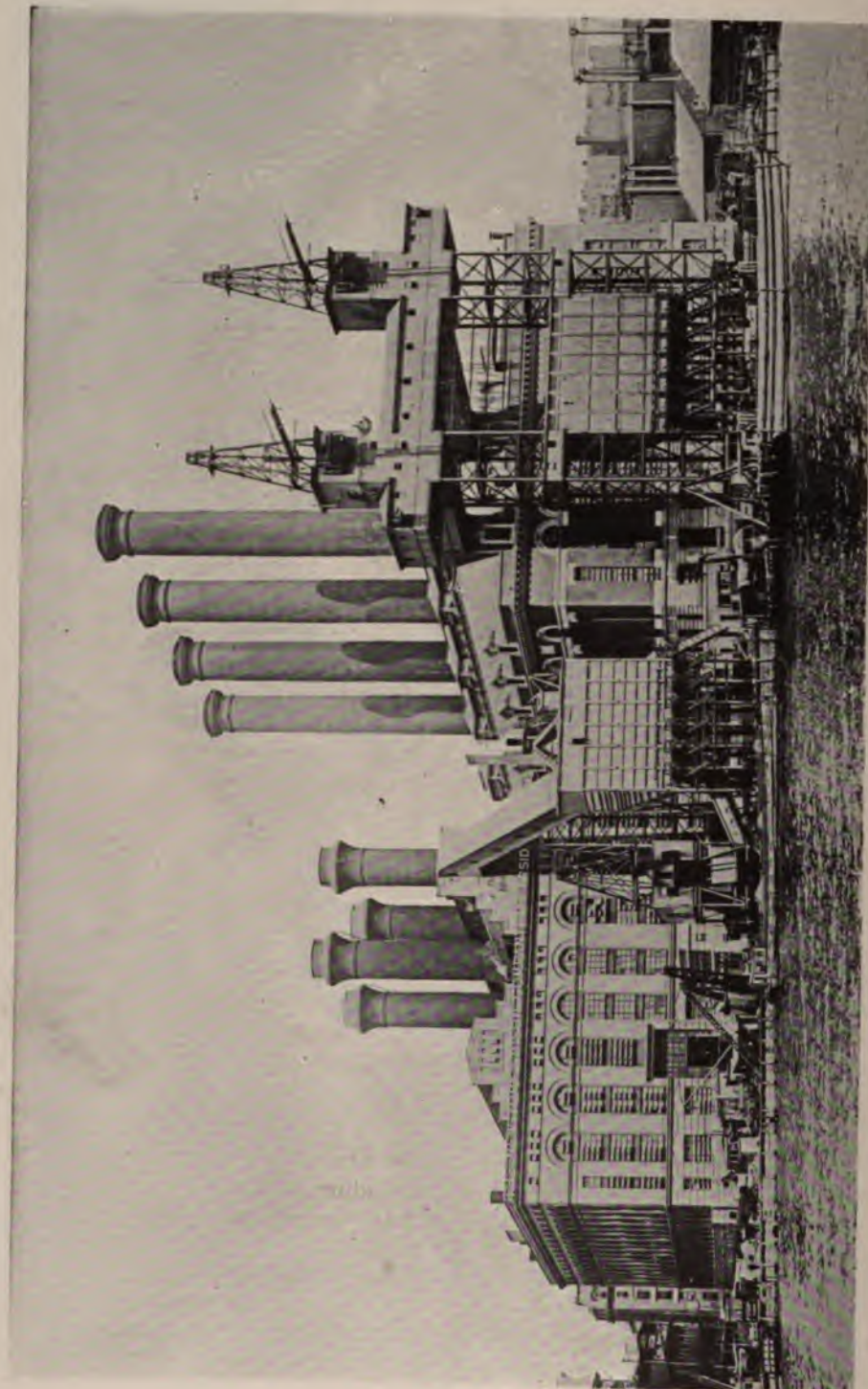
when he talks on the relative merits of the different types of trucks used by the local warehouses.

In the opinion of Mr Morris, there is no truck which can compare with the electric for service. Its points of superiority are its cleanliness, its ease of operation, its lack of vibration and its safety. An added advantage is the fact that it can be garaged in the warehouse without increasing insurance premiums.

Mr Morris's opinion of electrics is based not merely on his observation as president of the local and national organizations, but also on his own experience with the six electrics operated by the Metropolitan Storage Warehouse Company of which he is president.

"After experience with the two types of trucks for city work, I for one, do not believe that the gasoline truck belongs in our municipal business," said Mr Morris at a recent meeting of transportation engineers in New York.

The tremendous strides now being made toward national electrification are indicated in an announcement of the Geological Survey which shows that for June of this year the daily consumption of electricity throughout the country was 127,700,000 kilowatt hours, while the total for the month was 3,831,508,000 kilowatt hours. Comparison with the daily output for December, 1919—124,200,000 kilowatt hours—gives a slight indication of the increasing use of current for all purposes. The figures, impressive in themselves, are doubly interesting in this anniversary year.



*Photograph by The New York Edison Company*  
The New York Edison Company Waterside Plant on the East River Extends from Thirty-eighth to Fortieth Streets. The Most Improved Methods of Coal Handling and Highly Developed Electrical and Mechanical Equipment Help Make This the Efficient Plant Which Unfailingly Supplies New York with Electric Light and Power

## Forty Years of Edison Service

**F**ORTY years ago this month—specifically at 3 o'clock in the afternoon of the fourth day, current was turned on at the first central station in New York City. In the period which has elapsed since that memorable date, the promise of great things born of the initial success in bringing electricity into industrial docility, has found fruition in a measure of performance as amazing as

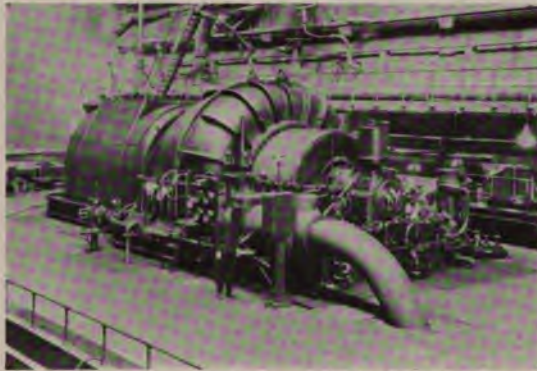
it is true. On this anniversary occasion it may be well to tell of the part which the Central Station has been able to take in community service and the importance of electrical service to the city's well being.

Going back to the autumn of 1882, the record shows that a total of only fifty-nine customers were on the books of the company. Electricity had been officially tried and accepted as a new illuminating agent but doubt and misgivings, operated to make people hesitate to give it a trial. They were content to wait until they could hear from the pioneers as to whether the incandescent bulb in service was good, bad, or indifferent.

Results always count. A year thereafter, the number of customers had increased almost fourfold, and

3,144 lights were in use. The city about this time began to awaken to the fact that the long hours of patient experiment which Edison had given to the subject of light had clearly established its worth. Doubt gave way.

Every newly installed light became a beacon of progress. In a short ten years—in 1892 to be exact—the first 100,000 lamps were in operation, serving the needs of 4,344 customers.



*Photograph by The New York Edison Company*

One of the 35,000 Kilowatt Generators at the Waterside Station

From that time on the figures form themselves into amazing totals. In December, 1901, a million lights gave evidence of the now generally accepted superiority of the incandescent lamp in office and store, in factory, workshop and the home. The totals as of June 30 of this year round out this phase of the record. On that date there were 9,337,144 incandescent lamps in use, an average of about three to every man, woman and child in the population of Manhattan and the Bronx. The total connected load, including all appliances, equals more than twenty-one million fifty-watt lamps.

Quite early in its history, the Edison Company realized that to keep pace with the call for service would require the establishment of plants and



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*Photograph by The New York Edison Company*

Central Park West and the New Skyscrapers of the Columbus Circle District



*Photograph by The New York Edison Company*

Broadway at Night Looking Towards Times Square

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stations in many parts of Manhattan and beyond the Harlem. Before the original station at 255-257 Pearl Street, had reached its peak load, an annex was opened at 60 Liberty Street. In 1888 the lighting requirements of the mid-city made stations necessary on 26th Street, and West 39th Street. Thereafter, with a

served from the original Pearl Street stations. Comparing it with the power of the present day stations would be quite as one-sided as a comparison between a mountain and a mole hill.

The colossal Waterside Stations of the company now have a rated capacity of 349,500 kilowatts, which is



*Photograph by The New York Edison Company*

Downtown New York at Night, Showing the Woolworth Tower and the Singer and Municipal Buildings Ablaze with Light

frequency which kept pace with the calendar, other stations and sub-stations were established covering the territory of the two boroughs, from Bowling Green at the lower end of Manhattan to Inwood Avenue and Hunt's Point, in the distant reaches of the Bronx.

Six Jumbos, as the early form of bipolar generators were called, were sufficient to provide the current required, in the circumscribed zone

equal to more than half a million horsepower. The current generated at these stations is transmitted over high tension lines to the sub-stations, throughout the territory served, where it is reduced to the voltage used in hotels, institutions, apartment houses, and private dwellings, and in industrial and commercial establishments.

The range of employment of electrical power is so wide as to include all forms of industrial, commercial and

stations in many parts of the city and beyond the Hudson River. The original station at 11th Street, had made an annex was moved to 33rd Street. In 1908 the improvements of the station were necessary in 1910 at 33rd Street. This



hly



Photograph by Meier Hamilton Maxwell

This Airplane View of the Chelsea Docks Shows Vessels of the Cunard, French and White Star Lines, One of the City Fire Boats, a Portion of Gansevoort Market, the Factory of the National Biscuit Company and Some of the Waterfront Traffic

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domestic use. New York is a manufacturing city of the first importance, besides being the commercial metropolis. No fewer than 32,626 establishments of diversified character with an output of products valued at \$2,500,000,000 are dependent on power. Yet through the fast growing use of electricity, the belching smoke stack has been almost entirely eliminated and the city presents none of the evidences of factory town soot and grime. Indeed, even along showy Fifth Avenue, there are many manufacturing places, called not improperly, marble front factories. With respect to industry there is no city in the country cleaner than New York. The motor is not a dirt maker.

Perhaps in no other element of the city is the motor more important than in the great office buildings. It is there put to every variety of service. Elevators for passengers and freight are quite generally motor operated. The motor is also the power behind the cleaning systems, and the pumping equipment, and it operates the ventilation plants. In hotels and restaurants it functions in no less than a dozen different ways, and in every one with a saving. In the physical development of the city—the erection of new buildings, the construction of subways, the building of the aqueduct, the boring of tunnels and the fabrication of bridges—the electric motor is an essential element in the engineers' plans.

The high pressure system of the fire department, perhaps the most vital emergency agent of the municipality, is made instantly available for duty through its connection with the Edison service. A call for high pressure

to drench a threatening, stubborn fire is received, a switch is thrown and the great motors give their energy to the pumps within the limitation of a second.

To the housewife the Edison Service has come as a boon. It has taken much of the drudgery out of the work of laundry and kitchen. The electric washer and ironer, the electric cooker and toaster, the electric carpet-sweeper—these are only a few of the labor saving devices which are available for use.

The storage battery is used in many ways. It provides a reserve supply of electricity in the generating stations, it is used for emergency lighting in the subway, and it finds a great field of usefulness in automobile service.

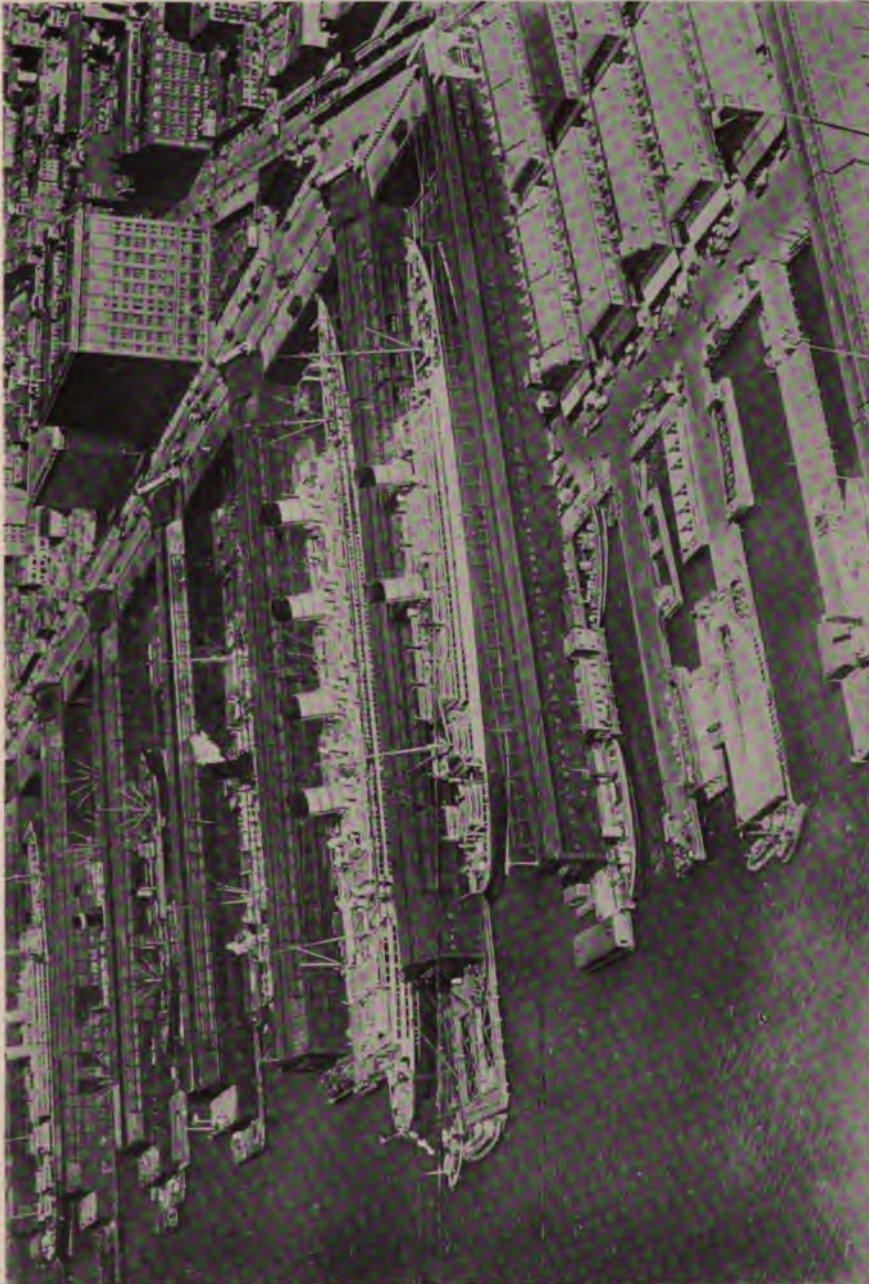
So, with the completion of two score years of Edison Service, this is the record briefly set forth. At the beginning, only 78 employees were needed, and their earnings for the year were \$71,000. Now there are 8,427 names on the payroll which calls for \$13,299,319.28.

Because of Edison, New York is now the foremost electrical city in the world.

Appropriate here is this extract from W. J. Lampton's poem, "Electricity," written more than ten years ago:

"Ho, Light and Power,  
The guide and force  
Which measures and controls the  
course  
Of all activities, you stand  
Twin Souls of progress in a land  
Which leads  
In meeting man's material needs."

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*Photograph by Major Hamilton Maxwell*

This Airplane View of the Chelsea Docks Shows Vessels of the Cunard, French and White Star Lines, One of the City Fire Boats, a Portion of Gansevoort Market, the Factory of the National Biscuit Company and Some of the Waterfront Traffic

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*The George A Fuller Company, Builders*

*Donn Barber, Architect*

**The Imposing Home of the New York Cotton Exchange Now Being Erected at  
60-62 Beaver Street**

## The New York Cotton Exchange

**N**EW YORK'S latest addition to its skyscraper family will be the home of the New York Cotton Exchange now under construction. The new twenty-five story building will occupy the site of the famous old Cotton Exchange, and during the present building operation the business of the exchange is being carried on at 90 Wall Street.

A radical departure is the fact that the exchange will be located on the nineteenth floor and will run through three stories to the roof. Uninterrupted elevator service will have to be maintained because of the necessity of the members having prompt access to the trading floor at all times during the hours of transacting business. Outside of the space occupied by the owners the building will be rented, most of the tenants being members of the exchange.

The building was designed by Donn Barber of 101 Park Avenue and the construction is being taken care of by the George A Fuller Company, general contractors of 949 Broadway; Pattison Brothers of 304 Madison Avenue, are the consulting engineers and the electrical contractor is the Lord Electric Company.

### *Old Quarters Outgrown*

The Cotton Exchange building, which will be a lasting monument to the genius of its architects, engineers and builders, will be the latest exchange to feel the onward rush of the times. Outgrowing its old quarters because of increased membership and business, it was necessary to increase

facilities and the only way to overcome all obstacles was to erect a building that would take care of any increase for many years to come.

The exterior of the building will have Deer's Island granite base, dark blue limestone up to the second story line, Indiana buff limestone up to and including the penthouse, a hard lead roof and flagpole base. The electrical equipment will be most modern and complete in every respect, there being eleven electric elevators, overhead traction being furnished by the Otis Elevator Company, one electrically driven low rise pump, one electric spare house pump, one electric high rise house pump, two electric sump pumps, two electric vacuum pumps, eleven fans, one ice water pump, one ice compressor and two air compressors.

The lighting facilities have been laid out on an elaborate scale, the equivalent of nine thousand 50-watt lamps being installed. Motors aggregating seven hundred and sixty-five horse-power will be required for the above mentioned equipment. The current will be supplied by The New York Edison Company because of the dependability of the Central Station Service.

The New York Cotton Exchange was organized on July 20th, 1870, and on September 19th of the same year was officially opened for trading. Four times since organization, the exchange has sought larger quarters. It is expected that the building now being erected will take care of any increase for the next fifty years.

## Book Binding

**A**N establishment which in regular everyday operation can show a record of power and mechanical efficiency approaching the always sought for but generally elusive 100 per cent is indeed a rarity, but now and then one hears of such a place. The extensive plant of the American Bookbinding Company at No 406 West Thirty-first Street, may well be counted in that distinctly superior class. Directed by executives who are not content with anything which falls short of the highest standard, and served by department heads and craftsmen who take pride in top-notch delivery this progressive organization occupies a proud place in the industry.

It is of special interest here that in this plant every element of its lighting, heating and power—all the industrial essentials—is electrical. Thus, the results which come from physical agencies in no small measure may be traced to electrical origin. Every machine in the place, whatever its size and kind, is individually driven, and all but two per cent of the power equipment is

automatically controlled and operated.

All told the plant has 143 motors, running in size from  $\frac{1}{6}$  horse-power to 7 horse-power, each motor being selected to perform its specific task.

Mr Hugh O'Hara is the electrical superintendent in charge. He directed the installation of the power plant, drawing from his twenty years' experience in the arrangement and setting of motors to make the job a good one. On his authority, the plant performance is as near perfect as it is possible for one to be. He modestly accepts for himself only a small share of credit, passing the bulk along to the



*Photograph by The New York Edison Company*

The Battery of Folding Machines at the Plant of the American Bookbinding Co



## The Edison Monthly



*Photograph by The New York Edison Company*

The Folded Sheets Are Gathered Here and Made Ready for Stitching

unseen power which energizes the motors.

"Electricity is in every way a superior power in this plant," he said. "It has been put to the severest practical test, covering every shop condition and extending over a long period and it has proved its thorough reliability all the way. We swear by it for it is 100 per cent on the job.

"Now as to cost. In work performed month by month it shows a real economy. The troubles of other times are not with us now. We do not know what waits and stoppages are these days. Every motor in the plant has its own work to do and it is suited to its job. A man-size

motor isn't put on a boy-size job. When the work of a particular machine is done the motor stops instantly. There is not a second's waste of power. That is real economy, just as it is economy to be able to begin or resume operations by the same instantaneous touch of a button."

The various processes by which

printed pages, fresh from the press, are transformed into volumes ready for the bookstore counters or library shelves, call for a variety of mechanical devices. Some are no larger than a home sewing machine, others are long rambling affairs and still others mammoths requiring much power for



*Photograph by The New York Edison Company*

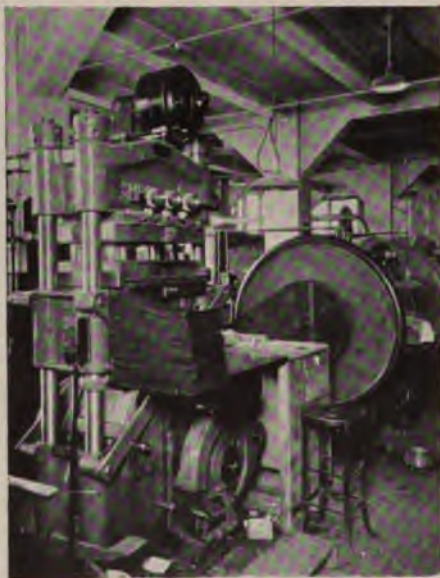
Where the Folded Pages Are Stitched Together

## The Edison Monthly

their operation. Electric heat as well as power is used in many, thus calling on electricity for double service. Electricity serves the glue cookers, warmers and embossers, the stitchers, folders, gatherers, smashers and casemakers—all familiar names in the trade, and at the same time it is the power agent in the repair shop.

Glue is a primary essential in book-binding. Six ten-gallon electrically heated cookers are used for mixing and preparing it for the thirty four-quart glue pots used throughout the plant. Nine machines which fit the covers on books have glue receptacles set in electrically heated water jackets. These glue pots were made by the International Electric Heater Company. The electrically heated dies and special apparatus are from the Cutler Hammer Co.

The gathering machines are oper-



*Photograph by The New York Edison Company*

With Electrically Heated Dies and Electric Motor Drive the Embossing Machines Represent the Highest Development in This Part of the Process



*Photograph by The New York Edison Company*

Six Electrically Heated Glue Cookers, Each of Ten Gallons Capacity, Supply the Needs of the Bindery

ated by seven and five horse-power motors. These machines gather groups of pages, moving them along and adding others in their proper places until all the signatures of a book are in proper position. Three slashing machines operated by five-horse-power motors compress the pages of a book to the required size for binding.

Folding machines occupy the entire length of the building on one side. There are twenty of these each with its own motor of from two to three horse-power and all provided with automatic controlling devices and push buttons.

The embossing machines stamp the designs on the covers with electrically heated dies. They are equipped with water cooling devices which enable the operator to change, without loss of time, from a stamping job to one requiring ink. Six heat-

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ing elements serve these machines. Three-heat switch controls are connected with each two heaters. This makes it possible to vary the heat at will.

Perhaps in no department of the establishment is the value of the motor more clearly demonstrated than in the stitching room. Practically noiseless in their operation, each little motor



*Photograph by The New York Edison Company*  
Electric Heat Is Also Used With the Case-Making Machines Which Glue the Cloth to the Board Covers

has only one machine to serve. The girls employed in this room take a lively interest in their individual machines. Neatness is a feature.

In the repair shop there is about every device necessary for the speedy restoration of a faulty part on any of the plant's equipment. The mechanics know the machines and a record is kept showing when and how repairs are made. With respect to the power plant, Mr O'Hara has all the essential data of upkeep and performance so

that he may refer to it whenever occasion requires.

"One thing more," said Mr O'Hara as the door was about to close following an inspection of the plant. "Notice the lighting units. On a dark day we can provide a very satisfactory substitute for sunlight—a light which is uniform on every floor and in every part of every floor. Yes, we use electricity here three ways—for heat, light and power and we get results, and they are what count."

### The Firefly

Firefly flitting through the dark,  
Where, oh, where'd you get your  
spark?  
You have lightning, but I wonder,  
How you flash without the thunder.

Do you ever have a short  
In your circuit? No retort.  
Do you run on a dry cell?  
If you do, you do it well.

Are your batteries ever weak?  
Answer me. Why, can't you speak?  
Can you tell your candle-power?  
Know how much you burn per hour?

That's your tail-light, so it's said,  
Don't you know it should be red?  
Do you ever use a dimmer?  
Can't you stop that awful glimmer?

Does your light come through a meter?  
If it did, would life be sweeter?  
They would charge you day by day,  
Save you trouble in that way.

Oh, you little dynamo,  
Tell me this before you go,  
Can you ever stop for breath  
And not shock yourself to death.

—Blaine C. Bigler

## Warehouse Trucking

**I**T is a peculiar thing that the same business executive who uses gasoline trucks for short haul city work, very often has his furniture moved by electric trucks when he changes his city residence or leaves for the country in the summer, for practically every large warehouse in the city uses storage battery vehicles for its furniture hauling.

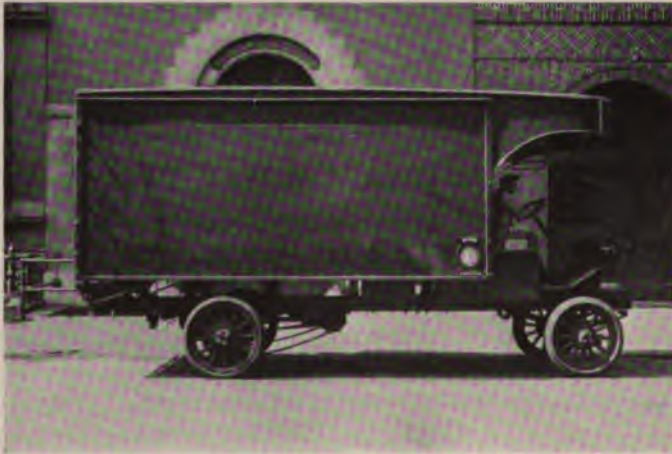
The Metropolitan Storage Warehouse Company, whose big warehouses are on West 66th Street near Columbus Avenue, was among the first to use electric trucks in New York. This concern placed its first electric truck in service in 1914. It took the place of two horse vans and the saving it showed resulted in the purchase of more electrics, until now there are six in operation. Two of these are of three-ton capacity and the rest are of two-ton capacity. All are equipped with Edison alkaline batteries and

have enclosed van bodies specially designed with inside guard rails for the protection of polished surfaces or fragile furniture.

The furniture and warehouse business is of necessity seasonal since the majority of people store their furniture in the summer and take it out again upon their return to the city, usually just after Labor Day. This means that to qualify for warehouse service a truck must have low maintenance costs and must give the minimum amount of trouble when being returned to duty after its between-season lay off. In both these particulars the storage battery vehicle excels.

The Metropolitan Company, and in fact practically every warehouse company, provides garage facilities for its electrics in its own building. The fact that the electric is free from fire risk, that it is clean and gives off no odors that would cling to stored household

goods make this possible. The company occupies three buildings on West 66th Street, the basement of Number 32 being used for the garage. The trucks are run in every night and by means of a Cutler-Hammer charging equipment the batteries are recharged for the next day's work. Thus the company is spared the expense



*Photograph by The New York Edison Company*

One of the Three-Ton Electric Trucks of the Metropolitan Fireproof Storage Warehouse. The Emblem on the Side of the Truck Denotes Membership in the Van Owners' Association of Greater New York

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of maintaining a special garage for its cars and is able to do it without increasing the insurance on its warehouse, for the insurance companies recognize the fact that there is no fire hazard in the electric. Incidentally it may be mentioned that because of this element of safety electric trucks are permitted on piers from which gasoline trucks are often barred.

The Metropolitan Warehouse has found that the average cost of electricity for operating its vans each month is only \$30.00 for each truck. The depreciation is charged off at 15%, although the usual electric truck practice is to charge off only 10%. Despite this increase in the usual depreciation charge, the electric trucks are proving vastly more economical than gasoline cars for the work.

The company, using its electric trucks and depending upon their smoothness of operation and certainty of control, undertakes the moving of all kinds of household goods. The most delicate china, bric-a-brac, cut-glass ware and oil paintings are transported in the electric trucks without damage of any kind, while the factor of protection is still further assured by elaborate and specialized methods of packing.

Mr Charles Morris, president of the company, is also president of the



*Photograph by The New York Edison Company*

Loading One of the Two-Ton Electrics. Part of the Protective Padding With Which the Entire Body Interior is Equipped Can Be Seen Against the Open Rear Door

Van Owners' Association of Greater New York. Besides this, he is president of the National Furniture Warehouse Men's Association. He has just completed a country-wide survey of conditions in his industry, during which he paid special attention to the transportation methods in use in the warehouse business in the various large cities. Speaking at a recent gathering of transportation engineers and electric truck owners and manufacturers he stated that "Other types of trucks injure furniture by constant vibration and racking, but with the electric this is not so because the electric truck has smooth motion and is easily controlled." He also said that "the cleanliness of the electric prevents unpleasant odors from clinging to household goods in transit." He added: "After experience with the two types of trucks for city work, I for one, do not believe that the gasoline truck belongs in our municipal business."

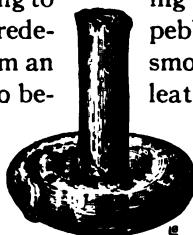
## Ironing Days

**F**OLLOWING the article "Blue Monday Indeed!" which appeared in last month's **EDISON MONTHLY** comes, logically the story of ironing, ancient and modern. It is interesting to consider the customs of our predecessors in this field not only from an historical point of view but also because of the light shed on our own methods in comparison.

There are in existence curious assortments of implements used by ancient housekeepers in widely separated corners of the earth in the laundering of their garments. These may be found in use in some countries even today, crude as the implements and the method by which they are employed may be, others are to be found only in museums. A linen smoother, for instance, has been discovered that was a part of the tenth century household in Scotland. This is the earliest kind known in the British Isles. Evidently it was taken there by the Vikings, which is indicated by the fact that similar implements have been found in Viking graves in Scotland. In Norway where Viking ancestors lived this same smoother was used until recent times. It is of black glass, resembling in shape an enormous inverted mushroom  $5\frac{1}{2}$ " in diameter, and possessing a stem  $7\frac{1}{2}$ " long. It is a rather curious article, a type of implement far removed from present day devices. Our electric iron has a surface that is perfectly smooth, but it is smooth so that it may give excellent service

and not because it has already been rubbed energetically, as was the case of the black glass device.

Even more primitive than the Viking smoother are the stones and pebbles that were used in the smoothing and glossing of linen, leather and other materials. A catalogue of the Edinburgh museum shows that "an oval shaped water worn pebble of granite,  $5\frac{3}{4}$ " x  $2\frac{1}{2}$ ", was used within the last ten years in Orkney for smoothing and ironing clothes."



A Glass Linen Smoother  
Used by the Vikings in  
the 10th Century

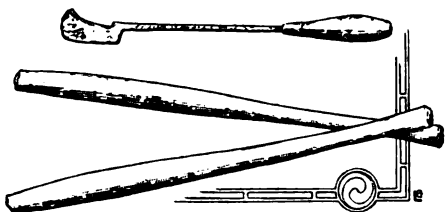
The Greeks followed the Roman method of cleaning their garments. From the Egyptians they borrowed a gauffering iron with which to plait their linen robes. Paintings of these ancient peoples show them clad in flowing dresses bearing wavy lines. These lines were the result of the use of a wooden instrument whose upper surface was divided into segmental partitions about an inch and a half broad. It was held in one hand while the linen was pressed upon it with the other.

At the end of the eleventh century smoothing irons were a part of the French household equipment. Unfortunately, owing to their relative lack of value there is none to be found in museums belonging to a period earlier than the fifteenth century. Irons of that time were furnished with a little interior open shelf on which a bar of red hot iron or some burning charcoal was placed. In the illustration on page 180 is shown a product of the sixteenth cen-



An Egyptian Gauffering Iron

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An Iron Used by the Koreans for Seams. Hard Wood Sticks Are Used for Beating Garments Into a High Gloss and Pliability

ture, one that is considered a work of art. It is covered on the outside with embossed silver and possesses a wooden handle. Inside there is a little iron tray which prevented the heating elements from touching the bottom of the iron. It must have taken a long while to heat the iron bar or the charcoal that was placed in the French iron, and after all the time and energy was consumed in preparing the iron for use it could not have stayed hot for very many minutes.

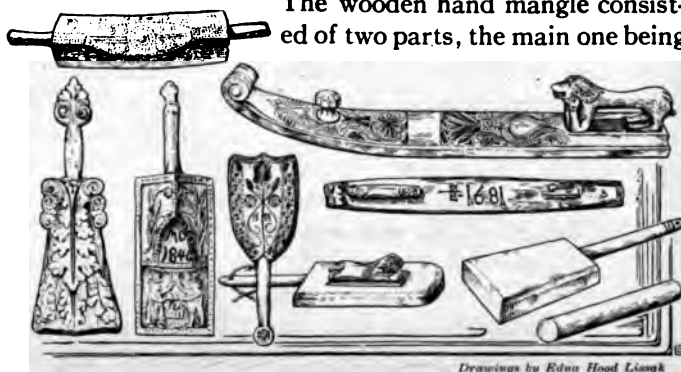
The old-fashioned flat iron that is still used today has to be heated for about eight minutes on a stove before it is hot enough to apply, and then it takes eighteen minutes to iron an ordinary sheet, changing the iron every three or four minutes. On the other hand, the electric iron which is so popular in this country can be heated in two or three minutes, and without making any change at all a sheet can be ironed with it in ten minutes.

Again, in contrast to our irons, there is a Korean seam iron or "into;" this is a bar of iron terminating in a head and set in a wooden handle, re-

sembling a soldering iron. With it are used the "pang-mang-i," hard wood sticks shaped like a baseball bat though smaller in size. The method by which they are applied is quite strenuous compared to our simple electrical system. Winter clothes are ripped apart for washing and are boiled in wood-ash lye. The garments are then beaten on stones in the streams, starched with rice starch, dried and piled in heaps ready for pounding with the "pang-mang-i." This is done over a wooden roller until the fibre of the materials takes on a remarkable gloss. The parts of the garments are then sewed together and the seams are ironed down with the "into." This same iron is also used for creasing quilted work.

A certain quaintness and a bit of romance surround the ancient wooden hand mangle or smoother, illustrated on this page, that was used in Norway, north Germany, England, Scotland, Sweden and Russia. In many cases it was elaborately carved for it was given as a wedding present and was, therefore, highly prized by the bride. If the bridegroom himself made one for his sweetheart it was all the more valuable to her.

The wooden hand mangle consisted of two parts, the main one being



Hand Mangles Used in Norway, England, Scotland, Austria and Russia

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a flat board about 2½' long, 6" wide, and ½" thick, and the other being a roller about 1' 6" long and 2" in diameter. The under part of the board and the round part of the roller were necessarily smooth but the upper part of the board and the ends of the roller were frequently ornamented. When they were used the dampened linen to be pressed was wrapped around the roller flat on a table and the roller was worked back and forth by means of the flat board, a downward pressure being exerted by the hand at the same time.

In the same illustration two wooden hand mangles from Whitby, Yorkshire, are shown. The lion on one is solid and is grooved at the sides like a clothesbrush in order to give the hand a firmer hold upon it. The mangle with the lion at the back and the knob in the front is a Norwegian type.

The ancient wooden hand mangle has been almost entirely superseded by more modern laundry appliances. What a waste of energy it would be to attempt the ironing of a large family laundry by such primitive devices! As soon as electrical appliances become universal in use, people will wonder how it was they ever managed to accomplish anything at all with their crude methods. Enormous gains have been made for the housekeeper with electricity as a heating agent for her iron.

### Interesting Displays at Electrical Show

The important part that electricity plays in the industries of the country will be strikingly illustrated in this year's Electrical and Industrial Exposition, to be held October 7 to 14 at the Grand Central Palace. The industrial displays will range all the way from a toy railroad to devices for regulating traffic and to machines for making candy. There will be automatic lifts such as are used in handling materials in warehouses, wood working apparatus, soda bottling machinery and water purifiers, soap manufacturing, a telephone switchboard, the manufacture of envelopes, a cigar factory, an automatic machine for the manufacture of screws, and an automatic device for the control of heat in radiators. The wireless department will include working demonstrations that will appeal not only to the fan who wants to see the latest developments in apparatus but to the novice whose interest is still largely based on curiosity.

In addition to the industrial and radio exhibits there will be electric trucks and passenger cars, displays showing the application of electricity toward lightening the burdens of housekeeping, electro-therapeutic apparatus, and an historical exhibit portraying forty years of progress in the central station industry.



Most of the Irons of France and Russia Contained Compartments for Burning Charcoal. These Are of the 16th and 18th Centuries





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## The Edison Monthly

### The Edison Monthly

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WALTER NEUMULLER, Secretary  
FREDERICK SMITH, Treasurer

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No finer tribute has ever been paid to men associated in the development of an idea than that paid by Thomas A Edison to the men who labored with him forty years ago in planning and building the first electrical central station in the world. Speaking through his son Charles at the anniversary dinner given in his honor and in commemoration of forty years of Edison Service in New York the great inventor said, "If there has been some addition through my work to the resources of human welfare, that benefit has accrued largely through my good fortune in being favored with the devotion of associates willing to throw their all into the melting pot. I have never ceased being grateful to the Edison men whose friendship I have enjoyed ever since the morning fifty-three years ago when I landed here from the Boston boat."

And there was a tender thought for those who can no longer be a part of these Edison reunions. Of those who have gone on Mr Edison said, "It is natural as I sit here tonight surrounded by so many of my old friends and fellow workers there should be mingled with my joy something of sadness as I think of the men whose companionship we can no longer share."

Mr Edison's message, which will be cherished by every one of his friends and associates is reproduced in full on the opposite page.



Two models of Edison central stations claimed the attention of the guests as they passed through the lobby of the Commodore on their way to the Edison Anniversary dinner. These models portrayed in impressive fashion the engineering development that has taken place since the first generating station began operation on that eventful afternoon forty years ago.

One model showed Old Pearl Street; the other was an exact miniature of the country's newest power plant, the Hell Gate Station in the Bronx. The one showed a rebuilt brick warehouse with six clumsy looking bipolar generators; the other showed a veritable palace of industry, immaculately clean and equipped with turbo generators of the very latest design. Another striking display was the first Edison lamp giving eight candlepower of light with a current consumption of 55 watts as contrasted with a high powered incandescent lamp consuming 30,000 watts and giving 60,000 candlepower.

It is by such forward steps as those represented by power plant design and lamp manufacture that the electrical industry has been able to add so much to the purchasing power of a cent as applied to illumination. Forty years ago, one cent would buy eight candlepower for one hour—today one cent will buy one hundred and seventy candlepower for the same period.

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### Thomas A Edison's Tribute to the Men Who Were Associated With Him Forty Years Ago

"Mr President Hulbert, I thank you sincerely for your courteous presentation of the freedom of the City and will you kindly convey to His Honor Mayor Hylan and to the Honorable Board of Aldermen of the City of New York my deep felt appreciation of the distinguished honor conferred on me and of which I am very proud?

"This commemorative celebration has a deep personal significance to me, for the Pearl Street Station was the greatest adventure of my life. It was akin to venturing on an uncharted sea. No precedents were available. I felt the sense of a great responsibility, for unknown things might happen on turning a mighty power loose under the streets and in the buildings of lower New York. However, I kept my own counsel. Thanks to the faithful co-operation of my unfailing companions, the Pearl Street Station was carried promptly to the point of successful operation. The later development of the industry is a matter of history.

"As I look around this assemblage, my thoughts run backward to those days. Although Father Time has laid his silvery fingers upon us, the memory of our early struggles at Pearl Street affords a pleasant retrospect. It is natural as I sit tonight surrounded by so many of my old friends and fellow workers, there should be mingled with my joy something of sadness as I think of the men whose companionship we can no longer share. If there be some addition through my work to the resources of human welfare, that benefit has accrued largely through my good fortune in being favored with the devotion of my associates willing to throw their all into my melting pot. I have never ceased being grateful to the Edison men whose friendship I have enjoyed ever since the morning fifty-three years ago when I landed here from the Boston boat.

"To the wider circle of friends, I must express the fullest appreciation of the encouragement that has enabled me to perfect various inventions, and is notably embodied in the splendid public utilities bearing my name, of which The New York Edison Company is typical. I would think more highly, perhaps, of the little I have done if I did not feel it to be only a promise of what lies before. There is still much to be done in the promotion of human happiness and comfort."

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*Photograph by Walter Scott Shinn*

**Thomas Alva Edison, Guest of Honor At the Anniversary Dinner Which Commemorated  
Forty Years of Edison Service**

# The Edison Anniversary Dinner

**S**URROUNDED by his associates of forty years ago, by the men who today are carrying on the work he inaugurated, and by the leaders of many other industries, Thomas A Edison was the guest of honor at the anniversary dinner commemorating forty years of Edison Service in New York. Nearly seven hundred distinguished guests assembled in the grand ball room of the Commodore on the evening of September eleventh to do honor to the man whose genius conceived and executed the plans for the first central station and thus gave to the world the great comforts and blessings of electrical service.

Able speakers, in glowing terms pointed out the world's debt to Edison. The City of New York, the scene of his triumph in establishing the central station system, recognized its obligation and through its Acting Mayor, the Honorable Murray Hulbert, presented to Mr Edison a great bronze key symbolical of the freedom of the city. Mr Edison's reply acknowledging the gift, and expressing his obligation to his old associates and his gratification at finding so many of them present, was read by his son Charles. Mr Samuel Insull, secretary to Mr Edison forty years ago and now president of the Commonwealth Edison Company of Chicago related many of the early difficulties in establishing the new method of lighting and told of the final culminating success. Mr Frederick P Fish of Boston, counsel of the General Electric Company, referred to the great industrial development which

followed the success of the application of electricity to lighting and power. Mr John W Lieb who was the electrician of the first central is now vice-president of The New York Edison Company, told something of the technical problems that had to be solved and then in statistical terms described the growth of the company during the forty-year period. The toastmaster of the evening was Mr Nicholas F Brady, president of The New York Edison Company.

The setting of the dinner was in keeping with so auspicious an occasion. Batteries of incandescent lamps concealed in giant floral urns cast their changing colors upon the ceiling; other lamps were installed behind the cornices and still others were suspended between the arches of the balconies. Controlled by a set of dimmers similar to those used in producing theatrical effects, these lights illuminated the room with an ever changing intensity. Their installation and operation represented the skill of the illuminating engineer at its highest degree. But not all of the light was of this modern type. As was fitting at such a gathering, the inventor and his friends were several times carried back to the simpler methods of an earlier day.

## *Some Contrasts in Lighting*

Just after Mr Edison had acknowledged the presentation of the freedom of the city, Mr Brady, the toastmaster, announced that the room would be darkened. Gradually the changing colors faded, the lights around the balcony and those high

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against the ceiling dimmed and were extinguished. Then against the darkness shone the light from two homely little fixtures mounted above the speaker's table with one at each side of the distinguished guest. These fixtures, simple affairs of bent pipe, cumbersome sockets and queer shaped lamps had hardly been noticed until the toastmaster pointed them out and explained that they were the handiwork of Mr Edison himself, that he made them more than forty years ago for use in the laboratory at Menlo Park and that they were probably the first electric fixtures ever made in this country.

Later in the evening the lights were again turned out. Then in one corner of the room there glowed a single incandescent. This, it was explained, was another of the original Edison lamps. Its eight candlepower of illumination required fifty-five watts of current. This lamp was lighted merely to point a contrast, for as soon as it was turned out the current was switched to another lamp, a lamp which represents the highest development in incandescent lamp manufacture. Where the first lamp dispelled a little darkness in its own corner the second filled the great room with a noonday brilliance. Its blinding rays were rated at 60,000 candlepower and it had a current

consumption of 30,000 watts. The old lamp required 6.8 watts for each candlepower; the new lamp gave 2 candlepower for each watt.

After painting a direful picture of a New York without electric lights, without electricity for trolley cars or subway trains, and without electric motors for elevators in tall buildings, Mr Hulbert, in presenting the freedom of the city to Mr Edison said, "We have all grown so used to what we have that it takes an occasion such as this to make us understand our great good fortune over that of our fathers. . . .

"So the people of New York both in their hours of work and in their hours of play realize that Mr Edison has in very truth made easier and more agreeable their path of life. And therefore as Acting Mayor of this municipality I know that in extending congratulations to Mr Edison I am giving voice to the sentiments of our six millions of people; and their feelings of appreciation and gratitude for his great work



*Photograph by The New York Edison Company*

Encased in a Casket of Velvet and Bound With Hammered Iron, a Great Bronze Key, Symbolical of the Freedom of the City, Was Presented to Thomas A Edison by the Honorable Murray Hulbert, Acting Mayor

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for the humanity of which they are a part, take the material form of this key which carries with it the Freedom of the Greatest City on Earth.”

To this greeting and tribute, Mr Edison through his son Charles replied:

“Mr President Hulbert, I thank you sincerely for your courteous presentation of the Freedom of the City and will you kindly convey to His Honor Mayor Hylan and to the Honorable Board of Aldermen of the City of New York my deep felt appreciation of the distinguished honor conferred on me and of which I am very proud.

This commemorative celebration has a deep personal significance to me, for the Pearl Street Station was the greatest adventure of my life. It was akin to venturing on an uncharted sea. No precedents were available. I felt the sense of a great responsibility, for unknown things might happen on turning a mighty power loose under the streets and in the buildings of lower New York. However, I kept my own counsel. Thanks to the faithful co-operation of my unflinching companions, the Pearl Street Station was carried promptly to the point of successful operation. The later development of the industry is a matter of history.

### *Memories of Early Struggles*

As I look around this assemblage, my thoughts run backward to those days. Although Father Time has laid his silvery fingers upon us, the memory of our early struggles at Pearl Street affords a pleasant retrospect. It is natural as I sit tonight surrounded by so many of my old friends and fellow workers, there should be mingled with my joy something of sadness as I

think of the men whose companionship we can no longer share. If there be some addition through my work to the resources of human welfare, that benefit has accrued largely through my good fortune in being favored with the devotion of my associates willing to throw their all into my melting pot. I have never ceased being grateful to the Edison men whose friendship I have enjoyed ever since the morning fifty-three years ago when I landed here from the Boston boat.

To the wider circle of friends, I must express the fullest appreciation of the encouragement that has enabled me to perfect various inventions, and is notably embodied in the splendid public utilities bearing my name, of which The New York Edison Company is typical. I would think more highly, perhaps, of the little I have done if I did not feel it to be only a promise of what lies before. There is still much to be done in the promotion of human happiness and comfort.”

Mr Insull, after a very comprehensive review of conditions preceding the work at Pearl Street, and an interesting discussion of the technical problems that had to be solved, said:

“As I have previously stated, I have no intention whatever of going into any extensive scientific or technical discussion of Mr Edison's accomplishments as an inventor in connection with the development of the electric light and power business. I would, however, be violating my personal feelings, and be neglectful of my duty if I did not say something of the influence of this one man upon this great industry. Mr Edison's work on telegraphic and telephonic apparatus and his discovery of the means of recording

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and reproducing the human voice firmly established him as a great inventor. He was by no means the first experimenter or the first person to endeavor to adapt electricity to the use of man as an illuminant or for power purposes. Whilst the patent office records of this and other countries bear tribute to his contribution to the development of the art, we have to go a little deeper to discover the paramount influence of his mind in connection with the development of this industry. If you will study the technical literature of the period contemporaneous with his early electric light experiments, you will find how little the writers of that period understood the theory of the production and distribution of electric energy, not alone as the technical man understands it, but as the ordinary layman, the man in the street understands it today. But few writers of the technical press of that time had any conception of what Mr Edison was trying to produce.

"It was understood in the popular mind that he was endeavoring to subdivide the electric current for ordinary everyday use, but the principles underlying this popular conception were little understood either by the technician or the layman. It was Mr Edison's conception that what was needed was a translating device—that is, an electric lamp of high resistance taking a small quantity of current of relatively high pressure.

"That was the first stepping stone to success. You can call this, if you like, discovery; you can call it the intuition of a natural mathematician; you can call it the establishment of an engineering principle, but the translating device, once settled on as the cardinal

principle, the production of the device itself, the working out of the details of the apparatus, the generation of the energy, the conducting (or transmission) of it, the measuring of it, and the controlling of it, were all matters



*Photograph by The New York Edison Company*

The Bronze Tablet at 257 Pearl Street Which Marks the Site of the First Edison Central Station. On Monday, September 4, the Tablet Was Decorated by the Company With a Handsome Wreath of Smilax

of invention or engineering detail. Each one was a step by itself, demanding foresight, vision, brilliant conception of methods to be used, and indomitable pluck and perseverance in working them out, but yet, as compared with the original conception, all were matters of detail.



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"It took the transcendent genius of an Edison to discover that a high resistance translating device, or its equivalent, was the first essential to success, and that discovery was the primary step towards placing him on a level with the few whom the people of all time will put in the first rank of the world's inventors."

After outlining the great industrial development which followed the introduction of the electric lamp, Mr Fish concluded an eloquent address with these words:

### *Great Influence on Industrial Development*

"We cannot conceive what our situation would be if the incandescent lamp had not been invented. I can see that, because of the invention of the incandescent lamp and its development, directly into extensive light and power systems, through Mr Edison largely, but at any rate he was at the foundation of it, led to the employment of millions of people and to production and to comfort and happiness of the whole human race. I feel that there has never been anything more fruitful or productive, as Lincoln said, and out of which so much else has grown as that wonderful invention, made in the year 1879. Consequently as we have the eagle for the insignia of our country, England has the lion, I think myself there would not be any better insignia for industry as a whole than the incandescent lamp, which typifies one of the greatest things ever done for industry in and of itself by the greatest inventor that ever lived, and typifies the way in which industries can be developed from a small foundation, if that small foundation is of an essential character, it can be of

logical, tremendous and far-spread development in the interest of the human race."

The closing address of the evening was given by one, who like Mr Insull, had been associated with Mr Edison in those epoch-making days of forty years ago. Mr J W Lieb, vice-president of The New York Edison Company, was the first electrician when the Pearl Street Station went into service.

"Many of the old friends and early associates of Mr Edison," said Mr Lieb "who are honoring us with their presence here this evening in celebration of this notable event and some of whom were on the spot forty years ago when the service of the old Pearl Street Central Station was inaugurated, could not, in their wildest dreams, have imagined the epoch-making importance to the world of the great demonstration in which they were then taking part.

"After years of patient, untiring, persistent effort, under the inspiration and direction of the great Master mind and sustained by his buoyant faith, the day had come when the supreme test was to be made of a stupendous idea, the working out in practice of a bold conception, the launching of a great new enterprise—the generation of electric current on a commercial scale in a central station, and its distribution through an extensive system of underground conductors to furnish a house-to-house supply of light and power over a considerable area of a great city."

Mr Lieb then told of some of the early problems of the pioneer company, of the difficult engineering questions that arose, of the progress of the work in building the Pearl Street Sta-

## The Edison Monthly

tion and the extension of the underground distribution system and of the momentous day when the current was at last turned on. He then told of some of the other early central station companies both in America and abroad. Statistics showing the growth not only of the company but of the industry during the four decades that have passed, an outline of relationship existing between public utility companies and their customers and an interesting word picture of the company organization and employee relations existing in New York added much to the value of Mr Lieb's address.

"We, The New York Edison Company," said Mr Lieb in closing, "therefore rejoice, with due humility but with pardonable pride, that we have succeeded in these forty years of "At Your Service," in enlisting the good-will of our customers, in establishing and maintaining amicable relations with the public authorities as they came and went under different administrations, and in meeting all the rapidly expanding needs and requirements of this greatest American metropolis. But these successes of the past, due so largely to the helpful patronage and support of our customers, for which the Company is duly grateful, opens up a bright hope of future usefulness to the community, encourages a rededication of our efforts to excel in its service, and invites a renewed devotion

to its highest and best interests. We thus shall make this great city a pleasanter place in which to live; we shall hope to bring to the homes of the humblest of its citizens the comforts and conveniences conceived by the world's greatest inventor, and in bringing to our community brighter and more cheerful homes, a more devoted feeling of citizenship, and a more powerful attachment to our city, we shall thus carry out to its fullest development the marvelous conception of the great mastermind, the launching of whose great adventure forty years ago we have met here to celebrate.

"We, The New York Edison Company, are proud to bear his name and we appreciate the honor which his presence here this evening and that of his gracious and charming wife, lend to this great occasion marking another milestone

in the progress of our beloved old New York.

"As Mr Richard Rogers Bowker, a former distinguished vice-president of the company, has so beautifully expressed it in his sonnet entitled 'Fama Eterna':

'Blest is the man who for his country dies,  
Twice blessed he who lives to serve mankind,  
Thrice blessed he who in life's little hour,  
Searching God's treasure-house with  
lucent eyes,  
A lamp for all men and all times may find,  
And thrill the world with light and heat  
and Power.'"

### Challenging the Dark

Edipus, O Edipus,  
The riddle of the Sphinx!  
Your inspiration guessed it  
Tho' bafflingly she dressed it,  
The shrewd Egyptian minx.

Prometheus, Prometheus,  
You brought from heaven the fire;  
You strove with faith undying  
To serve mankind, defying  
The gods' avenging ire.

Edison, O Edison,  
Your riddle was a spark;  
Your inspiration guessed it:  
Your tireless hand could wrest it—  
Light challenging the dark.

Edison, O Edison,  
You dreamed of light to be;  
You, striving vision-haunted  
To serve mankind, undaunted,  
Made dream reality.

—Charlotte W Thurston

## Park Avenue Baptist Church

THE beautiful new church at Park Avenue and 64th Street illustrates by its renamings the upward march of Manhattan during the past half century. What is now the Park Avenue Baptist Church has been known successively as the Stanton Street, the Norfolk Street and more recently the Fifth Avenue Baptist.

The new building is church and church community house in one, with four large auditoriums and a number of offices and smaller rooms. The problem was to construct such a building on a lot extending only 80 feet on Park Avenue and 100 feet on 64th Street and preserve a churchly harmony of architecture.

Through the skillful placing of windows, buttresses and tower, this desired unity of effect has been most successfully achieved by the architects, Henry C Pelton of New York and Allen and Collins of Boston.

### *Gothic Architecture*

The best traditions of English and French Gothic church architecture have been followed and as one looks at the building from Park Avenue one must admire the balanced beauty of this modern edifice. The eye travels upward from the wide pointed arch of the west window divided by deep secondary buttresses, past the beautiful stone tracery and mullions of the clearstory and gable windows to the pointed roof, higher still on the right to the carved octagonal tower like a high king's crown, then down again to the richly orna-

mented arch of the double entrance doorway.

The interior is in three divisions with intermediate mezzanines between the main church and the upper floors for the church offices and minister's study, but one may actually count from seven to ten stories when basements and sub-basement are included.

Immediately over the church proper in the clearstory is the women's auditorium, over this the Sunday-school, while the men's auditorium where the famous Rockefeller Men's Bible class meets is in a high-ceilinged basement under the auditorium.

Back of this basement auditorium is a well equipped kitchen with dumb-waiter service to the floors above. Here also is a machine for projecting motion pictures and there is another on the Sunday-school floor. On the women's floor are capacious store-rooms, a kitchen and serving room, and sewing rooms equipped with electric sewing machines.

The great entrance door to the right of the facade opens on a vestibule leading on the left to the church and on the other side to the stair-ways and two elevators by which one ascends to the offices and the upper auditoriums.

These elevators are of very special construction to guard against noise and were designed, as were the other electrical, heating and ventilating features of the building, by the consulting engineers, the H Marshall Hall Company. They are of electric traction type and entirely noiseless as the elevator machinery is in special found-

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*Marc Eidlitz & Son, Builders*

*Henry C Pelton and Allen and Collins, Architects*

The Park Avenue Baptist Church At Park Avenue and 64th Street, Illustrates by Its Renamings the Northward Trend in Manhattan

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ations remote from the steel work of the building. The electrical service for elevators and all other building equipment is supplied by The New York Edison Company.

Entering the main church one notes the soft warm tone of the stone finished walls, the line of stone columns that support the arch, and the stone vaulting that is so full of delicate beauty.

The magnificent organ, built by Hook and Hastings, has special features planned by Archie Gibson and Harold Vincent Milligan, organist of the church. It is operated by combinations set by electric switches in the manual. The organ chamber is very deep extending from the choir room beneath the chancel to the full height of the church proper. For this reason there is sometimes a difference in the temperature of the organ chamber and that of the rest of the church that would cause a discord in the musical tone; but electric heaters have been placed throughout the chamber and these are controlled at the discretion of the organist by remote control switches. There is an echo organ off the west gallery.

### *The Lighting Fixtures*

The lighting fixtures, designed by the architects in collaboration with the Edward F Caldwell Company are of two ten-sided bands, of pierced wrought iron and of glass, which prevent the filaments of the lamps from showing and make for a soft diffused illumination. There are dimmers on the chancel and main lights and all of the lights are controlled separately.

The west gallery has a very fine and richly colored memorial window.

It is in perpendicular Gothic in six parts portraying six great figures in Baptist history, three Englishmen, John Milton, John Bunyan, and William Carey, and three Americans, Roger Williams, the founder of Rhode Island, Adoniram Judson, the missionary, and Francis Wayland of Brown University.

Underneath the gallery fronts are heads of angels bearing shields of the apostles and there is much fine symbolic carving both inside and outside of the church using floral and ecclesiastical symbols.

The ventilation of the entire building is thorough. Tempered fresh air introduced through air tunnels and ducts is forced through to the pews by fans; there are electric fans in the sub-basement for exhausting the air from the basement auditorium and fans in the roof for exhausting the air from the church, the kitchens and other rooms and auditoriums.

An electric vacuum pump with a temperature regulating pump, electrically driven, controls the heating system; an electric house pump takes water to the tank in the tower for emergency fire and other uses.

In the building of this church, so close was the co-operation between architects, builders (Marc Eidlitz and Son, Inc.) and building committee that a hundred thousand dollars was saved on the original estimate of a million dollars.

The final arrangement of the baptistery wall of the same carved wood as the reredos, and the installation of some very fine chimes in the octagonal belfry will complete one of the most beautiful of New York's new church buildings.

# Presses, Mangles, Ironing Machines

**A**N ancestor of the modern electric ironing machine may be found in the ancient Roman cochelia or press which was spoken of in the first story of this series. From that developed the calender or "mangle," as they were probably rightly called at that time.

Before the appearance of the heated calender there came the wooden press. A notice is recorded in an inventory made by William More, Esquire, on August 20th, 1556, of a little press to press clothes.

In the seventeenth century in New Amsterdam the Dutch housewives used wooden presses after their clothes had been washed and dried on the public bleaching grounds. This apparatus most likely was brought from Holland, where it had been in use for several centuries. At the same time it was to be found in northern France and England. Sometimes it was made quite plain and then again it was elaborately

carved, very beautiful and decorative to look upon. The wooden press consisted of a wooden table containing drawers in which the pressed clothing was carefully and neatly put away. The whole thing was surmounted by a frame in which was placed a tray, moved by a vise, in which the pressing was done. By the end of the eighteenth century cylinders had been substituted.

The wooden press was used extensively in France. In a book of "Memoires" reference is made to the Duc de Choiseul and to his Chateau de Chanteloup (singing wolf) where he was exiled until after the death of Louis XV. We learn that "never a tablecloth, a napkin, nor sheets were used until they had been passed through the calender, and the place where this was done—and also the lingerie—were one of the great curiosities of that Chateau."

Mention has been made of a carpenter who advertised, in the second half of the eight-



*Drawings by Edna Hood Lisank*  
An Early Type of Clothes Press, Similar to Those Used in France and England in the 17th Century. Linens After Coming From the Wash Were Smoothed Under Pressure. Drawers Under the Press Provided Storage Space

## The Edison Monthly

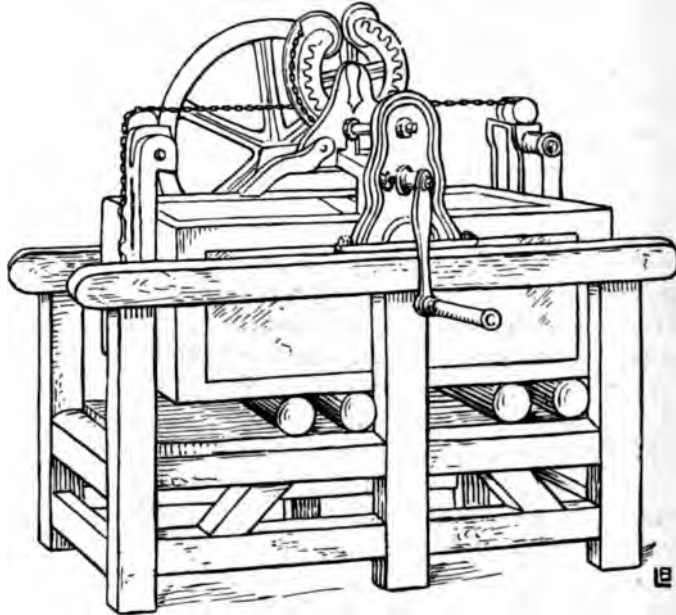
eenth century, his "improved" mangle. It seems as though similar appliances must have been in existence long before that time in Russia, Germany, and England. There are indications of their presence, at any rate.

The calender had a box that was weighted with stones and moved upon rollers which ran upon a polished table. The clothes to be pressed were laid upon the table-top beneath the rollers. In its older form this device was a rectangular wooden chest filled with stones. It was worked backwards and forwards by a rack and pinion arrangement (or, earlier by straps wound around a roller that was worked by a handle) and rested with great pressure upon the cylinders beneath.

The possession of a mangle today among the poorer English cottagers is a common source of income for it can be rented out for a small sum to someone who does not own such a piece of apparatus. Instead of a box of stones the modern calender of this old type consists of two or more cylinders working one upon the other.

The early English mangle was merely a strong level table with a substantial cover made of well seasoned wood. When it was in use the

cloth to be pressed was placed smoothly upon it. Then the cover supported by two smooth rollers of iron was made to move back and forth from one end of the table to the other, traveling, as it went, across the cloth being ironed. This was done



This Mangle of Less Than One Hundred Years Ago Consisted of a Polished Table Top, Reciprocating Rollers, a Box Weighted With Stones. By Means of Hand-operated Gearing the Rollers Were Worked Back and Forth Over the Material Being Ironed. Ironing Machines of This Type Were Used in England, Russia and Germany

until all the wrinkles were pressed away and the piece was left sufficiently smooth.

When heat was required in the pressing it was applied by using hollow cylinders for rollers and filling them with smaller iron cylinders that had been heated. The use of heat, however, as an ironing agent was doubtless a later development. The machine was operated by means of belts, cords, or chains, which passed over a pulley at either end of the table and were wound around the

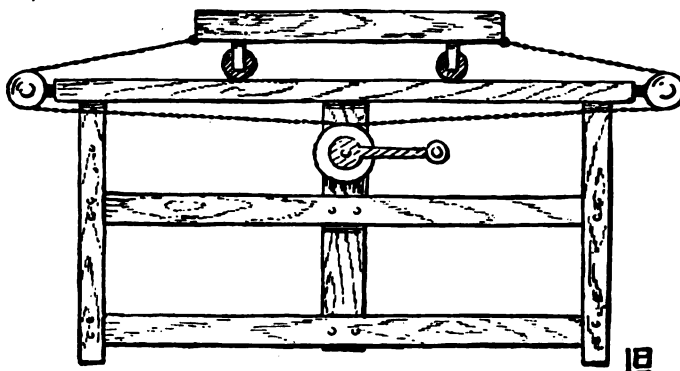
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cylinder or barrel below the table top. A handle, or winch, was attached to this and by turning the handle the barrel was moved and the motion was communicated to the box in either direction.

Electric ironing machines are, like all electrically driven and heated devices, very simple and easy to handle. Not only are they excellent ironers of flat pieces, but also of garments that are made to fit the body. The electric ironing machine has had improvements added so that ruffles may be ironed beautifully; cuffs and collars and sleeves can be made to look as though ironed by hand; and large linens come forth from the machine smooth and wrinkleless.

There is no doubt that it is a time and labor saver. The ironing can be done while the operator sits on a stool in front of the device. The heating requires little time and when the cylinders are hot they remain so at an even temperature.

Washing and ironing are only a part of the many household tasks that have been simplified by electricity. But when we look into the work that women used to do and then look at the same tasks that are



An Ironing Machine Used In England Early in the 19th Century

accomplished today with scarcely any expenditure of energy and with every indication of efficiency we marvel that the members of the "weaker sex" ever managed to become as strong as they are. Fortunately these electrical devices are making it possible for women to save some of their energies for physical relaxation and mental stimulation outside of the regular routine required by housework.

### Your Chance

Would you like to make your fortune  
A cool million "bucks" or so?  
Then go to the flies that flicker  
Sparks of light 'til meadows glow;—  
Wrest from one his time-old secret  
Just how light sans heat is made;—  
Surely for your pains in learning  
Men will see you are well paid.

—Alice Crowell Hoffman

AN INVENTORIE of all suche GOODS as I WILL<sup>M</sup>. MORE, Esquiere, had  
the 20<sup>th</sup> day of August, A° Dñi 1556.

In the chambre wherein I lye.

Itm a lytle presse to p<sup>r</sup>esse clothes . . . . . iij d.

An Item in the Inventory of William More Dated 1556 Concerns His Clothes Press



## The Fox Studio

IN considering the various factors that enter into the making of motion pictures, the average fan is inclined to regard the actor as the *sine qua non* of the films. High priced press agents in promoting the silent play have devoted their talents in behalf of the stars to the virtual exclusion of other equally important elements that are a part of the sum total of motion picture production.

Take electricity, for example. Here is an element so important that were it to fail stars would quickly dim. Producers are unanimous in agreeing on its essentiality, one film magnate saying that he would rather have a star go back on him than have his electrical equipment fall short to the least degree. The electrical equipment of a motion picture studio represents the last word in development—

and a considerable part of the investment.

A tour of the motion picture studio of the Fox Film Corporation, a typical user of Edison current, afforded an opportunity of observing the variety of ways in which electricity serves as an adjunct to the fifth biggest industry in the world. In this "film city," one of the largest in the world, occupying a solid block on Tenth Avenue at Fifty-fourth Street, with an annex building a few blocks away, William Fox, presiding genius of the organization, has invested more than a half million dollars in electrical equipment. "Whenever possible, do it by electricity" has been an idea which has been carried out in every department.

It is no secret around the Fox Studio that Mr J G Leo, Vice Presi-



*Photograph by The New York Edison Company*

The Studio of the Fox Film Company on Eleventh Avenue, Secures Current for its Vast Electrical Equipment From the Lines of The New York Edison Company

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dent, who is in charge of the plant activities, regards the electrical end as one of his paramount interests. As proof of his interest he permitted THE EDISON MONTHLY to reproduce in this issue photographs of the electrical equipment which have never been out of his office.

"The New York Edison Company has always rendered satisfactory and efficient service to us—the sort of service that precludes worry as to whether it will function at all times," Mr. Leo said "I believe we are the largest users of current among the motion picture studios. If necessary a current of 18,000 amperes can be supplied to the studio.

"Electricity plays a vital part in our business and is quite as essential as the player. In designing the Fox Studios, we paid particular attention



*Photograph by Central News Service*

The Original Edison Studio, of Some Twenty Years Ago, Was a Crude Structure Built of Wood and Covered With Tar Paper. It Was Mounted on a Turntable So That It Could Follow the Sun

to the electrical features; there is hardly a department where Edison current is not used in some important way."

The studio floor, with its forest of lamps and lighting apparatus representing an investment of six figures, arouses the admiration of the electrician and the layman. On the two stages seven directors can work without interfering with each other. Eight high intensity arcs with 800,000 combined candle-power attract, and when lighted bewilder, the visitor. Enormous switchboards control the lights, being arranged so that by pressing a single button a whole set can be flooded with light or plunged into darkness at the will of the director. Obtaining their power from Edison current, these arcs can turn the studio into a noonday



*Photograph by Fox Film Company*

Behind the Scenes at the Fox Studio In the Filming of "Silver Wings," With Edwin Carewe Directing

## The Edison Monthly



*Photograph by Fox Film Company*  
Miles of Film Wound on Drums for Drying, in Purified Air

glare, if desired. The much vaunted California sunshine is as easy to simulate in the Tenth Avenue building as a New England twilight. Little wonder it is then that the Fox Corporation as a result of the electrical power at its command is able to produce the bulk of its films, requiring every kind of an indoor or outdoor setting, right here in New York.

A system of remote control, a feature of the studio, enables the director to proceed with his work without having to shout his orders to an electrician fifty or sixty feet away. Cables are run out from the main switchboard to the spot where the director is standing. The electrician then executes the orders on a small board equipped with push buttons. There are nine switchboards in the studio containing more than

two tons of copper. Ten million reflected candle-power represents the total lighting capacity of the studios—sufficient to light a city of the size of Brussels, Belgium. The tubes from the mass of Cooper Hewitt lights would, if stretched from end to end, reach across the Brooklyn Bridge and half way back again. Over the floors are scattered fifty miles of heavily insulated electric light cables completing what is said to be the greatest artificial light system in existence.

Mention should be made of another innovation of the studio—a system of overhead trolleys whereby the lights may be swung to any part of the studio desired—a great time and money saver. According to the Fox officials, their studio is the only one that possesses this system.

After a production has been filmed the next stage is making the negatives or prints. This is done in a ruby lighted room where scores of girls in semi-darkness toiling over electrically



*Photograph by Fox Film Company*  
Motor-driven Felt Polishers, Through Which the Celluloid Drama Must Pass Before It Is Ready For the Projector

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operated machines tediously make prints of each one of the pictures which when run through the projection machine cause the characters to move about as in real life. Small  $\frac{1}{2}$  and  $2\frac{1}{2}$ -horse-power motors drive the negative making machines.

The air in this and other rooms of the laboratory is "washed" and heated to certain temperatures. The air reconditioning and filtering plant contains more than a mile of ventilating ducts and ten tons of heating coils. An idea of the necessity of "washed" air may be gained from the fact that a speck of dust passing in front of the camera is magnified to such a degree as to mar the face of the actor or otherwise interfere with the perfection of the photography.

In the drying room, immense drums wound with miles of "thrillers" and love stories slowly revolve reminding one of the old stern wheelers that ply on the Mississippi. Streams of heated air, pumped from the reconditioning room, play over the wet film from above. In an adjoining room, the title department, the captions of the photoplay are filmed from printed placards by an electrically driven camera equipped with a timing device to record according to the length of the reading.

Edison current is also a valuable adjunct of the polishing department.

Before the film is ready to be run through the projection machine, it is necessary for a polishing process to be carried out. Much elbow grease and hand labor are saved through the use of small motors which whirl the polishers over a reel as it is fed through by an automatic device. Other machines cut the holes along the sides of the film in order that it may travel through the projection machine.

The tour ends in a spacious room where dozens of miniature screens are alive with the unspoken drama. Push



*Photograph by Fox Film Company*

The Printing Room Where Negatives Are Developed and Celluloid Prints Made

buttons are constantly at work stopping the electrically operated projection machines in order for the watchers to note down the parts that have to be changed.

It does not require an electrical engineer to discover the undisputed part that electricity plays in the film industry. The facts speak for themselves. One wonders if the film industry would have mounted to fifth place without electricity.

November



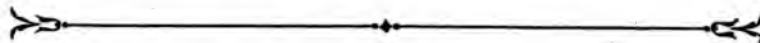
*The Bridge Path in Central Park  
in the 'Sixties*

1922

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## The Edison Monthly

### The Edison Monthly

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The Electrical and Industrial Exposition, held in October at the Grand Central Palace, will be remembered for a number of things. It formed a part of the events arranged in celebration of the beginning of Central Station Service in New York; and a large section of floor space was given over to the Museum of Edisonia with its collection of electrical antiques telling of the eventful period between 1875 and 1885. Its many exhibits showed new uses of electricity in the home and proved a fruitful source of information for those confronted with problems of home management. A series of industrial exhibits showed not only the use of electric power in the factory but gave an interesting insight into many products whose uses are more familiar than are the methods by which they are made. Exhibits by electric lighting companies served to show the important part which the company plays in community development, and, by explaining company practices served to bring about a better understanding with the public. Electrical transportation formed another instructive display, and during the exposition New York saw its first modern electric taxicab. After a busy seven days, with an attendance that reached well over the hundred thou-

sand mark the show closed on October 14th with Thomas A Edison and the Edison Pioneers as distinguished guests.



The show served as a medium for spreading information regarding electricity and its uses. It sowed the seed for much future business. At the same time orders for immediate delivery were also taken, many of the exhibitors reporting the closing of contracts for both domestic and export business.

Probably the most conspicuous of all the groups of visitors were the students from high schools and colleges. Coming in the afternoons with their text books under their arms they were not hard to recognize. Their questions, at least those of the girls, seemed based on a deep-lying interest, and on a knowledge of the use of electrical appliances. A few years ago a vacuum cleaner, a washing machine, or a cooking appliance with its motor or heating element might have been an object of curiosity. Today this curiosity has given way to a desire to know more about the advantages of the different types of the same machine.

On the other hand students from the technical schools found their interest held by the Museum of Edisonia. In the light of the knowledge which they are acquiring of modern dynamos and the science of electricity, the apparatus and equipment with which Edison established the modern central station and the system of incandescent lighting were more than mere curiosities. These students could see in the primitive apparatus of forty years ago the same principles which they are studying now in their engineering classes and which are embodied in the

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modern central stations which now supply New York with electric light and power.



It was fitting that the closing day of the show should be designated in honor of the Edison Pioneers and that the great Pioneer himself could be present. Not since 1916 has Mr Edison attended the Electrical Exposition. And as on that former occasion, his progress through the exhibits was an unbroken series of ovations from vast throngs of admirers. When the word went through the Palace, "Edison is here," there was a rush to see him and from that time on his way had literally to be forced through crowded aisles.

But it was not the Museum that monopolized his attention. Apparently to Mr Edison the past is past and it is only the future with which he is concerned. This accounts for his intense interest in the industrial exhibits and his inquiries regarding the different manufacturing processes. Even in his amazement at the scope of electrical application in industry and in the home he never lost sight of its possibilities for future development. He expressed the hope that he could attend the Electrical Exposition of fifteen or even ten years hence for he was confident that a tremendous development would be recorded in the exhibits.



The electric industrial truck, by reason of its service at freight terminals, docks, railroad stations and in factories has become a familiar element in transportation. Its appearance on the streets as a delivery

vehicle, picking its way through dense traffic, places it in another rôle and shows its versatility.

As described elsewhere in this issue, the International Tailoring Company uses an electric industrial truck not only for gathering parcel post packages within the factory but also for carrying the mail sacks to the post office a block away. In covering this distance the industrial truck must traverse one of the busiest traffic sections in the city—Fourth Avenue between Twelfth and Thirteenth Streets—and must travel a road far rougher than industrial trucks are usually designed for. It makes the trip several times a day and not only is standing up well under the hard usage, but according to its owners, it is bringing about decided economies in the mailing department.



It taxes the imagination considerably to picture our ancestors getting any real comfort out of the primitive warming devices of a bygone day. Heated bricks, charcoal burners and portable stoves, all were called upon in the struggle for comfort. For taking the chill from sheets, as related in the article "Little Bits of Comfort", they put a stove in the bed. Today the fresh air advocate sleeps with his windows wide open and secures real bodily comfort through the medium of the electric heating pad. He places it under the covers a few minutes before he retires and then keeps it at his feet or back all through the night. With a room full of biting cold air but with the sheets warm and cosy he can well afford to laugh at the so called "good old days".

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*Photograph by The New York Edison Company*

Thomas A Edison and Mrs Edison in the Museum of Edisonia at the Electrical and Industrial Exposition Where Mr Edison Unveiled the Model of the Menlo Park Laboratory. Standing at Mr Edison's Left is Mr F A Wardlaw, Curator of the Museum



*Photograph by The New York Edison Company*

The Model of the New Hell Gate Station of The United Electric Light and Power Company Which Was Studied With Great Interest by Mr Edison Was in Marked Contrast to the Model of the Pearl Street Station of Forty Years Ago. Mr Edison Was Accompanied on His Tour of the Exposition by Mr Arthur Williams



# Fairyland

**A** CHILDREN'S fairyland, a veritable Aladdin's palace, to which admission is granted not to the child of good fortune, but to the friendless or abused youngster, was opened during the last week in August on Fifth Avenue between 104th and 105th Streets. The Heckscher Foundation for Children, as the world's biggest playground and home for minors is called, represents to the adult and juvenile mind the embodiment of the fairy paradises described in Grimm's or Anderson's fairy tales.

The home, which cost more than \$2,000,000, with additional outlays of \$1,000,000 for the site and \$1,250,000 for running expenses, provides a headquarters for the Society for the Prevention of Cruelty to Children. Col Ernest K Coulter, general manager of the society and a director of the Heckscher Foundation, is in charge of the home and its activities. Seven stories in height and occupying the greater part of a city block, the building, constructed of buff brick, presents an imposing appearance to the passerby. Special attention has been given to the design of the lighting and power equipment, which consist of seven thousand incandescent lamps and four hundred horse-power, for which current is furnished by the New York Edison Company.

## *Environment*

Before touring the Foundation and surveying its wonders, it would not be amiss to consider the motive which prompted Mr August Heckscher to expend such a huge sum of money in

one philanthropy. The reason lies in one word—environment. Mr Heckscher and the Children's Society officials believe that if the "bad" boy, the wayward girl, the friendless juvenile or the abused child are transferred into an environment that betokens the good things of the world, the chances for developing real manhood and womanhood are increased many fold. Given a background which suggests none of the evils or bad conditions with which the child has come into contact, the effect on the impressionable mind is quite certain to remain, reason the child welfare workers. And Mr Heckscher has tried to work along this idea in planning his \$4,000,000 dreamland.

Keeping in mind the idea back of the Foundation, the visitor is able to appreciate to a greater degree the various sights which greet him throughout the building. Passing the general offices of the Children's Society, occupying the greater part of the main floor, the child entering the institution is ushered into one of several cheery reception rooms, decorated with illustrations from well known fairy stories. If the newcomer is a lost child, he or she is taken to a lost child department on the main floor. Here in spacious rooms, replete with cribs, beds and toys the youngster awaits the arrival of the frantic parent who usually appears within a few hours.

The juvenile recalcitrant or abused child is conducted from the reception room, after the necessary records have been set down, to the shower baths and swimming pool on the sixth floor.

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Four dressing rooms, marble enclosed, open into each shower, the temperature of which is regulated from a central station. Those who prefer the pool find a lake 60 feet long by 33 feet wide, with varying depths to 8½ feet awaiting them. A gallery affords an opportunity for visitors to watch the aquatic antics of the youngsters.

The third floor has six large dormitories for girls; an equal number for the boys are found on the fourth floor. Long rows of white enamelled cots, a chair and clothes bag at the foot of each, invite the juveniles to slumberland after a day of supervised play and instruction. The facilities of the home provide for five hundred children.

The children are separated into

groups according to age. The larger boys and girls have an aerial playground atop the roof overlooking Central Park. Here they can play to their hearts content—kiddies who have been the victims of cruelty, others friendless or described as bad when they ran afoul of the law. Instructors say that many do not know how to play and have to be taught. Supervised gymnastics are conducted in a gymnasium which the guide assures visitors is "larger than the biggest ballroom in New York."

The smaller youngsters have a kindergarten roof opening off the third floor. A feature of this playground is a good sized wading pool, the water bubbling down from a fountain picturesquely situated at one end. A



*Putnam Brothers, Consulting Electrical Engineers  
Comstock Associates Company, Wiring Contractors*

*Maynicke and Franke, Architects  
Photograph by The New York Edison Company*

**This Building on Fifth Avenue Between One Hundred and Fourth and One Hundred and Fifth Streets is the Magnificent Contribution of Mr August Heckscher to the Cause of Wayward and Friendless Boys and Girls, That They May Have the Environment of a Real Home and be Given an Opportunity in Life**

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*Photograph by The New York Edison Company*

**The Spacious Kindergarten, Light and Cheery, Has Little Chairs Specially Built, a Cork Floor for Subduing Noise, and Toys Galore to Brighten the Hours**

kindergarten, with a cork floor and specially built chairs reminding one of Lilliputia, beckons to the tots when they are tired of the playground. Toys that would gladden the heart of a rich man's sons are scattered about.

The program for the larger "guests" of the Foundation includes manual training and grade school instruction. Girls are taught domestic science in connection with which four-room model apartments with all conveniences have been set up for them. Printing and cobbler shops have been installed for the boys. There are also seven school rooms presided over by city teachers. The religious side has not been overlooked. Mr Heckscher's architects have designed a chapel, the quaintness and beauty of which have aroused favorable comment. Protestant, Catholic and Jewish services are held weekly.

A children's theatre, of which David Belasco is the manager, is one of the novelties of the home. Light and

scenic effects such as are found in the leading playhouses of the city, can be produced by the equipment installed by Mr Heckscher. The mural decorations of the playhouse, which holds eight hundred, are being executed by Willy Pogany.

Food is an integral part of a child's life, by virtue of which fact special attention has been devoted to the culinary end

of the establishment. There are four large dining rooms on the fourth floor, each furnished with marble topped tables and high backed chairs. The china is of a special design; that used by the smaller juveniles being decorated with story book characters such as Red Riding Hood and Little Bo-Peep.

Children like soup best of all, according to the chef, who took evident delight in uncovering four 150-gallon cauldrons in which strengthening broths and thick soups were bubbling. As vegetables aplenty feature in the daily menus, electrically operated peelers and cleaners are kept humming in the task of preparing the "spuds" and other good things of the vegetable kingdom. One noted also the rhythmic motion of an electric churn as it performed its task of turning rich creamy milk into butter.

Many of the workers are college graduates; all are high school graduates. Great care has been exercised in

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*Photograph by The New York Edison Company*

The Roof of the Heckscher Building Overlooking Central Park is a Haven of Play, Happiness and Sunshine for Little Youngsters Who Have Never Known Them Before

fitting up their rest rooms and sleeping quarters. Each worker has his or her own bedroom, furnished attractively and comfortably.

Before and after pictures attest the results of a stay at the Foundation home. Looking at a picture of some

maltreated child, with cowed expression, one finds it difficult to realize that the ruddy faced smiling youngster brought in by an agent is the same child. A fortnight accomplishes wonders. A month reveals a child who has learned what it is really to live.

### Multiplied Hands

"So much work to do," wailed the housewife of old,  
"And only two hands to do it!"  
At the thought of it all her fine courage grew cold  
How would she ever get through it?

"So much work to do," laughs the housewife today,  
"But why should I worry or rue it?"  
As long as Electra befriends me this way  
I've dozens of hands to do it."

—*Alice Crowell Hoffman*

## “Little Bits of Comfort”

**T**WO or three centuries ago it was not unusual to see gold and lacquer coaches, bearing coats of arms on their doors, stop before a cathedral and from the equipages alight handsomely dressed court ladies. If it was winter time, they were followed into the cold, damp church, by a footman carrying a handwrought silver basket in which glowed a cheery charcoal fire. This was placed inside the pew. From time to time the worshippers bent forward and moved their hands back and forth over the top of the silver basket, then they resumed their prayers. This was the only way they could warm themselves

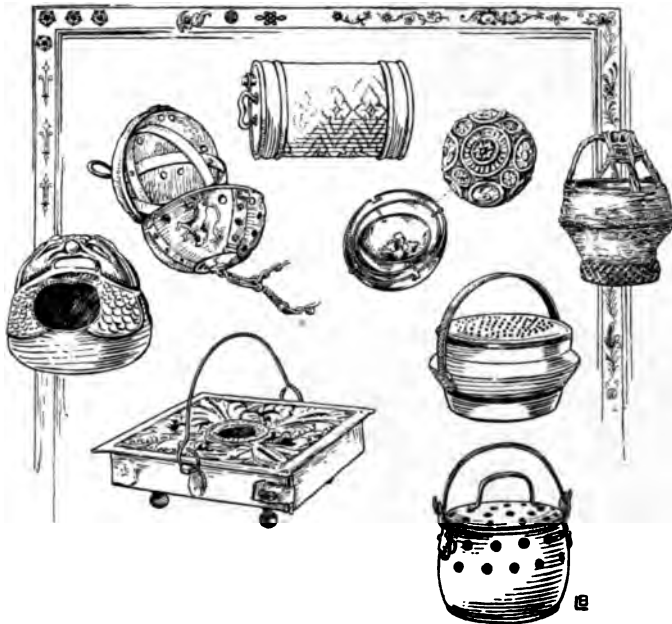
in the unheated building of those “good old days.”

It requires imagination in these modern days to realize all the discomforts men and women endured. Hand stoves and foot warmers were the sole source of heat. The fingers of the priests at the altar sometimes grew numb from the cold. If it had not been for the metal warmers no doubt they would have been unable during the bitter days of winter to conduct the religious services.

The chaufferette, or hand warmer, used by French men and women of fashion, were usually of gold or silver combined with brocade. Inside the box

were bits of burning charcoal. Poor folk either blew their breath on their icy hands to restore circulation, or they carried roughly made warmers of inferior metals.

Hand warmers and foot stoves were a luxury. They were used by the richer folk in France, England, Holland, Italy, India, China, Japan and the United States. Being small they were easily carried about and the charcoal ones retained their heat for a long



*Drawings by Edna Hood Liseak*

Hand Warmers Added to the Comforts of America and Europe as Well as China and India From the Fifteenth to the Nineteenth Centuries. They Were Unique in Shape and Attractive in Design and Were Heated by Charcoal, Hot Ashes or Hot Water. Some Were of Gold and Silver While Others Were of Brass or Copper. The Materials Varied According to the Wealth and Station of the Owner

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time. Half a dozen persons could warm themselves at one of these tiny stoves.

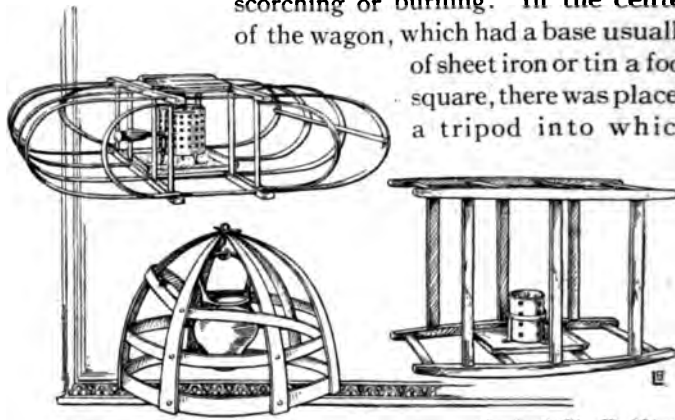
Occasionally the collector of antiques discovers a relic of our Puritan days when men and women used hand and foot warmers on their long drives across country to attend religious services in an unheated church. Although their religious ardor burned brightly they were forced to restore the circulation to their stiffening feet and chilled fingers at a little square box made with perforated brass sides and with four turned wooden corner posts, the accepted receptacle for charcoal.

The succeeding congregations of one church, founded in 1652 at Farmington, Conn, attended divine service for a period of 172 years, during which time there was no means of heating the edifice. The members of the congregation brought with them from home, foot stoves and hand warmers. Those who came from afar refilled their tiny heaters with charcoal or hot water at a neighbor's house in the vicinity of the church.

History does not record, so far as we know, the name of the inventor of the bed wagon, but blessings must have been heaped upon his head along with words of praise for the person who first thought of foot stoves and hand warmers. The bed wagon took

unto itself strange and wondrous shapes and sometimes it was of monstrous size, compared with the engraved and pierced silver hand warmers then so fashionable. Its chief object in the daily housekeeping programme was to remove the dampness and chill from the bed clothing.

English bed wagons of a century or two ago were constructed of bent pieces of wood to raise the sheets far enough from the brazier to prevent scorching or burning. In the center of the wagon, which had a base usually of sheet iron or tin a foot square, there was placed a tripod into which



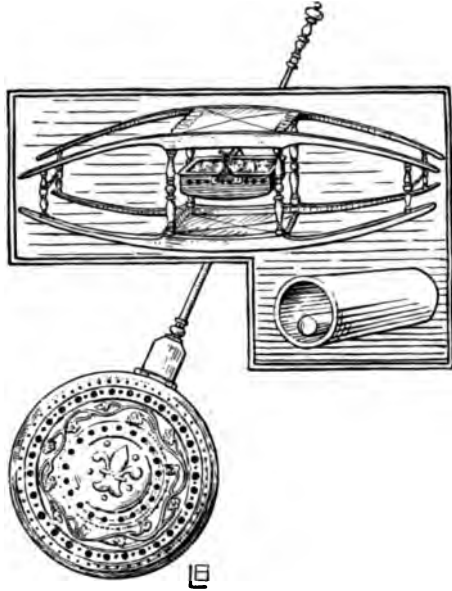
*Drawings by Edna Hood Linnak*

Bed Wagons Were Formerly Used in England, France and Italy for Warming Beds. The Protecting Frame Work Was of Wood Surrounding a Charcoal Receptacle. The Lower Left Illustration Shows an Italian Bed Wagon Which Burned the Charcoal in a Gracefully Shaped Vessel of Earthen-ware Known as a "Scaldino." As Late as 1898 the Italian Type Was in Use in One of the Most Modern Hotels of Venice

fitted the charcoal receptacle. Such an apparatus gave a bed a humorous appearance during the heating process, but the cheer the warm sheets brought imparted to this aspect of the ceremony a sense of importance rather than of amusement.

The bed warmer was developed from the bed wagon. This later heating model is made with a round brass or copper pan—it is said that Louis XVI of France possessed a solid silver one—and a perforated and chased cover. A long wooden handle made it

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*Drawings by Edna Hood Lissak*

A Development from the Bed Wagon Was the Warming Pan, a Round Brass or Copper Pan With a Long Wooden Handle. Inventories Show That Louis XVI Had at Least Ten in His Possession. The Late Nineteenth Century Type Was Cylindrical, Holding a Bar of Red Hot Iron

possible for the pan, into which were placed bits of burning charcoal, to be moved up and down and across, between the bed clothes.

The thought behind these primitive heating utensils is the same that has given us our modern comforts, such as the electric heating pad and the electric blanket. It was a logical step from the heated brick wrapped inside a blanket and which was tucked under

your feet in a sleigh to the present day electrically warmed bit of wool. Somewhere between, came the hot water bottle, which has served its purpose well, but which cannot be compared with its electric rival.

How much simpler it is to attach a soft, flexible bit of material to the electric light socket, switch on the current, and find a comforting warmth, which may be regulated to suit your needs and maintained at the same temperature, and for as long a time as you require it, than to depend upon these obsolete methods of heating the body.

One cannot help wondering how a person ever survived an acute illness which required immediate hot applications when the family had to depend upon the slow process of boiling water and the old fashioned method of applying hot cloths. The electric blanket; the aluminum heating pad, convex on one side and concave on the other to conform to the body curves, and which can be used either for wet or dry applications of heat, and the electric immersion heater, which boils a glass of water in less than three minutes, are all so convenient, so quick to adjust and so perfect in effect that it makes one glad to be living in these progressive days.



*Drawings by Edna Hood Lissak*

Foot Stoves Were in General Use For Many Years. The Churches of the Middle Ages Had no Other Method of Heating. The Third Illustration is a Foot Stove Used in the Old Congregational Church in Farmington, Connecticut, While the Fourth is an Ancient Hand Warmer, a Scaldino from Cyprus

## In a New Rôle

**I**N the rapid handling of the parcel post packages and letters of a large mail order coat and suit house an electric industrial truck is not only proving the solution of a perplexing delivery problem but is demonstrating another angle of the versatility of these serviceable vehicles. The truck operates both within the clothing factory in gathering the parcels and also on the street, traversing dense traffic, in carrying the packages to the post office. It does its work not only more rapidly and effectively than it can be done by any other system but also at a distinct reduction in cost as compared with the old method.

At Fourth Avenue and Twelfth Street, stands the New York building of the International Tailoring Company. A similar factory is in Chicago. The company supplies 10,000 retail tailors throughout the country. Sample books, containing swatches of the goods and a chart by which the measurement of any person is easily and accurately taken, are distributed among the dealers. This measurement is made by the local tailor and then, instead of himself going ahead and making the suit or overcoat, he forwards the figures on to the International Tailor-

ing Company either here or in Chicago.

The fact that practically all of the business is done by mail, and that shipments are all made by parcel post make the daily mail bulky and weighty. So great did it become that four men and four hand trucks were required to take it to the nearest post office, a block away.

In the search for a way to do this work more cheaply and with greater ease, the company investigated the electric industrial truck and finally installed one for trial. A truck was purchased from the Crescent Truck Company and a special type of body was designed. The body is made of steel in the form of a single deep compartment having a hinged door in the center, through which the mail sacks are loaded and unloaded. The battery is composed of twelve 11-plate Exide-



*Photograph by The New York Edison Company*  
One of the Efficient Little Electric Mail Trucks Making a Journey Down Fourth Avenue. An Electric Industrial Truck of This Kind is Easily Operated in Streets Where the Traffic is Congested



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*Photograph by The New York Edison Company*

The Electric Industrial Truck is Very Versatile. It is at Home Inside a Building or on the Street, for it is so Designed That it Can Go Up and Down in Freight Elevators and Can Thus be Loaded at Various Floors, With a Saving of Much Time and Energy

Ironclad cells and permits the truck to carry a weight of more than one ton. The battery is guarded against damage by coiled steel springs surrounding push rods on each side of the cradle which supports the cells. When the truck is on the street the jars of the rough pavement are thus broken and the danger of damage to the battery is greatly lessened.

One of the most interesting features of the work of this electric truck is the fact that it is equally at home in the building or on the street. Because the body was designed to fit inside the freight elevators of the building, the truck can be taken on the elevator and carried to the ninth floor of the twelve-story building for its first consignment of mail in sacks. Here it picks up the letters and all first class mail and then it is put back on the elevator and lowered to the second floor where the shipping and cutting rooms are located. The truck, under its own

power, runs in and out among the workers and machines in these rooms and picks up its full quota of suits and overcoats wrapped and ready for their journey to the outlying retail stores. Having done this it is again run on the elevator and taken to the street level. Here the hinged door is locked and the trip to the post office commences. It is a strange sight to see this little truck travelling amidst the traffic of crowded Fourth Avenue and is only a further indication of the application of electricity to mechanical motion and a demonstration of the capability of the electric industrial truck.

The truck carries thirty-five sacks of mail on ordinary trips and makes four or five trips a day to and from the post office. When the mail is in excess of the usual thirty-five sacks a trailer is attached.

Because its presence does not raise the insurance rates on the building, the truck is kept directly at the entrance to the elevators where the freight is loaded. An automatic charging plug has been provided so that the battery may be charged at the same spot where the truck is kept. The cost of charging does not exceed \$1.00 a day at any time.

Mr R H Raiss, Treasurer of the International Tailoring Company, is authority for the statement that "our electric industrial truck is an excellent investment and has more than justified its purchase. This truck saves us about \$150.00 monthly and we expect that it will pay for itself in a very short time. It is absolutely dependable and can always be relied upon when needed. It was unfortunate that we did not purchase it sooner."

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*Photograph by The New York Edison Company*

The Museum of Edisonia With Its Historical Collection Proved a Centre of Interest to Men of the Electrical Industry, as Well as to Students from Trade and Technical Schools and Colleges



*Photograph by The New York Edison Company*

A Corner of the Museum of Edisonia in Which Models of the Early Types of Motors and Generators Were Exhibited. At the Right, the First Bi-Polar Generator Is Shown, and in the Background Arc Lamps in Their Successive Stages of Development May Be Seen

# The Electrical and Industrial Exposition of 1922

THE fifteenth annual Electrical and Industrial Exposition has passed into history. Held at the Grand Central Palace, during the week of October 7-14 as part of the celebration of the beginning of Edison Service it portrayed not only the present uses of electricity in the home and in industry but showed also the progress that has been made since the first central station was placed in operation in 1882. Large crowds attended the exposition every day and on the closing day, when Thomas A. Edison and the Edison Pioneers inspected the displays it was almost impossible to force a passage through the throngs.

With one hundred and thirty-four exhibitors, the exposition covered the entire range of electrical application. There was a whole section devoted to electric vehicles and automobile accessories; model apartments showed the extent to which electrical appliances are helping solve the housekeeping problem; the industrial applications of electricity were shown by means of factories in actual operation; radio manufacturers occupied another large section and their receiving sets brought musical programs and news bulletins to the show's visitors; another department showed the year's progress in the development of electrotherapeutics; and there were exhibits which showed factory lighting, show window illumination and electric signs. In contrast with all these modern uses of electricity were the historical ex-

hibits in the Museum of Edisonia. Assembled by the Edison Pioneers and the Association of Edison Illuminating Companies these exhibits told the story of the experimental work carried on by Edison and his associates between 1875 and 1885. Among the exhibits were the first bipolar generators, one of the Jumbo generators from the Pearl Street Station, some of the first incandescent lamps and the first electric fixtures with their wooden sockets. A miniature of the Edison laboratory in Menlo Park, built entirely from material from the original laboratory, the first electric locomotive, the original phonograph with its tinfoil records, telegraphic instruments and a host of other relics of forty years ago completed the display in this interesting section of the exposition.

## *Household Exhibits*

Electric labor savers for the home, of course, held the interests of thousands. There were displays by the various manufacturers of such equipment and then in the several electrical apartments the devices were shown just as they would be used in the home. One of these apartments was managed by the Home Economics Bureau of The New York Edison Company, another was conducted by The Yonkers Electric Light and Power Company and another by The New York and Queens Electric Light and Power Company.

In addition to the Home Economics display The New York Edison Company

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maintained exhibits by several of its commercial departments. One by the Wholesale Bureau showed graphically the economy of central station service as compared with the service of the private plant. The Lighting Inspection Bureau explained the various factors which affect the consumption of electric current, pointing out the in-

medical applications of electricity. The coöperation that is being established between the electric light company and electrical dealers was the subject of an interesting display of printed matter by the Advertising Bureau. The district offices of the company were represented too, their booth having a large map with the district boundaries indi-



*Photograph by The New York Edison Company*

The Approach to the Exposition from the Lexington Avenue Entrance to the Grand Central Palace

creased use of electricity that is caused by cloudy days, storms or the early twilight in Fall and Winter. The Sign Bureau pointed out the advantages of electrical advertising and showed how the effectiveness of electric signs could be increased through proper maintenance. The Bureau of Electro therapeutics, coöperating with the manufacturers of medical equipment showed a number of the

cated. Here matters pertaining to Edison Service were explained and applications for service were received. The Bureau of Unwired Buildings demonstrated its plan for assisting in equipping for electrical service, existing buildings which have not yet been wired. How the employees of a public utility company are trained for more effective public service was shown in the exhibit by the Bureau of

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Education. Through the Heating Bureau the advantages of electricity as a source of heat were explained and the advantages of electricity over other forms of power were pointed out

The United Electric Light and Power Company maintained an exhibit which showed electricity in several different fields. The various effects that can be produced in show

### Exhibitors at the 1922 Electrical Show

Alpha Electric Company, Inc	151-155 West 30th Street
American Metric Association The	156 Fifth Avenue
American Radio & Electric Co	1133 Broadway
Andrea Frank A D	1581 Jerome Avenue
Appliance Distributing Corporation	673 Eighth Avenue
Baker R & L N Y Corporation	17 Central Park West
Berlin & Jones Company, Inc	47-553 West 27th Street
Betz Frank S Company	6 & 8 West 48th Street
Bleadow-Dun Company	Marbridge Building
Bohn C C Electric Company	820 Sixth Avenue
Borgfeldt George & Company	16th Street & Irving Place
Carbona Company, Inc	45 West 18th Street
Central Cigar Mfg Company	511 Canal Street
Clover Gardens	Grand Central Palace
Commercial Truck Company	405 Lexington Avenue
Consolidated Telegraph & Electrical Subway Company	54 Lafayette Street
Continental Radio & Electric Corp	6 Warren Street
Cutler-Hammer Manufacturing Co	50 Church Street
Dictograph Products Corporation	220 West 42nd Street
Disbecker & Company, Inc	15 West 35th Street
Domestic Electric Company	Cleveland, Ohio
Domestic Electric Company, Inc	43 Warren Street
Edison Electric Appliance Co Inc	140-142 Sixth Avenue
Edison Storage Battery Company	Orange, New Jersey
Electrical Repair Company The	240-242 West 25th Street
Electrical World	10th Ave & 36th Street
Electric Service Engineering Co	105 West 47th Street
Electric Storage Battery Co The	23-31 West 43rd Street
Eureka Vacuum Cleaner Company, Inc	31 West 43rd Street
F & M Liquid Heater Company	812 King St, Wilmington, Delaware
Fitzgerald Manufacturing Co	110 West 34th Street
Foote-Burt Company The	Cleveland, Ohio
Gage Publishing Company, Inc	461 Eighth Avenue
Geier P A Company	1400 Broadway
General Electric Company	120 Broadway
Gillespie-Eden Corporation	7 Dey Street
Glaesser Manufacturing Company	200 Fifth Avenue
Gold Car Heating & Lighting Co	220-36th St, Brooklyn, N Y
Gould Dreadnaught Battery Co	30 East 42nd Street
Halliwell Electric Company, Inc	113-119 Fourth Avenue
Hamersley Mfg Company The	25 Park Place
Hanovia Chemical & Mfg Company	233 N J Railroad Avenue, Newark, N J
Hart Wallace B	6 East 37th Street
Haughton Elevator & Machine Co The	220 West 54th Street
Henley Norman W Publishing Co The	2 West 45th Street
Hess & Hicks, Inc	326 West 41st Street
High Tension Transformer & Equipment Corporation	200 Washington St, Hoboken, N J

in an exhibit by the Power Bureau. A community booth maintained by the Bureau of Showroom Sales afforded all manufacturers an opportunity to demonstrate their appliances just as they do in the Edison showrooms.

window lighting formed a part of this exhibit. The lighting of factories, showing the relation between light and safety, light and production and light and waste formed another part of the United exhibit. Home lighting was

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also demonstrated and the Elixir fixtures which may be shifted about just as a picture is hung or removed, were shown. Wired furniture was also on display and the use of electrical appli-

capacity of 400,000 horse-power.

### Industrial Exhibits

The industrial exhibits were all in actual operation and they showed a

### Exhibitors at the 1922 Electrical Show—Continued

Himmer, Vitalis Jr	203-205 Sixth Avenue
Hobart Mfg Company, Inc The	Troy, Ohio
Home Devices Corporation	11 East 42nd Street
Hoover Suction Sweeper Company	47 West 34th Street
Hurley Machine Company	147 West 42nd Street
Hutchinson Manufacturing Co, Inc	Grand Central Palace
Ille F. Wilson Electric Corporation	109 East 23rd Street
Industry Illustrated	120 West 32nd Street
International Floor Machine Co	220 West 19th Street
Ives Manufacturing Corporation The	200 Fifth Avenue
Jackson William H Company	2 West 47th Street
Kelland Motor Car Company	58 Elm Street, Newark, N J
Kelvinator Sales Corporation	24 West 40th Street
Kent Company, Inc The	250 West 57th Street
Kimball Electric Company	23 West 37th Street
Kirkman & Son	Bridge & Water Streets, Brooklyn, N Y
Landers Frary & Clark	200 Fifth Avenue
Latham E B & Company	550 Pearl Street
Lawsom Electric Co.	122 5th Avenue
Lexington Radio & Electric Co, Inc	439 Lexington Avenue
Lightolier Company	569-571 Broadway
Lionel Corporation	48 East 21st Street
Manning Bowman & Company	200 Fifth Avenue
Marchbanks Press	114 East 13th Street
Maytag Company The	1319 Arch Street, Philadelphia, Pa
Metropolitan Device Corporation	1250 Atlantic Avenue, Brooklyn, N Y
Milburn Wagon Company The	Toledo, Ohio
Moisant Ozonized Water Company	178 Greenwich Street
Moore Company	Muncie, Indiana
Multiple Storage Battery Corporation The	350 Madison Avenue
Murrell Wm G Co	1672 Broadway
McIntosh Electrical Corporation	405 Lexington Avenue
McNab & Harlin Mfg Company	John & William Street
National Acme Company	77 White Street
National Marine Lamp Company	Forestville, Connecticut
Nelson's Loose-Leaf Encyclopaedia	30 Church Street
New Home Sewing Machine Company The	319 West 125th Street
New York & Queens Electric Light & Power Company, Bridge Plaza, Long Island City, N Y	
New York Edison Company, The	
Advertising Bureau	130 East 15th Street
Automobile Bureau	130 East 15th Street
District Office Managers	130 East 15th Street
Educational Bureau	130 East 15th Street
Electric Sign Bureau	130 East 15th Street
Electro-Therapeutics, Bureau of	124 West 42nd Street

ances for cooking was demonstrated. Occupying the center of the United booth was a miniature of the company's new Hell Gate Station. This station has just been placed in operation and it is designed for an ultimate

great variety of interesting manufacturing processes. A cigar factory operated by the Central Cigar Manufacturing Company showed the entire process of cigar manufacture from the selection of the filler to the wrapping

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and binding of the cigar. A wrapping machine exhibited by the Phenix Cheese Company showed how cream cheese is wrapped and packed for shipment. The wrapping of chocolate

Ozonized Water Company. The manufacture of envelopes was shown by Berlin and Jones Co while the Marchbanks Press printed stationery for the exhibitors of the show. The manu-

### Exhibitors at the 1922 Electrical Show— *Continued*

Heating Bureau	130 East 15th Street
Home Economics Bureau	124 West 42nd Street
Lighting Inspection Bureau	130 East 15th Street
Power Bureau	130 East 15th Street
Showroom Sales, Bureau of	130 East 15th Street
Unwired Buildings, Bureau of	130 East 15th Street
Wholesale Bureau	130 East 15th Street
New York Telephone Company	15 Dey Street
New York Tribune	154 Nassau Street
O B Electric Vehicles, Inc	Harris Avenue & Sherman St, Long Island City, N Y
Ohio Electric Company, Inc	145 West 45th Street
Otis Elevator Company	260 Eleventh Avenue
Phenix Cheese Company	345 Greenwich Street
Philadelphia Storage Battery Co	Ontario & C Streets, Philadelphia, Pa—41 E 42nd St
Pioneer Radio Corporation	206 Broadway
Pneuvac Company	Worcester, Massachusetts
Premier Service Company	2010 Broadway
Radio Corporation of America	233 Broadway
Radio Topics Publishing Company	Oak Park, Illinois
Rauch & Lang N Y Corporation	19 Central Park West
Rodger Publishing Company	Bush Terminal Building
Runkel Brothers, Inc	451 West 30th Street
Rutenber Electric Company	145 West 45th Street
Shelton Electric Company	16 East 42nd Street
Singer Sewing Machine Company	149 Broadway
Sleeper Radio Corporation	88 Park Place
Sloane W & J	5th Avenue & 47th Street
Steinmetz Electric Motor Car Corporation	Baltimore, Maryland
Stott Edward B Company, Inc	175 Fifth Avenue
Sunny Line Electric Sales Company	114 Chambers Street
The "1900" Washer Company	Binghamton, New York
Thomas Pump Works, Inc	154 Spring Street
Truswell & Sons William	16 Cedar Street
United Electric Light & Power Company, The	130 East 15th Street
Utensils Company	Fort Wayne, Indiana
Walker Vehicle Company	Grand Central Terminal
Ward Motor Vehicle Company	Mount Vernon, N Y
Ward Motor Vehicle Company	Grand Central Terminal Building
Watson Elevator Company, Inc	407 West 36th Street
Westinghouse Electric & Mfg Co	165 Broadway
Weston Electrical Instrument Co	Waverly Park, Newark, N J
Willcox & Gibbs Sewing Machine Co	658 Broadway
Woodrow Manufacturing Company	Newton, Iowa
Yonkers Electric Light & Power Company The	9 Manor House Square, Yonkers, N Y

bars by machinery was demonstrated by Runkel Brothers, while the preparation of soap was demonstrated by Kirkman and Son. The purification of drinking water by means of ozone was demonstrated by the Moisant

facture of screws was demonstrated by the National Acme Co. A new saw, capable of making every cut that a carpenter requires was demonstrated by the Hutchinson Manufacturing Company. Electrically operated ele-

## The Edison Monthly



*Photograph by The New York Edison Company*

Some of the Industrial Exhibits. The Runkel Display Showing the Wrapping of Chocolate Bars; the Exhibit by the Gold Car Heating and Lighting Company and the General Electric Company; the Screw Making Machine Exhibited by the National Acme Company; the Kirkman Exhibit and the Automatic Soap Wrapping Machine; High Speed Elevator Equipment as Exhibited by the Otis Elevator Company

vator equipment was demonstrated by the Otis Elevator Co, the Haughton Elevator and Machinery Company and the Watson Elevator Company.

### *Electric Truck Parade*

A comprehensive display of electric trucks, passenger cars and industrial trucks made up one of the most im-

portant departments of the exposition. Occupying a large part of the second floor of the building they formed a distinctive exhibit and were a centre of interest for merchants and manufacturers who are confronted with delivery problems.

On Tuesday, October 10, the exhibitors held an electric truck parade,



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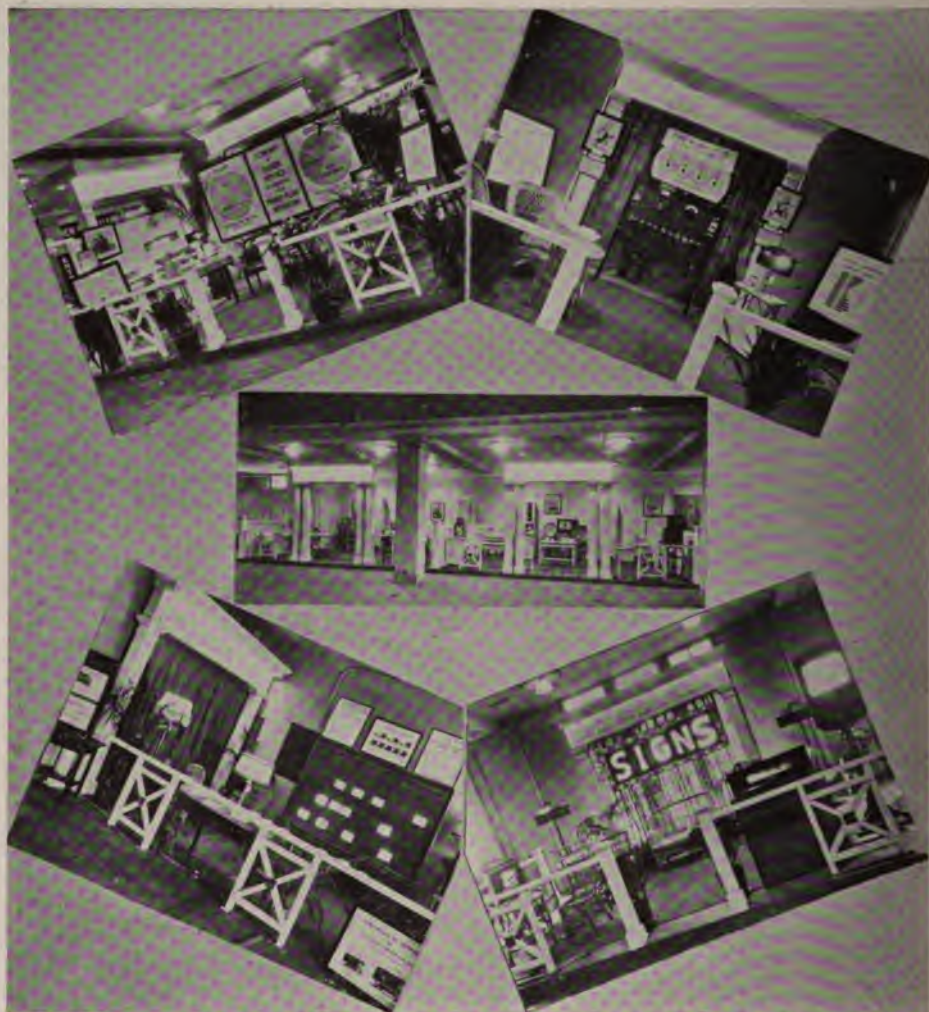
*Photograph by The New York Edison Company*

Industrial and Truck Exhibits. The Cigar Making Exhibit of the Central Cigar Manufacturing Company; Street Trucks, Industrial Trucks, the Electric Taxicab, and Charts Explaining Transportation Questions Were Found in the Automobile Section; the Moisant Ozonized Water Company Showed an Effective Way of Purifying Drinking Water

the first ever undertaken in New York. More than 150 vehicles participated, rolling down Fifth Avenue in a column that extended nearly a mile. Although the parade was held under the auspices of the manufacturers, the trucks themselves were entered by users and owners. Eighty different owners representing thirty different classes of service put their delivery equipment

in the parade. The procession was headed by a band on a five-ton truck and was escorted by a squad of motor cycle police. The start was from Sixty-seventh Street and Fifth Avenue and the parade broke up at Washington Square, a distance of about three miles. For the time the parade was on the avenue, south bound traffic was diverted to other streets. It was a big

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*Photograph by The New York Edison Company*

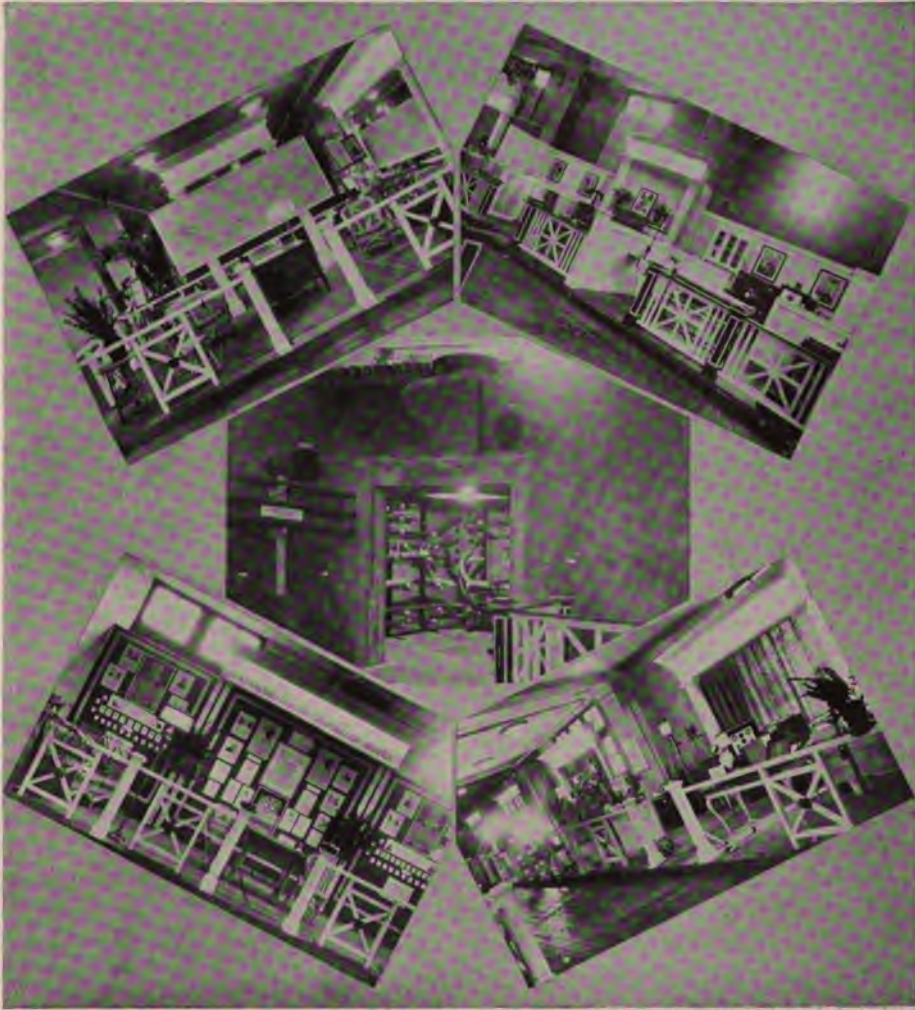
Exhibits by The New York Edison Company Showing the Activities of Some of its Commercial Bureaus. Charts Prepared by the Wholesale Bureau Showed the Economy of Central Station Service as Compared With the Isolated Plant; The Lighting Inspection Bureau Explained the Operation of the Electric Meter; The Home Economics Bureau Maintained a Pushbutton Apartment in Which the Kitchen and Laundry Proved Centres of Interest; Some of the Charts Shown by the Automobile Bureau; Electrical Advertising Was the Subject of the Sign Bureaus Display

day for electric vehicles and one of the least interesting elements of the proceedings was the fact that not in years have so many commercial vehicles been seen on "the Avenue" at one time. Several years ago Fifth Avenue placed a ban on commercial vehicles of all sorts and restricted itself ex-

clusively to passenger cars. This ban was temporarily lifted to permit the holding of the parade. Following the parade there was a perceptible increase of interest in the vehicles shown at the Electrical Show.

The show served to introduce to New York its first modern electric taxicab.

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*Photograph by The New York Edison Company*

**Central Station Exhibits. District Offices and Boundaries in the Territory of The New York Edison Company; Electric Appliances for the Home Were Shown by The Yonkers Electric Light and Power Company; Underground Electrical Construction Was Shown by the Consolidated Telegraph and Electrical Subway Company; Contractor-Dealer Cooperation Was Explained by the Advertising Bureau of The New York Edison Company; Medical Appliances as Exhibited by the Bureau of Electro-Therapeutics**

The vehicle, one of fifty being built by the Rauch and Lang Corporation for the Electrotaxi Corporation of 1292 Madison Avenue will go into service on November 1. The first ten have been completed and the balance will follow as the business increases. The cabs are painted in a combination of two

tones of grey—in striking contrast with some of the color schemes adopted by taxicab companies. They have a wheel base of only 102 inches, and as the control is entirely by means of a hand-operated lever, with no gears to shift they will be easy to handle in the traffic congested streets

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Photograph by The New York Edison Company  
Looking Down on the Main Floor from the Mezzanine

of New York. It is expected that the electric cabs will be a big factor for safety on the crowded streets. The insurance companies recognize the safety of electric cabs by giving a 25% reduction in the premium for liability insurance.

### *Electric Vehicle Statistics*

The Electric Vehicle Bureau of The New York Edison Company displayed an interesting series of charts pointing out the advantages of electrics. One chart was called the Dollar Race and showed graphically the relative distances that electric, gasoline and horse-drawn vehicles of different capacities could cover at an operating expense of one dollar, while others gave the electric vehicle census and the ages of trucks now in service.

### *Special Features*

As in former years, the opportunity to study the development and application of electricity afforded by the exposition was grasped by high school and college students. Domestic science

groups were greatly interested in the electrically operated apartments, while engineering students spent most of their time at the industrial displays and in the Museum of Edisonia under the guidance of the curators Messrs F A Wardlaw and Francis Jehl. Delegates attending the convention of the New York State

Federation of Womens Clubs were conspicuous among the show visitors. Safety Day brought many workers in the Safety Campaign to the show. Among them were Judge Elbert H Gary, Mr Lawrence V Coleman and Mr CW Price. On Safety Day visitors were shown the proper way to use electrical appliances and were warned of the dangers of carelessness. Safety workers were much interested in the possibility of reducing industrial accidents through the application of individual motor drive with the elimination of dangerous shafts and belts, and in the effect of proper factory lighting in reducing industrial hazards.

The closing day of the show was designated in honor of the Edison Pioneers and brought together many of the early associates of the inventor. Mr and Mrs Edison spent the afternoon at the exposition and while Mr Edison was greatly interested in the display of his own early inventions his enthusiasm was aroused by the growing application of electricity in industry.

December



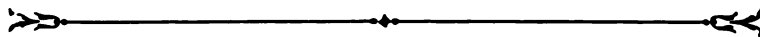
1922

*From a Drawing by Thomas Nast  
in Harper's Weekly 1868*

VOLUME 14

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## The Edison Monthly

### The Edison Monthly

Published by

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General Offices

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New York City

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N F BRADY, President  
WALTER NEUMULLER, Secretary  
FREDERICK SMITH, Treasurer

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Just about this time each year Santa Claus and his men turn their thoughts from questions of production to problems of distribution. The reindeer after their long summer's rest are being carefully brought to condition for their midnight trip to a sleeping world. Scratches on the historic old sleigh are being touched up and the rust is being rubbed from the runners. For more years than the mothers of good little boys and girls can remember this has been the yearly program in the land of icebergs and snow. There was a time only a few years ago when it looked as though old Santa was going to make a change in his methods and retire Prancer and Vixen and the rest of the reindeer herd to a well earned rest. That was when the automobile came into popularity. But Santa Claus knew his reindeer; knew that they could cover his long routes and knew, too, that to anxiously waiting little ears, the honking of a horn and the roar of a cut-out would never be the same as the prancing of hoofs on the roof and the jingle of sleighbells.

But while Santa's delivery system remains true to tradition his production department keeps in close touch with the changing desires of wide awake boys and girls and the modern

needs of their Mothers and Daddies. That is why the patron saint of Christmas time is an electrical engineer of considerable repute, a chemist of remarkable versatility and the holder of degrees in almost all the arts and sciences. Today the Christmas sleigh from Toyland carries as varied a collection of remembrances as could be imagined. There are drums and tops, and dolls and horns as of old but there are also electric locomotives, wireless sets, magnetic devices, toy electric ranges and sewing machines, chemical outfits and miniature electric cooking devices, and old Santa carries a passenger on his long sleigh-ride—the North Pole prototype of the modern “wireman's helper,” and between them they string thousands of tiny electric lamps on Christmas trees all over the land.

Old Santa is awake to the times and in his electrical department he has manufactured besides his toys for the little folks' Christmas, almost all of the larger electrical housekeeping appliances that have made such pleasing Christmas gifts for the big folks.



Speed in elevator service is not so much a matter of “feet per second” as of time between actual stops. With the application of the electric motor to elevator operation the rate of travel was greatly increased but there was still much time lost at each stop in the effort to bring the car to the floor level. Very often the car would stop a foot or two short and sometimes it would go too far. Elevator engineers have long been seeking to eliminate the waste of time and power that were entailed through the extra starting and stopping and with the develop-

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ment of the micro-levelling device have removed the last obstacle to rapid elevator service.

As described elsewhere in this issue the micro-levelling attachment automatically brings the car to an accurate stop. When the operator throws his controller on approaching a floor he automatically brings into operation a smaller motor geared to the driving shaft and this not only stops the car at the exact floor level but holds it there. The new attachment is being applied not only to express elevators, of which those in the Emigrant Bank Building are typical, but also to freight elevators where they prove especially effective in holding the car at the floor level as heavy loads are brought on or removed.

Since early in November New York has been enjoying something new in taxicabs—electrics—and judging by their popularity the addition to existing methods of city travel is decidedly welcome. It is the intention of the Electrotaxi Corporation eventually to have fifty of the cars on the streets of this city. To the passenger the cars are popular because of their cleanliness, their comfort, their safety, and the ease with which they can be handled in heavy traffic. To the operating company the electric cabs have advantages of dependability and economy. Not the least important item in their economy is the lower rate of insurance for all classes of protection. Insurance on the electric cabs is approximately 25% lower than on other types.

The introduction of these new taxis recalls the interesting fact that New

York's first motor driven public hacks were electrics: They were in service in the early '90's and resembled very closely the historic hansom cabs. These old cars eventually outlived their usefulness and not until the Electro-taxi Corporation introduced the present cabs has New York had anything but the ubiquitous gasoline taxi.

Although in its details the experience of the Atlas Storage Warehouse in the operation of electric trucks is extreme the principles of economy and dependability are the same which may be expected of any properly maintained delivery fleet. Not every user of electric trucks can expect them to go through eight years of hard service with no other replacements than one hub cap and a few separators in some of the battery cells. It must be admitted that even for electrics such a record of replacements is unusual and that for it there is no logical explanation. Aside from this unusual freedom from repair expense, however, the Atlas trucks bear eloquent testimony of the capacity of electrics for hard work, of ability to go to distant places over hilly roads and of economy in operating expense.

The officials of the Atlas Company are enthusiastic over their two eight-year old electrics. They have recommended them without reservation to their associates in the warehouse business and to anyone who is interested they will tell the story of what electrics have done for them. But more to the point than what they say is what they do.

Last September they bought another electric!

The Edison Monthly



H. A. Schoenkaia

A Winter's Night in Central Park

Photograph by H. A. Schoenkaia



## Santa Claus E E

**S**ANTA CLAUS is not what he used to be—not by a bookfull. Besides being a plump, merry soul of unlimited generosity, he is now an electrical engineer and a “whiz” at chemistry.

In a toy shop, on Fifth Avenue, where Christmas seems perpetual, a round, little face crowned with a Dutch bob and a sailor’s natty cap came just above the level of a long table where two electrical express trains were speeding along their separate routes, intent upon keeping their schedules. Two blue eyes followed the circling trains and a chubby forefinger was called into service now and then to be sure that his mother appreciated all the marvels of the electric signals at the switches and the brightly lighted railroad station. Then mother decided that they would better be going. Whereupon her young son took a firm stand. He would either stay right there with that train, or the train, tracks and all, must come with him.

There you have it! Three-year-olds crying for toys which a few years ago were reserved for the scientific experi-

ments of inventors. It was this situation that convinced Santa Claus that even the patron saint of Christmas was becoming, so to speak, a back number. His pre-Christmas mail was getting quite beyond him. He got out an old text book on physics and began thumbing the pages anxiously when he kept getting letters like this:

“Dear Santa, please bring me a radio set. I hope it will catch wave lengths as much as 800 meters and I would like two variable condensers on my set.”

Or, “Dear St Nicholas, I want to make my dolls’ new dresses on an electric sewing machine just like Mother’s, only the size for a little girl like me.”

That was when the old boy got a stack of new books on radio and electrical engineering and chemistry and began burning the midnight watt. Filling the magic Christmas sleigh

in this year of grace is not a matter of loading in dolls and drums and gimcracks with the confidence that anything is all right provided there is plenty of it. Mercy, no!

The little mothers of healthy young dolls, nowadays, think that



*Drawings by Harry Cimino*

**Filling the Magic Sleigh This Year of Grace Is Not a Matter of Loading in Dolls and Drums and Gimcracks**

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Besides Being a Plump Merry Old Soul of Unlimited Generosity He Is Now an Electrical Engineer and a "Whiz" at Chemistry

electricity and plenty of lights in their dolls' houses are just about as necessary as plenty of ventilation. Just because a house is small, they explain in their carefully written Santa Claus letters, is no reason why the housekeeper doesn't need a little vacuum cleaner just the size for a 10 x 12 inch rug, and an electric hot plate to make doll porridge is a mighty handy thing. Then there must be room for an electric washing machine because it is amazing how laundry does pile up with a large family. There must also be grills and chafing dishes and percolators, just like Mother uses when she entertains her big guests at tea or supper.

Running away to sea may be as fascinating as ever for boys, but it is losing in popularity as an experiment

nothing less than a telegraphic set of his own will save his father from consequences with the telephone company. In fact, his family will tell you, the youngster talks in an off-hand manner about alternating and direct current, rheostats and chemical reactions as if they were invented to play with.

Santa Claus has to chuckle and get a few more laughwrinkles around his twinkling eyes, every time he thinks about what

because they would be sure to miss a lot at home. Boys of the present on-rushing generation amuse themselves with about all the electrical equipment their fathers have in their factories and office buildings.

If Junior works in wood he has the saws and drills in his workshop attached to an electric motor. If he is interested in sound experiments, he will probably insist on rigging up extensions to the telephones until



It Takes Toys That Do Something to Please Youngsters Who Play With Wireless

## The Edison Monthly

a joke he is going to have on the high school professors of physics and chemistry when these young radio experts progress to first year Latin and Freshman athletics.

"Shucks! That's pie!" They will tell the instructor when he looks over a weighty volume and begins to tell his class about the marvels of electricity. They have been "taming" electric motors and making them build bridges, run toy trains, operate saw mills or do any other task they set them to, ever since St Nick discovered what a lot of fun was being wasted on serious scientists.

Even the weather bureau has been drafted into service as an electrical toy. For the youngster who gets a weather bureau outfit for Christmas, finding out which way the wind blows is



"I Want to Make My Dolls' Dresses on an Electric Sewing Machine, Just Like Mother's"



He Would Stay Right There With That Train, or the Train, Tracks and All, Must Come With Him

much more simple than some politicians think.

It takes toys that do something to please these presentday youngsters

who play with wireless and make experiments with sound and light. Electric toy engines have to be made part for part like the locomotives that carry passengers across the country. And a ten-year-old can not only take his toys apart; he can put them together again.

For those who are still on Santa Claus' mailing lists, electrical efficiency is as important in play as it is in work. Santa Claus E E hints that these youngsters have decided not to wait for anybody to invent a new electrical toy, if they think of it first.

After a survey of his most recent correspondence, the ruddy chief at Christmas headquarters issues a statement that the only conditions which cramp the electrical style of boys and girls, now, is that grown-ups do not think of enough ways to use electricity.

## The Fifth Avenue Hospital

THE hospital problem of providing an "all outside" room arrangement without a prohibitive waste of ground space seems admirably met in the unusual planning of the new Fifth Avenue Hospital, on Fifth Avenue at 105th Street. The floors form a huge St Andrews cross, each arm of the cross being divided by a corridor and, opening on this corridor are rooms which overlook the open grounds. The crossing of the four areas forms a rotunda-like central space on each floor which serves as the administrative centre. Here the supervisor has her

desk and from it she has perfect command of the four radiating corridors. Besides the supervisor's room there is a service room, a treatment room and a visitors' parlor. A loggia outside the reception room overlooks the park.

The unusual plan of the hospital was suggested by Dr Wiley E Woodbury, medical director of the hospital and consultant on hospital construction. It is the first time such a plan has ever been used. Dr Woodbury was director of the Hahnemann Hospital before the consolidation with the Laura Franklin Free Hospital for

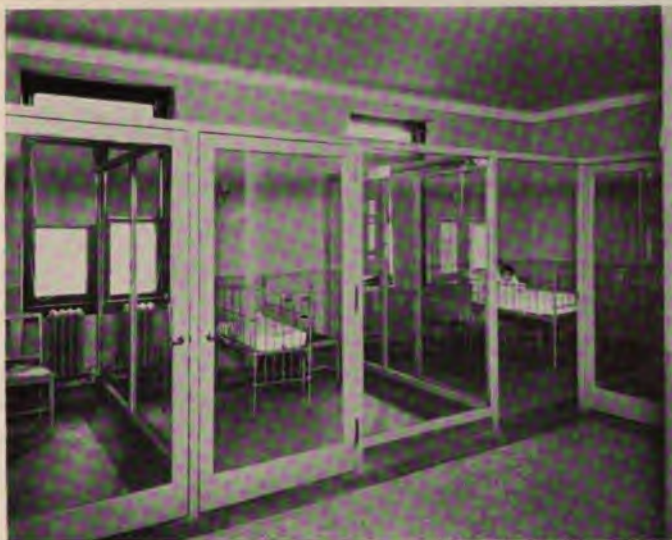


*Mare Eidlitz & Son, General Contractor  
A Gustafson Co, Electrical Contractor*

*York and Sawyer, Architects  
Photograph by The New York Edison Company*

Planned Somewhat in the Form of a Huge St Andrew's Cross, It Has Been Possible for the Fifth Avenue Hospital to Have Every Patient's Room an Outside Room

## The Edison Monthly



*Photograph by The New York Edison Company*  
The Glass Cubicles Provide the Isolation Necessary in the Care of Small Patients  
But Without the Loneliness of a Private Room

Children and the reorganization of these two as the Fifth Avenue Hospital.

It has been said that the very wealthy and the very poor can always be sure of the best in medical treatment, but that a different condition prevails for those who cannot afford to pay the high cost of a hospital room and who will not accept charity. It is for these in between folk that the Fifth Avenue Hospital is intended. There are no public wards and the rooms will be priced according to the means of the patient. There are three hundred and forty rooms, all private, all with lavatories, many with baths and all with outside air and light.

One of the floors, due to the \$400,000 gift, is entirely free and there are also many endowed rooms and specialized floors, such as the doctors' working floor, the maternity floor, the children's floor, the nurses' floor and, on the roof, solariums with lovely views

of Central Park.

Nowhere does one see the usual hospital white. Soft tones of French gray, buff and tan, with a little blue in the curtains, are the shades used and the furniture in the bedrooms is like that seen in a comfortable modern hotel. Even the operating rooms are in gray.

The highly developed scientific departments are all

on the eighth floor which is the doctors' working floor. Its four units, in the four wings are separate, but are in close enough relation to be of great mutual service. Here one finds the surgical wing with its eight operating rooms, the x-ray wing, the pathological laboratories and the diagnosis and medical wing which has all the newest appliances.

The entire second floor has been set aside for use by the Laura Franklin-Delano Foundation and much free work is done here in connection with the New York Society for Prevention of Cruelty to Children and the Heckscher Foundation, whose new building occupies the opposite Fifth Avenue corner.

There are on this floor, besides the usual private rooms for the larger children, a small ward for twenty-four hour cases and a dining room with gayly painted chairs and tables. There are rooms laid off in glass cubicles so that the small patients while in isola-

## The Edison Monthly

tion may see each other and not be lonely. There is also a school room as well as a porch and teaching room, with teachers assigned by the Board of Education. A spacious open-air play roof completes the children's department.

On the nurses' floor the bedrooms open on a balcony which goes almost entirely around the building and there are comfortable

parlors and rest rooms. On the first floor are the nurses' dining rooms, one of which is for the student nurses and is provided with cafeteria service for emergency use. The doctors' dining room is also on this floor.

In going through the hospital one sees continual evidence of Edison Service which is used to the extent of 300 kilowatts and 200 horse-power. The elevators are of course electric and hospital communication is through the dial system automatic telephone, the telacall, with different combinations of musical tone for different individuals, and the telautograph.

All food for patients, doctors, and nurses is prepared in the basement kitchens and comes up in electric dumbwaiters or in electric food carts. The central service room in the basement where telautograph orders are taken from every department is flanked by a general storeroom, phar-



*Photograph by The New York Edison Company*  
The Operating Rooms Are Furnished in Gray Instead of the Usual White. This Room Not Only Has the North Daylight But Is Equipped with a Powerful Electric Light for Night Work

macy, surgical supply room, main kitchen with adjoining vegetable room, ice cream room, diet kitchen under the direction of trained dietitians, and linen supply department. Here, too, is the laundry with its most up-to-date electric service including huge cylinders for ironing linen and doctors' and nurses' uniforms.

Another unusual feature of this hospital is the provision for suites of offices and waiting rooms for the attending physicians. In these offices, which are on the ground floor, doctors will be able to receive their private patients while remaining within call of their patients in the hospital.

The fact that the hospital has a million and a half endowment enables it to give 37 per cent of its service free. There were 4,900 subscribers to the building fund. The total cost was \$3,500,000 and the remaining \$1,000,000 still needed will be raised by private subscription.

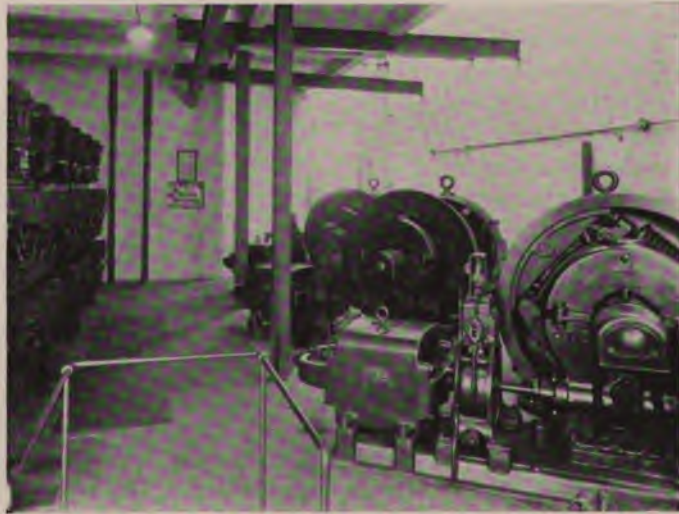
## Elevator Improvements

THE average bustling business man these days, usually takes elevators as much for granted as he does the side-walks upon which he walks. Yet on thought he will realize that a real, thorough-going, practical elevator, is a thing of comparatively recent date, for it was the development of the elevator, together with the invention of steel construction, which made New York's sky-scrapers possible. And still more remarkable, during the short time that we have had elevators with us, there has been an almost complete revolution in their construction and management.

It has been proved beyond doubt that back in the time of Nero, elevators or mechanical lifts of a primitive sort were employed in Roman palaces; and from that time to our own, hoisting devices of various sorts have had their brief glory; but before the work of Elisha Otis, the elevator was hardly anything more than a mechanical curiosity. First this inventor employed a steam engine, then a hydraulic arrangement, making use of steam pumps, and then, with the advent of the electric motor, came the electric elevator.

Yet at the time when the older sky-

scrapers were built, say those dating back some twenty years, the hydraulic elevator had been brought to a greater degree of perfection than that achieved by the early electric elevator. Accordingly in tall buildings of that period, where it was desired to assure the most rapid vertical travel, hydraulic elevators were selected in spite of the fact that these required elaborate and costly mechanism for their operation. Logically, the elevator operated by electric motor was the ideal thing. It only remained to make it as good in practice as it was in theory. This is the revolution that has gone on in elevator-making during the past decade, and especially within the past five years, so that now when a new building of high grade is erected, the electric and not the hydraulic has become the standard vehicle for



*Photograph by The New York Edison Company*  
Three of the Eight Otis Gearless Traction Multi-Voltage Micro-Drive Elevator Machines Which Have Replaced the Hydraulic Elevators in the Building of the Emigrant Industrial Savings Bank

## The Edison Monthly

smooth and speedy vertical travel.

As far as the average man, however, is concerned, this has all gone on behind the scenes as it were, so that the daily visitor to large buildings hardly realizes the changes that have been made. He comes instead to expect a high order of elevator service, just as he assumes an adequate amount of light or heat.

Technically speaking, the perfection of the modern electric elevator depends upon the development of what is called the "traction type." Originally an electric elevator was controlled by a rope wound about a drum, which in turn was rotated by an electric motor. With such a mechanical basis, it was impossible to obtain either the highest speeds, or the great heights needed in the tallest buildings. Between this arrangement and the latest traction equipment, several intermediate steps intervene, which, however, need not be considered here, as each proved to be merely a stage in the production of the latest high-speed, electric traction elevator. The fundamental point of this is a slow-speed motor, either mounted on, or geared to, the driving sheave of the car, movement of the ropes being secured by traction only—a method infinitely superior in its simplicity, and at the same time affording a much

greater degree of safety in travel.

Besides these technical advantages, there are other factors that especially recommend the traction type elevator to the building owner. The small amount of operating machinery required is placed immediately over the elevator shaft, usually in a pent-house on the roof. This not only saves space in the valuable part of the building proper, but also halves the amount of cable needed, where an elevator is operated by machinery in the basement.

When one speaks of the increased speed possible with the new traction elevator, a very definite and practical thing is meant. There is a theoretical or experimental speed of an elevator, involving the rise of so many feet in so many minutes, and as far as this rated speed is concerned, the hydraulic elevator can still make a fair showing. Then there is the actual speed as proved in daily usage under the conditions found in large office-buildings, a



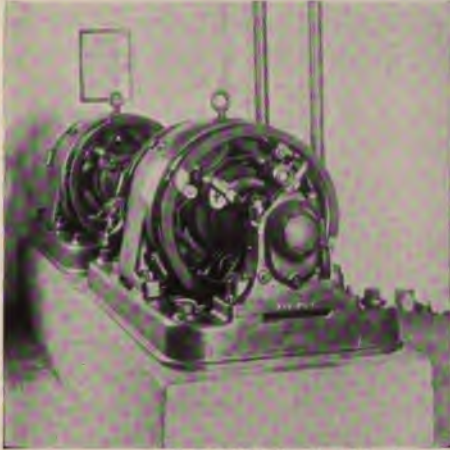
*Photograph by The New York Edison Company*

One of the Elevator Machines Showing, at the Left, the Main Motor with Driving Sheave Mounted on the Armature Shaft, and in the Foreground, the Small Micro-Drive Motor Which Automatically Brings the Car to the Floor Level. Emigrant Bank Building



## The Edison Monthly

speed which is dependent not so much on the lifting power of the equipment, as the ease, quickness, and accuracy with which stops and starts can be



*Photograph by The New York Edison Company*  
The Balancer Set Which Provides the Voltage Steps Used in the Multi-Voltage System of Control—Emigrant Bank Building

made. This is spoken of by elevator-engineers as facility in acceleration and retardation, and includes the making of accurate landings, particulars in which the electric definitely excels all other types.

In this connection, a recent improvement has been made, the new micro-levelling attachment now included in the latest electric elevators. This is a device by means of which an electric elevator can be brought automatically to accurate floor-stops; it depends upon an additional smaller motor mounted on the same shaft with the larger driving apparatus. A certain distance above and below each floor is made a special zone, controlled by the micro-levelling device, so that once the operator throws his lever on approaching the landing, the mechanical leveller does the rest, not only bringing the car to an accurate stop,

but also holding it in that position.

That such an arrangement as this is of infinite value in high-grade elevator operating is self-evident. Where office buildings or department stores are concerned, it increases speed by assuring accurate landings at the first try, and at the same time, does away with possible hazard of passengers' tripping where an inaccurate landing is made. In commercial establishments, it is of equal though different service, in trucking of goods on and off a freight elevator. The accuracy of landing obtainable with this device is almost unbelievable, a slightly wider variation (an eighth of an inch) being allowed, however, in the case of the fastest passenger cars.

In a different department of elevator engineering is the other important recent improvement represented by the new multi-voltage control system now being introduced into New York in the new elevators lately placed in the Emigrant Bank Building, an installation which embodies in every way the very last word in present day elevator efficiency. As most readers of THE EDISON MONTHLY know, the acceleration of an electric elevator is produced by cutting out electrical resistance, so that a gradually increased amount of power is brought to bear upon the lifting apparatus. With the new multi-voltage system, two compensating sets are used, floating upon the 240 volt power circuit; these are constructed so that voltages of 60, 120, 180 and 240 are available for operating purposes, a much smaller amount of resistance being employed in acceleration and retardation. Possibilities of greater speed, smoother running, and decreased current con-

## The Edison Monthly

sumption are suggested by this new arrangement.

It must not be forgotten that technical points such as these are valuable not because they are technical, but because they have definite practical consequences in building maintenance. For instance, the elimination of the bulky hydraulic elevator equipment in favor of the electric motor supplied from the central station saves space within the building and does away with any necessity for high-pressure steam machinery on the premises, and steam-pumps for elevator service are notoriously wasteful of coal. Where greater going-speed is obtained—including greater facility in starting and stopping—the passenger-efficiency of elevator equipment is greatly enhanced, since the same number of cars of the better type, will handle a greater number of passengers. In some buildings, where otherwise new shafts would have to be constructed to meet the demands for better elevator service, extensive reconstruction has been avoided and increased elevator service obtained, merely by substituting the new electric for the old hydraulic equipment. While this change embodies a considerable item of expense, it is infinitely more practical and less expensive than undergoing extensive building reconstruction.

That the advantages of the newer type of electric elevators are actual and not theoretical is shown by the large number of buildings which have undertaken this change over of their elevator service, especially within the last two years. More than two hundred large buildings have ordered this form of renovation, the number of cars concerned being between five and

six hundred. The 200 structures mentioned include 53 office buildings, 19 apartment houses, 17 hotels, 101 mercantile establishments, the others being listed as miscellaneous. In all of the instances named, the renovation has included the elimination of high pressure steam equipment, and the substitution for it of electric current from the mains of The New York Edison Company.

### Electric Taxicabs

A fleet of electric taxicabs, the first of their kind in the country, have just been placed in service in New York. Operated by the Electrotaxi Corporation of 1292 Madison Avenue, and garaged at the Electric Garage, 62nd Street and Central Park West, the cars serve the theatre district, the railroad terminals and the uptown residential section.

There are a number of factors about the electric taxicabs which augur well for their success in New York. From the standpoint of the passenger there is the element of safety and the ease with which they can be handled in heavy traffic. This ease of handling will also make for quick trips, for an electric will be well on its way while the chauffeur of a gasoline taxi is still shifting his gears. Their cleanliness too must not be overlooked. From the standpoint of the operator there is the matter of economy. Electric taxis are not only economical in operation, but have lower insurance costs and give many years of service. It is not too much to predict that these electric taxicabs will be in just as good operating condition ten years from now as they are today.

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The ease and safety with which they can be driven in traffic is of particular importance, especially in a city the size of New York, where traffic is extremely heavy. A short wheel base and a control by means of a hand operated lever, together with quick, smooth acceleration, render the car exceptionally easy to handle.

streets. As a verification of the safety of these cars, the insurance companies give a twenty-five per cent reduction in the premiums for liability insurance. Premiums for fire and collision are correspondingly low.

It is the intention of the Electrotaxi Corporation to work the cabs in double shifts, keeping them on the



*Photograph by The New York Edison Company*

Part of the Fleet of Electric Taxicabs Now in the Service of the Electrotaxi Corporation. The Cars Went Into Service on November 13 and Are Proving Extremely Popular

They are attractive looking cars, conservative and well equipped throughout. The car is of the standard taxi design, is trimmed in hand-buffed leather and has large headlights, disc wheels, and a bumper both in the front and the rear. They were built by the Rauch and Lang Company.

The use of these electric taxis points toward the elimination of a great deal of the danger prevalent on our city

streets from eighteen to twenty hours a day. Two sets of batteries are to be used and the battery compartments are specially designed for rapid changing, so that an exhausted battery may be removed and a fresh one substituted in less than ten minutes. By thus changing the battery, the cars will have an operating radius of approximately one hundred and twenty miles, and a maximum speed of twenty-five miles an hour.

## The New Hub Cap

**T**HERE is just one black mark on the otherwise perfect record of the two eight-year-old electric trucks in the service of the Atlas Storage Warehouse Company. It is in the matter of repairs and replacements—the company has had to expend for repairs and replacements on these two trucks during the eight years they have been in service the price of one hub cap—that is all. Electric motors, controlling equipment, and even the batteries, with the exception of a few separators in some of the cells, are just as they were the day the trucks went into service in March, 1915. All of which accounts for the enthusiasm with which Mr Benjamin Blum, the president, and Mr J D Kreiger, the manager of the Atlas Company, endorse electric trucks whenever anyone seeks their opinions. Incidentally it also explains why, when it became necessary to increase the Atlas fleet, another electric was purchased.

Today the van equipment of the Atlas Company consists of the two original two-ton G M C trucks and a new two-ton Commercial truck which was installed on September 10. Their work in the general handling of household goods is typical of that of any storage warehouse.

The warehouse is located at 157 West 124th Street but the territory covered by the vans is by no means limited to Harlem or even to the Greater City. In fact, some of the suburban runs are recorded among the noteworthy achievements of these vehicles. Ask anyone of the Atlas organization about "miles per charge" or

work on hills and they will tell you about the trip to Nutley or Montclair, New Jersey, or the one to Hartsdale in Westchester County, or perhaps the Plandome, Long Island, trip. On all of these trips the vans maintained their high mileage records and on all of them they negotiated hard hills. On the Nutley trip the two G M C trucks covered fifty-two miles without a boost and besides the ordinary hills of New Jersey climbed the heavy grade from the Weehawken ferry. The Montclair trip on one day was followed by the trip to Hartsdale the next day, the vans, loaded with furniture, remaining in the warehouse over night where they were recharged. This trip was not so much a matter of mileage as of hill climbing ability in proof of which, William Fitzpatrick, the chauffeur, tells about the dangerous Breakneck Hill in Scarsdale.

### *On the Westchester Hills*

"We had to cross this hill to get from White Plains road to Central Avenue and I'll say they did not make any mistake when they named it. I was about half way over when a woman told me I better get off before I got smashed. She told me about other accidents on the hill, but I knew my brakes were right and that the electric could make it so I went ahead."

The Plandome trip, a distance of forty-six miles, was accomplished in five hours and forty-five minutes, the vans leaving Harlem at 7 A M and getting back to the warehouse at twelve forty-five. This includes the time spent at Plandome in loading.

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Anyone who has driven an automobile on the north shore of Long Island knows the long heavy grades which lead into the different villages. The Manhasset Hill is particularly difficult, not only because of the heavy grade and the distance but because of the curves. The Douglaston Hill is not much better. The Atlas vans, one of the old G M C's and the new Commercial truck both negotiated these hills without trouble and the old van kept right up with the new one for the whole distance.

### Use Electric Trucks! Why? Ask All Owners

Selected from over six thousand suggestions in the slogan contest held by the Electric Motor Truck Association, that submitted by Mr J H Ander-

son of 111 Broadway has been adjudged the winner of the \$500 prize. The winning slogan consists of seven words, "Use Electric Trucks—Why? Ask All Owners," which brings the rate per word for Mr Anderson's literary effort to a trifle over \$71.42. Mr Anderson is connected with the Ebling Weaver Automobile Supply Corporation.

The second prize of \$200 went to Mr J H VanHarlingen of 175 Fifth Avenue, and the third prize, \$100, was won by Mr William B Nesbitt of 285 West 108th Street. In addition to the three major prizes there were forty awards of \$5 each.

The contest closed on October 14 and it required nearly four weeks for the judges to pass upon the six thousand suggestions that were received from every part of the country.



*Photograph by The New York Edison Company*

The New and One of the Old Vans of the Atlas Storage Warehouse Company. The Two Old Vans Have Been in Service Since 1915 and There Has Been But One Replacement—a Hub Cap

# Envelopes

LETTERS in the old days, whether declarations of love, war, peace, or the mere messages of trade all had the appearance of important documents of state, wrapped as they were, in parchment carefully folded, tied with a red tape and sealed with heavy wax. In the haste and hurry of today's efficiency it is hard to picture what would happen if letters now had to receive similar treatment, before being entrusted to the post.

which to enclose letters was long felt but it was not until about 1845 that the first envelope appeared. It met with instant popularity and soon the manufacture of envelopes became an important industry. Of course there was no machinery in this country for folding envelopes, and as all work was done by hand, it was crude and costly. Ten years later, young Henry C Berlin, one of the pioneer manufacturers of envelopes in New York, went to Europe and brought back to this coun-

## The Mission of the Envelope

"Carrier of news and knowledge,  
Instrument of trade and industry,  
Promoter of mutual acquaintance,  
Of peace and good will among men and nations.  
Messenger of sympathy and love,  
Servant of parted friends,  
Consoler of the lonely,  
Bond of the scattered family,  
Enlarger of the common life."

*Inscription on the new Post Office Building at Washington, D. C.*

The necessity for a wrapper in



*Photograph by The New York Edison Company*

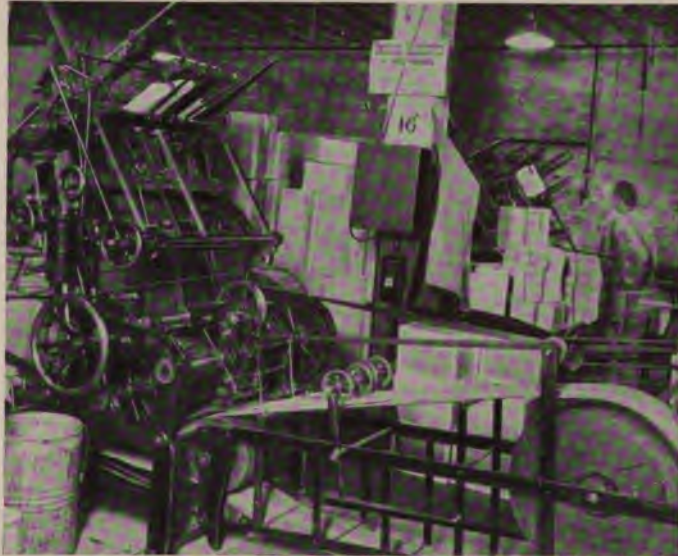
A View in the Commercial Envelope Department of Berlin and Jones Showing the Latest Type of Plunger Envelope Folding Machines Which Make Many Thousand Open-side Envelopes Each Day

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try a machine to do the folding. With new manufacturing methods the company became well established and today the firm of Berlin and Jones, who occupy a seven-story building at 547 West 27th Street, is one of the largest manufacturers in the country. The machinery of Henry Berlin has long since given way to modern electrically operated equipment,

and in the present factory the motor plays just as important a part as the machines themselves. An electrical installation of more than two hundred horse-power is supplied from the lines of The New York Edison Company.

The chief product of this firm for many years has been envelopes of every kind but they also do printing and make commercial and social stationery as well as the boxes in which paper is sold. They are in the true sense dealers in "papetries." Mountains of paper in the unfinished state are shipped to them from the mills of Massachusetts. Almost one hundred and fifty tons are used each month and the finished products are shipped to every part of the country. All paper comes in large plain sheets and is stored upon shelves which present a gayly colorful appearance with stacks upon stacks of paper every hue of the rainbow.



*Photograph by The New York Edison Company*

**A New Rotary Envelope Folding Machine of the Large Type Making Open-End Commercial Envelopes**

Berlin and Jones realizing that "The pen is mightier than the sword" have made it their business to furnish the necessary munition for those who use this great weapon.

In the making of their envelopes and stationery seventy-five to one hundred grades of paper are used, each according to the quality desired and the purpose for which the envelope is intended. The finer grades of closely woven paper are made from rags treated with sulphite while the commercial grades are made from wood pulp. A fine linen finish, smooth kid, or hard glazed vellum, laid or parchment finish is easily given to the paper. Heavy envelopes are made from jute, hemp, manila or brown craft paper.

The envelopes which Berlin and Jones make are of great variety and style. The smallest are of Lilliputian dimensions while the largest may assume gigantic proportions. Some

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have open ends, some open sides, some are window envelopes with transparent oiled paper for revealing the address from within; while some are gummed and others of commercial type fasten by cords and clasps or little metal catches.

Making envelopes is a comparatively simple process and varies according to the manifold uses to which the containers are to be put. First the paper is cut out by a die, the pattern of which is chosen from at least three thousand styles. The die is placed on the stack of paper and under great pressure cuts four or five hundred sheets in one stroke. The blanks thus cut are fed into the motor-driven rotary or plunger folding machines, which fold them one by one and gum the flaps. They are then carried to the folding box where agile little mechanical fingers press down all the flaps with the exception of the top one. The gum on the top flap is dried as the envelopes are carried in a snug little wire pocket along an endless chain. When the chain is filled with envelopes it gives the appearance of a monster caterpillar crawling along. The machine automatically counts each finished envelope as it is delivered and deposits them in bunches of twelve, twenty-four or any number. After this they are banded with narrow strips

of paper and are ready for boxing. These machines are very efficient, the larger ones making as many as eighty to one hundred thousand envelopes a day. The fact that each one has its individual motor of one horse-power makes it adjustable to the varying speeds required for different qualities of paper.

The uses for envelopes are legion. They are used for holding everything from hair nets to securities, theatre tickets, drugs, circulars, file material for file cabinets, articles sold in stores; and generally for concealing anything and everything. Such envelopes as those for securities and the special kinds must be made by hand in the Hand Fold Department. Envelopes seem to become associated with the particular use for which they are employed. They have their caste and class, their fashion and their style, but still remain universal figures and faithful servants of every race and creed.



*Photograph by The New York Edison Company*

An Operator Cutting or "Dieing Out" Envelopes. Enough Envelope Blanks Are Cut in One Day by This Machine to Keep Busy Five Folding Machines



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## The Edison Directory

THE very great increase in the number of names listed, and consequently the broadened scope and added importance of The Edison Directory make it necessary to issue it as a separate publication rather than as a department of THE EDISON MONTHLY. The Directory in its new form will be distributed partly by mail and partly through the offices of The New York Edison Company. It will be sent without charge to anyone upon request.

The Edison Directory is published for the purpose of rendering the greatest possible assistance to those desiring to use Edison Service for any purpose. Its lists include the names of dealers in every form of electric appliance, manufacturers or their agents, and contractors who do electrical work in the territory served by this Company. So far as is possible, the accuracy of each name and address is carefully verified.

Another object of the Directory is to give to every manufacturer, agent, dealer, and contractor an equal chance with those desiring to purchase devices or to have equipment made.

The Company desires to encourage the establishment of the largest possible number of dealers in electrical devices, appliances, and incandescent lamps, and of independent electric contractors who do satisfactory work at fair prices. It is believed that this policy is in keeping with the public interest, and is aided through a directory of this nature.

Each manufacturer or agent has equal right to free space, electric current and demonstration in the various showrooms of the Company, and equal endorsement by the Company's representatives when talking with prospective purchasers. The Company's representatives are forbidden to recommend any particular device as compared with another, and final choice in the purchase must rest with the purchaser.

It might be added that the Company itself makes no sales (other than of incandescent lamps), nor does it install any kind of electrical equipment upon the customer's premises, other than directly identified with its service and meter. Appliances are shown and demonstrated, and an order from the purchaser will be received and transmitted to the manufacturer or agent of the appliance selected, without commission or charge of any kind for this service.

*The New York Edison Company*

## District Offices of The New York Edison Company

### Contract and Inspection Department

#### Broadway District

Temporary Office at 10 Irving Place, David T. Brown, Manager; Telephone Stuyvesant 5600. Boundaries: The Broadway District includes the territory south of Christopher and Eighth Streets, west of the Bowery, and south of Catharine Street.

#### Norfolk Street District

Norfolk Street Office at 20 Norfolk Street, L. P. Bendall, Manager; Telephone, Orchard 4261. Boundaries: The Norfolk Street District includes the territory south of Eighth Street, east of and including the Bowery, and north of and including Catharine Street.

#### Irving Place District

Office at 10 Irving Place, S. F. Fahnestock, Manager; Telephone, Stuyvesant 5600, Extension 405. Boundaries: The Irving Place District includes the territory between and including Eighth Street and Twenty-eighth Street from the East to North Rivers.

#### Forty-second Street District

Office at 124 West 42nd Street, W. M. Kerr, Manager; Telephone, Bryant 5262, Extension 98. Boundaries: The Forty-second Street District includes the territory north of Twenty-eighth Street to and including Fifty-ninth Street from the East to the North Rivers.

#### Eighty-sixth Street District

Office at 151 East 86th Street, H. S. McGrath, Manager; Telephone, Lenox 7780. Boundaries: The Eighty-sixth Street District includes the territory north of Fifty-ninth Street and south of One Hundred and Tenth Street, east of Central Park West.

#### One Hundred and Twenty-fifth Street District

Office at 15 East 125th Street, William J. Meara, Manager; Telephone, Harlem 4020. Boundaries: The One Hundred and Twenty-fifth Street District includes the territory bounded by the North River, Fifty-ninth Street, Central Park West, One Hundred and Tenth Street, East River to and including One Hundred and Thirty-sixth Street east of St. Nicholas Avenue, and to the south side of One Hundred and Thirty-fifth Street west of St. Nicholas Avenue.

#### Bronx (One Hundred and Forty-ninth Street District)

Office at 362 East 149th Street, Edmund R. Partridge, Manager; Telephone, Mott Haven 4600. Boundaries: All territory lying between the Harlem and Bronx Rivers and between One Hundred and Thirty-second Street and East One Hundred and Seventy-second Street. The dividing number between the One Hundred and Forty-ninth Street Office and the Tremont Avenue Office, on all avenues with the exception of Third and Park Avenues, is 1499. On Third and Park Avenues, however, the dividing number is 3799.

#### Bronx (Tremont District)

Office at Tremont and Monterey Avenues, Richard Goff, Manager, Tremont Avenue Office; Telephone, Tremont 6900, Extension 100. Boundaries: The territory covered by the Tremont Office extends from approximately One Hundred and Seventy-second Street north to Yonkers City line; all territory lying between the Harlem River and Two Hundred and Twenty-fifth Street, and the Hudson River from Two Hundred and Twenty-fifth Street to Yonkers on the West, and the Bronx River on the East, including Woodlawn, Spuyten Duyvil, Riverdale and Mount Saint Vincent Districts.



Night and Emergency Call (Manhattan): Watkins 3000  
 Night and Emergency Call (Bronx): Mott Haven 1300



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