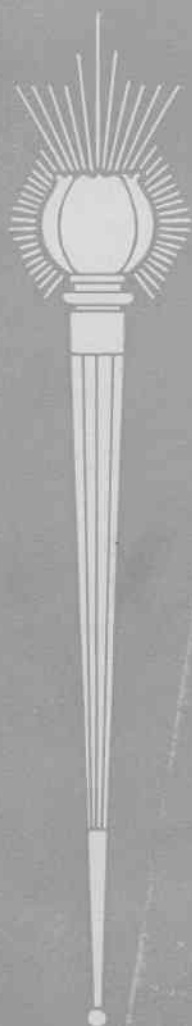
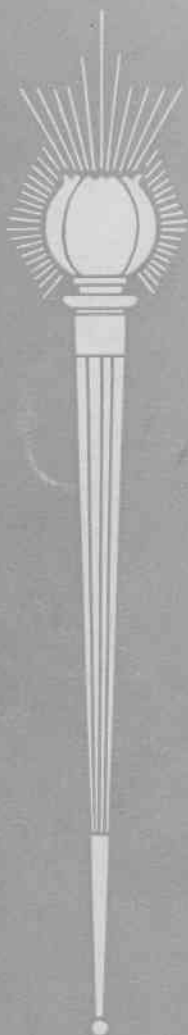


# GAS AND ELECTRIC NEWS



## *The Successful Man*

THE man who succeeds in the greatest degree today, is the man who surrounds himself in his work, and becomes a part of it, thinks it, believes it, talks it, feels it, acts it, lives it and dreams it.



OCTOBER, 1912

*Published monthly by the*  
**ROCHESTER RAILWAY AND LIGHT CO.**

ROCHESTER, N. Y.

*For the Information of Its Employees*

# GAS AND ELECTRIC NEWS

PUBLISHED MONTHLY

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Vol. 1

OCTOBER, 1912

No. 6

## The New East Avenue Lights

By J. O. MONTIGNANI



Much attention has been directed to the new lighting installation on East Avenue. The lighting is unique, in that East Avenue is perhaps the only residence street in the country lighted throughout its entire length by means of magnetite arc lamps of the inverted type. The writer hopes that this article may help to make clearer to those not in touch with this branch of the busi-

ness, the meaning of the term "Inverted Magnetite Arc," what it is and does, and wherein it differs from

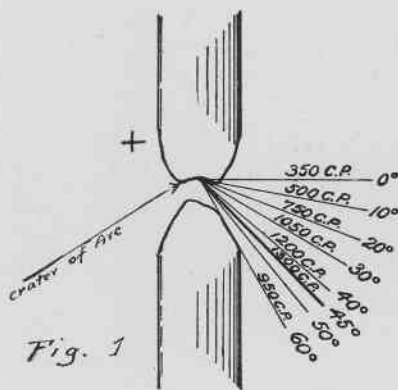


Fig. 1 shows the ends of the carbon electrodes in a direct current arc lamp. The candle power distributed at various angles from the crater in upper or positive electrode is shown, the maximum being at an angle of 45° below the horizontal.

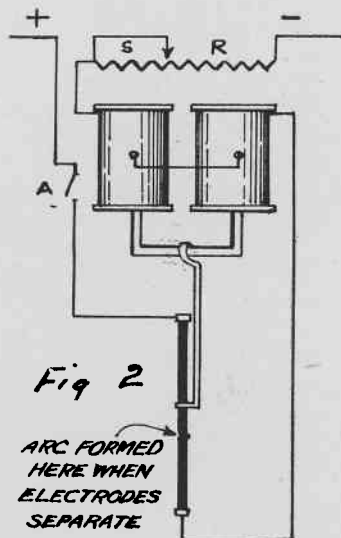


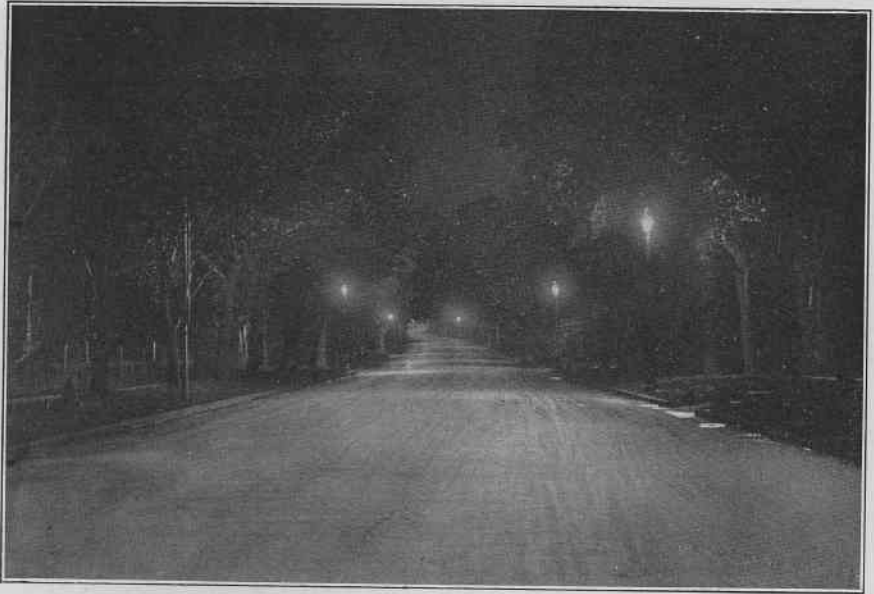
Fig. 2 shows a diagram of an arc lamp mechanism. "A" is a switch or cutout for turning the current on or off. The current enters through the positive terminal, proceeding through the closed electrodes and controlling magnets to the negative terminal. The pull of the magnet separates the electrodes and starts the arc. The resistance "R" and shunt "S" provide adjustment for various voltages.

the more familiar types of arc lamps.

In its simplest form an arc light is produced when two pieces of con-



Daylight picture, showing arrangement of new East Avenue lamp posts. The lamps are "staggered" 200 feet apart. Each lamp is provided with a switch or cut-out to enable repairs to be made in safety. The switch is located in base of lamp, access being had through a door placed therein.



East Avenue at Night, Showing the Brilliant Illumination of Roadway and Surroundings—  
Almost as Clear as Daylight.

ducting material connected in an electrical circuit with their ends touching, are slowly separated, and a spark is seen between them. If the voltage of the circuit be high enough, portions of the terminals will be burned away, and a vapor formed which is itself a conductor, and the current will continue to flow, although the terminals be rather widely separated. Light will be given off from these terminals (called electrodes), and from the arc stream, thus giving the arc light.

In the earlier forms of arc lamps, plain carbon rods were commonly

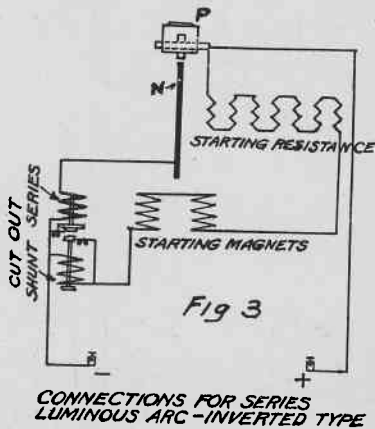
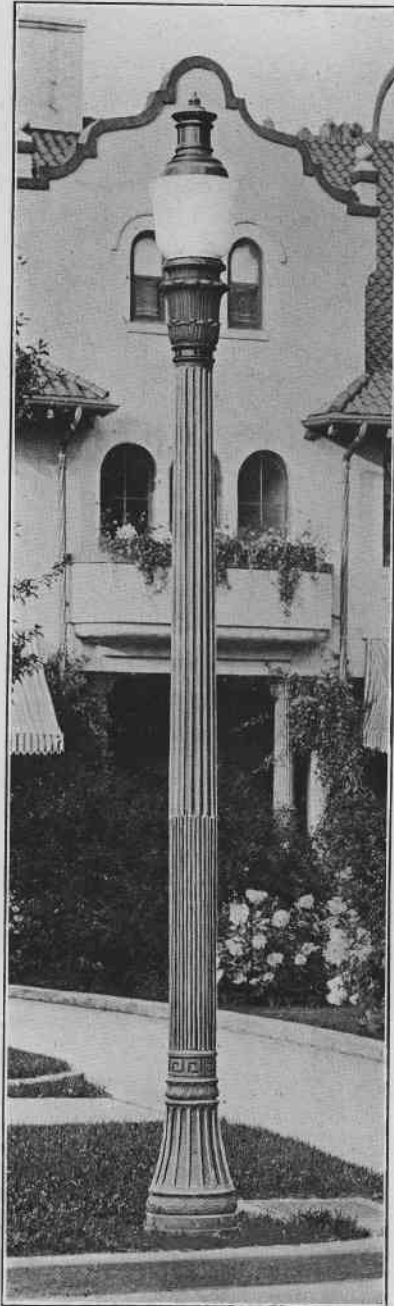


Fig.3, showing diagrammatically the arrangement of the inverted magnetite arc lamp. "P" is the positive electrode, being a copper rod of sufficient mass to be non-consuming. "N" the negative magnetite electrode which vaporizing and entering the arc stream produces the light. In operation the current enters the + terminal, passes through the starting resistance and starting magnets, and through the cut-outs to the negative terminal. This causes the starting magnets to bring the magnetite electrode into contact with the positive electrode, starting the arc through the series cut-out coil, which in turn separates the contacts and opens the circuit through the starting coils, allowing the lower electrode to fall back to its normal operating position.

used for the electrodes, a simple electro-magnetic mechanism being introduced to separate the electrodes and keep them at a proper distance to maintain the arc to the best advantage. Most of the light comes from a crater formed in the positive



A near view of the new East Avenue lamp post. The lamp mechanism is connected in the ornamental capital.

electrode of the direct current carbon arc; the upper electrode is therefore made positive to throw the light in a downward direction, i. e., in the lower hemisphere. Only about 5 per cent of the light comes from the arc stream.

To increase the efficiency of the arc lamp, the problem seemed to be to find materials which would pro-

duce the light, raising its efficiency by luminescence, just as the Welsbach mantle increases the efficiency of the Bunsen gas flame, which is itself almost non-luminous. Arc lamps using impregnated electrodes are known as flame arcs. When magnetite is used for one of the electrodes, the lamp is called a magnetite or luminous arc. Magnetite

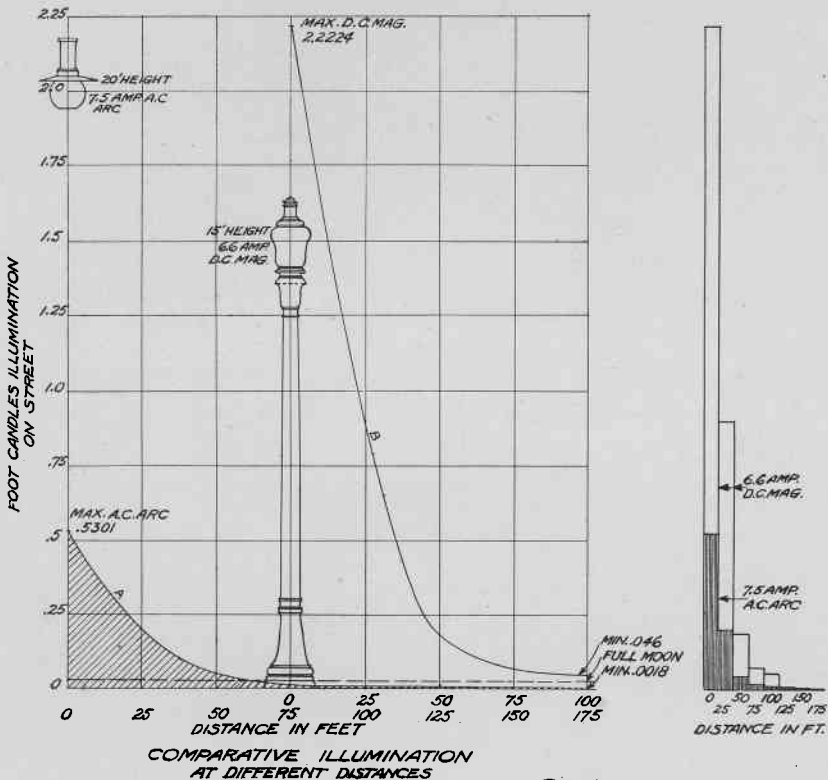


Fig 4

Fig. 4. Curve "A" shows the illumination on the street surface from the A. C. enclosed lamps formerly used on East Avenue with an average spacing of 350 feet. The maximum is seen to be .5301 foot-candles at the lamp and minimum .0018 foot-candles midway between the lamps. Curve "B" shows the illumination from the new lamps spaced 200 feet apart, having a maximum of 2.22 at the lamp and a minimum of .046 foot-candles midway between lamps. The dotted line shows the illumination produced by full moon—about .025 foot-candles.

duce an arc flame having in itself a highly luminous spectrum. This result can be obtained by using electrodes impregnated with the salts of certain metals such as calcium (lime) titanium, sodium, etc., which give their own characteristic color

containing iron furnishes the conducting material in the arc stream and most of the light is obtained by a compound containing titanium which is mixed with the magnetite.

The electrode consists of a thin iron tube into which ground mag-

netite, titanium oxide and chromite are packed. The magnetite melts, volatilizes and carries with it the titanium. The chromite is used to absorb the fluid magnetite and steady the arc. The magnetite electrode lasts from 85 to 200 hours, depending on the current used. A draft tube or chimney is employed to carry away the products of combustion so that they are not deposited on the outer globe, thereby cutting off much of the light after the lamp has operated but a short time. The difference then, between the carbon arc lamp and the magnetite lamp is that the former gives its light from the heated tips of the electrodes, and the latter from the highly luminous vapor passing between the electrodes. The East Avenue magnetite lamp is called the inverted type simply because the mechanism which regulates the lamp is placed below the arc instead of above as in the pendant types of lamps. This arrangement is made so that the lamps may be in harmony with the design of the ornamental posts which support them.

That a greater amount of light is produced by the magnetite lamp for a given amount of energy than by the carbon lamps, which they replaced on East Avenue, is readily seen from the following figures:

	Enclosed A. C. Arc formerly used on East Ave.	Inverted Magne- tite Arc now used on East Ave.
Current in Amperes	7½	6.6
Volts at Terminals.	72	80
Terminal Watts....	480	528
Maximum C. P. Value .....	350	1600
Mean Candle Power in lower Hemi- sphere .....	298	1170
Watts per C. P.....	1.61	.45

The above table shows that about 3.7 times as much light is produced per unit of energy by the use of the new type of lamp, and inasmuch as

the number of lamps on the avenue has been increased 35 per cent the average illumination is now between five and six times greater than with the enclosed carbon lamp.

The accompanying curves are intended to show graphically for the purpose of comparison the distribution of light with the old and new installations. Illumination is measured in foot-candles. The foot-candle is a unit which represents the illumination thrown on an object by a standard candle at a distance of one foot. The illumination produced on the ground by full moon is approximately .025 foot-candle, and one is able to distinguish objects at a considerable distance with this illumination, especially as it is perfectly uniform. It is hardly sufficient, however, to enable one to read ordinary print without straining the eyes.

From 1 to 3-foot candles are required for ordinary reading purposes. Diffused daylight gives an illumination equal to between 10 and 40 foot-candles. The curves shown in Figure 4 are based on exact photometric readings taken on the two types of lamps, but the reader can quite accurately check up the figures given by noting the ease with which print of different sizes can be read at various points, when excluding light from other sources than that under consideration. Observations will of course have to be made first, under illuminations of known intensities in order to be able to make comparison.

One of the striking features of the East Avenue lighting is the absence of dark spots or shadows and the comparatively little glare from the lamps. This of course being accomplished by setting the lamps low enough to avoid the foliage or other obstructions and by the use of diffusing shades.

## How the Company Makes Its Purchases

By JAMES B. EATON



In 1904, at the time of consolidation of the many different gas and electric properties in Rochester into the Rochester Railway & Light Company, the Purchasing Department was organized to purchase supplies and materials for the various departments. Up to the present time we have placed about one hundred twenty-five thousand orders, numbering over ten thousand different articles, exclusive of gas and slack coal, gas oil and apparatus, which are purchased by contract. At present we are placing approximately twelve hundred orders per month, or about fifty orders per day, and when you consider the routine that each order must go through to keep proper record and accounting, there is considerable labor expended.

After a requisition for supplies has been drawn on the Purchasing Department it is necessary for it to be O. K.'d by the superintendent of the department in which the material is to be used, then authorized by the Vice-President or General Manager, and finally forwarded direct to the Purchasing Department for attention. Each requisition is numbered numerically and the order number is the same as the requisition number. The requisitions vary as to the number of items from one to twenty-five. With a large number of requisitions we are able to place the order immediately, that is, the day they are received in the department. This is on material on which we have prices, or which prices do not fluctuate; but often there are a large number of requisitions that it is necessary to hold until quotations can be received and then these are placed with the

lowest bidder. However, we sometimes find it necessary to place orders with other than the lowest bidder because one concern is able to give us better delivery than another. This does not often happen. It is generally where it has been impossible for a superintendent or department head doing the work to anticipate his requirements in advance.

During the month of July we requested eighty-odd quotations, and for this purpose we have a form which we make in triplicate, the original and duplicate being forwarded to the firm from whom we ask the quotation, while the triplicate is numerically filed in the Purchasing Department under the requisition or order number, which are the same. It is unusual to hold the requisition for these quotations more than five days. We make five copies of each order—the original, forwarded to the concern from whom we order the goods; the duplicate, filed alphabetically in the Purchasing Department under the firm name, each year's orders being filed separately; the triplicate, forwarded to the department making the requisition; the fourth copy is sent to the storehouse so the storekeeper will know the department requiring the material on its receipt; the fifth copy is enclosed with our order and is known as the acknowledgment. We require firms to fill in the acknowledgment, giving us price on material, date of delivery and terms of sale.

Although there are many orders and a large number of quotations requested, still this is only a small part of the work in the department, for it is necessary to reply to each quotation, advising whether the order is to be placed with that firm or else-

where; and in addition to this it is necessary to write from five hundred to a thousand letters per month, such as checking up deliveries, answering inquiries that may be asked by the manufacturer pertaining to orders, etc.

The requisitions, after the orders have been made, are filed numerically under separate file until acknowledgments have been received. Upon receipt of the acknowledgments it is necessary to check them as to price and delivery and also check against the requisitions. The requisitions are then filed numerically in a separate file as "acknowledged requisitions," and the acknowledgments are sent to the Accounting Department to check invoices. After invoices have been received and the material reported received on orders, they are filed numerically in what is known as "completed requisition file."

This year to date we have placed orders with about five hundred different firms, eighty per cent of these having been located in Rochester. We make a practice of purchasing locally all material possible and only go outside of Rochester when unable to get the material here or to purchase advantageously. In addition to handling our orders, the mail pertaining to the purchasing of material and supplies is filed in the Purchasing Department under subject, and each year's correspondence is filed separately. Besides this, we have about four thousand catalogues and pamphlets that are filed both under name of firm and subject, these being used as references in purchasing material.

### The Ten Commandments

A manufacturer posted up the following printed cards in the various departments of his large factory, calling them "The Ten Commandments:"

1. Don't lie. It wastes my time and yours. I'm sure to catch you in the end, and that's the wrong end.
2. Watch your work, not the clock. A long day's work makes a long day short, and a day's short work makes my face long.
3. Give me more than I expect and I'll pay you more than you expect. I can afford to increase your pay if you increase my profits.
5. Dishonesty is never an accident. Good men, like good women, always scorn temptation when they meet it.
6. Mind your own business, and in time you will have a business of your own to mind.
7. Don't do anything here which hurts your self-respect; the employee who is willing to steal for me is capable of stealing from me.
8. It's none of my business what you do at night, but if dissipation affects what you do the next day, and you do half as much as I demand, you'll last half as long as you hoped.
9. Don't tell me what I'd like to hear, but what I ought to hear.
10. Don't kick if I kick; if you're worth correcting, you're worth keeping. I don't waste time cutting specks out of rotten apples.

**T**HIS magazine is for you—read it. You will find in it many ideas that will help you, because it stands for encouragement, efficiency, unity, knowledge and advancement.



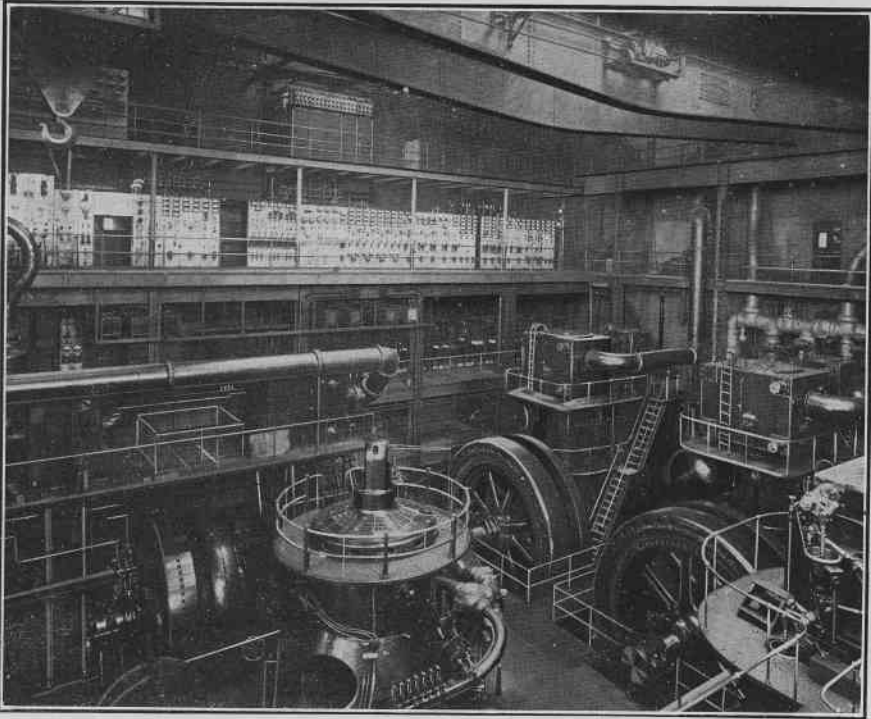
## Our Largest Steam-Power Station

By THOMAS H. YAWGER



As pointed out in my last article in the June issue, the water power furnished by the Genesee River, while practically unlimited during a short season of the year, falls to so low a point during the other portions that it is only possible at times to get enough water from Brown's Race to run the condensers for the engines. Water stor-

age dam capable of holding 18,000,000 cubic feet of water at Portageville, N. Y. This amount has been estimated to be sufficient to provide a yearly average flow of 800 cubic feet of water per second for power purposes and will increase by nearly 20,000 the actual 24-hour horsepower now developed at Rochester. Inasmuch as the scheme of pondage at Portageville will cost in the neighborhood of \$10,000,000, which would be apportioned among



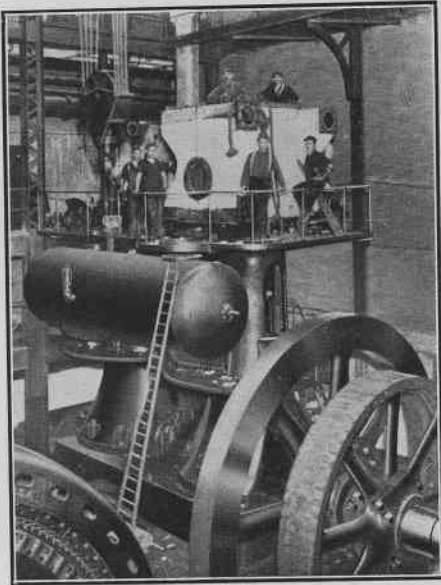
Interior of No. 3 Station Where Alterations Are Now Being Made for Installation of Another New Turbine Engine.

age on the Genesee has been discussed from time to time, but thus far nothing has been done. The New York State Water Supply Commission in one of its reports, has recommended the erection of a stor-

the benefited districts, there is little likelihood of the plan being carried through for at least some time to come. It is necessary, therefore, for our Company to keep some steam-driven stations in operation. The

largest of these, known as Station No. 3, is located on Brown's Race, which is about the geographical center of the city.

The station is built on the westerly bank of the Genesee against the

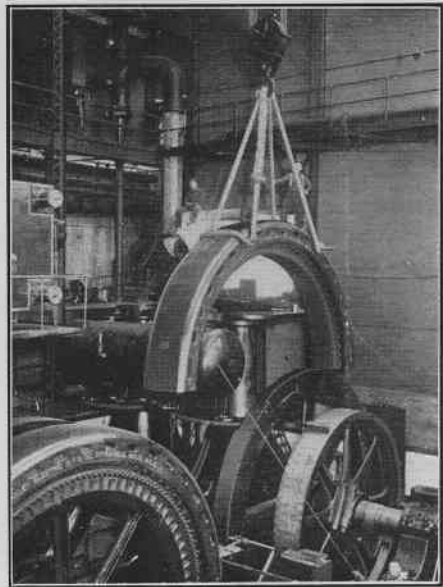


Engineer Powell, Foreman O'Neill and men removing steam engine to make room for turbine equipment.

rocky cliff. The solid rock extending from the race on the west at an elevation of about 100 feet above low water was channeled down to about a grade of 58 feet for the main floor of the boiler room. Below this for a distance of 10 feet is a basement for the ash hoppers and ash troughs, while toward the river there is another step cut in the rock 30 feet below the boiler room basement for the engine room. The latter room has mezzanine floors on either side which support steam piping, condensers and other auxiliary apparatus. The engine room proper is approximately 76 feet square inside of the columns supporting the galleries and is spanned by an electric traveling crane of 35 tons capacity. The engines are set in two lines run-

ning north and south, with the shafts running east and west, leaving a 10-foot aisle between the two lines of machines.

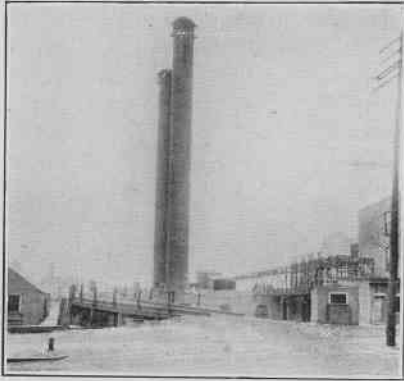
The roof of the boiler room is slightly higher than the street and between the building and the street runs Brown's Race, which comes within 10 feet of the southerly end of the building. A bridge spans the race and over this all the coal and other fuel used in the station is passed. The boiler room is approximately 89 feet x 69 feet in the clear. Above the boilers is a coal pocket, which is 21 feet wide at the bottom with sides sloping at 45 degrees, and 17½ feet high to the bottom of the boiler-house roof beams. The boiler fronts, stokers, concrete ash hoppers and part of the side walls of the boilers are supported by the main boiler-



Hoisting a Heavy Part.

room floor; but the boiler drums and tube sections are hung from pairs of 15-inch I-beams which frame into the horizontal coal-pocket girders. The roof over the boiler house is made sufficiently strong to support

coal wagons, which dump directly into the 1300-ton coal pocket through any one of 18 coal holes. The pocket is filled without trimming by hand by this means. The bridge forming a runway over the race has a 5 per cent grade, so that teams have no difficulty in delivering the coal to the roof.



178-foot Stacks at No. 3 Station and Driveway.

The foundations for the smoke stacks are also in the boiler-house roof. The stacks are 178 feet above the base or foundation girders and are 10 feet 3 inches in diameter. For 20 feet above the base they are lined with firebricks. The stacks stand 41 feet, center to center, and their tops are 185 feet above the furnace grates.

The boiler equipment comprises 10 Aultman & Taylor water-tube boilers, each of which is rated at 650 horsepower. The boilers are set in

four batteries of two each, occupying the four corners of the boiler house, with a single boiler set in the center of either side, occupying the space immediately under the stacks. There is no space behind the boilers, cleaning space being provided at the side instead of in the rear. All boilers are equipped with Rooney stokers made by the Westinghouse Company.

During the past two years four of the boilers have been equipped with Foster superheaters which, with two previously installed, provides six of the ten boilers with superheaters. These six boilers have also had all their valves and steam pipes changed to provide for the additional pressures and temperatures which will be used when the new 7,500 k. w. turbine goes into commission.

A number of other important changes are now being made at No. 3 Station. What these changes are will be fully described in coming issues of this magazine.

If you would do something worth while, first realize that you must be something. You must be able to think, plan, and create, not be a mere echo of what some one else has done.

Courtesy is an obligation, an indicator, an introduction, a passport, a lesson, an influence, an opportunity, an investment a peace-maker and a pleasure.

It's a pretty good scheme to be cheery, and sing as you follow the road, for a good many pilgrims are weary and hopelessly carry the load; their hearts from the journey are breaking, and maybe the noise you are making will hearten them up for a while.—Walt Mason.

## Some of Our Veteran Workers



PAT. MARTIN.  
Line Department—21 Years' Service.



PETE MARTIN.  
Line Department—28 Years' Service.



FRANK KELLY.  
Line Department—26 Years' Service.



LOUIS KELLY.  
Line Department—20 Years' Service.

**Pat and Pete Martin are brothers as also are Frank and Louis Kelly**



# EDITORIAL

## FRIENDSHIP IN BUSINESS

In a large company like ours how many of us realize just what friendship means in business,—to make friends and then to keep in touch with them in a friendly way, so they won't forget us? Good friends are a splendid asset to any man in business, and the closer they are to him, the greater the capital.

The man who is a friend of yours has an interest in your welfare and your business, just in proportion to that friendship. Therefore, the higher you can keep the mercury in the tube of friendship the better—and to do this you've got to keep the heart sincere and warm, nor let it get chilled through forgetfulness.

As heads of departments, or even as humble employees, we have to meet other people, perhaps in a business way, perhaps socially, perhaps on a train or trolley car. Many acquaintances of this sort are people who, in the long run, may become helpful to us in business. Their friendly attitude to us as individual parts of the whole is beneficial to our entire organization. Consequently it follows that every faithful employee who is gaining new friends in his business relationship is gaining assets of kindly good will and confidence among the public towards our Company.

It is therefore, to your interest, no less than it should be your pleasure, to keep in touch with your friends, to let them know that you remember them. Someone wrote, "There's an art in making friends." It is true. But there's a nobler art, and that is the art of keeping friends when once we have made them.

You can do it in many ways—a postcard, a letter, a little gift, a word of advice, or a personal interest in their work. Very often a slap on the shoulder, a tight handclasp or a little bit of your time will help to bind the bonds of friendship a little bit closer.

Therefore keep in touch with the friends of your business and of you. Make each one feel that you are his friend, and while life lasts you will never look in vain for the kindly smile and the warm clasp which betokens one of the noblest things in life.

Just a word to members of the N. E. L. A. You have the opportunity to derive as much benefit from the N. E. L. A. meetings held the second Tuesday every month as department heads do at Mr. Searle's Friday morning sessions. Are you improving the chance by prompt and regular attendance?

## East Avenue Lights

The first pages in this issue are devoted to an interesting and instructive article by Mr. Montignani on the beautiful new lighting system on East Avenue. Every employee of our Company should read Mr. Montignani's article, and with some knowledge of what those magnificent lights are go and see them. Take a

walk along East Avenue some evening, and bring your friends and relatives. We assure you that you will not only be pleased, but proud also of Rochester's enterprise in installing such wonderful lights on the city's most beautiful residence thoroughfare.

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Every big opportunity of the past was simply an opportunity to cut down waste somewhere. Therefore cultivate "little economies."

---

Growing and improving year by year, the Rochester Industrial Exposition promises to become a remarkable annual municipal event. And by the way "Eddie" Edwards is boosting it to success.

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Without a doubt Mayor Edgerton's name will go down in the history of Rochester as the one man who built a wonderful exposition park out of a mass of empty ruins and deserted grounds. Long may "Hi's" name live!

---

We take pleasure in referring to Messrs. Powell and Lamey, whose work at No. 3 Station was so highly complimented by Mr. Hutchings at the meeting Friday morning, September 6th. Mr. Powell and Mr. Enos of No. 3 Station were then complimented by Mr. Wolff for good work done in removing piping from the boilers.

Watch the little leaks and you can live within your salary.

---

The Friday morning meetings are like a training school, because they give a man a chance to learn something about the other fellow's way of doing things.

---

Everybody was mightily proud of the Company's beautiful float in the centennial parade. It's artistic design aroused much attention and praise all along the route.

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We should like to hear of any of the Company's "veteran employees" whose pictures have not yet appeared in the little group published each month. We have almost exhausted all the pictures that have been sent in to us. We do not wish to forget anyone, so if you know of any employee who has served our Company twenty years or more, and whose picture has not appeared in the magazine, we will be grateful if you will send us the "veteran's" name, and the department in which he is employed.

The world always listens to a man  
with a will in him.

The centennial parade was a magnificent success thanks to the splendid efforts of the committee in charge.

Have you seen the new East Avenue lights yet? No! Then by all means visit that beautiful thoroughfare some evening soon, and bring your friends. A surprise awaits you.

The new Central Avenue bridge has recently been equipped with a number of the inverted magnetite lamps mounted on massive ornamental posts. The effect is beautiful by day or night and should be seen by all interested in the betterment of our city's illumination.

### A Modern Romeo

O come with me and be my cook  
And you may have my pocketbook;  
For you a new gas range awaits,  
And you may have the cheapest rates.

Your friends may come to dine or  
dance

And I will pay you in advance;  
Now if these things should suit your  
book

Then come with me and be my  
cook.

Sure a "glad iron" I'll get you  
To make your labors light and few;  
And if to read you should aspire  
Mazda lights shall answer your desire.

For you a fairy palace door's ajar  
And you may have my electric car;  
So if these things enticing look  
Then come with me and be my cook.

### CAUTION TO VEHICLE DRIVERS

It is suggested by the Management that all drivers of electric and gasoline vehicles should exercise more care in entering and leaving the Andrews Street yard, and should run automobiles at a very much lower speed, and also exercise greater care in the control of the vehicles.

The Management requests that no one but the employees of the Company ride upon electric trucks in the course of their travels. It has been noticed that children and other persons not employed by the Company have been riding on the electric trucks, and as each additional person riding increases the percentage of accident possibilities, it is requested that the carrying of children and non-employees be discontinued in order to prevent future accidents.



It is more conducive to good health to split wood than split hairs.

The long green has been known to make the nose red.

A high collar shuts off many a stream of hot air.

If you wish to "do good," get a gas pipe and work nights.

The hot air peddler should have an aviator's license.

There is no policy like politeness, since a good manner often succeeds where the best tongue failed.

A still stream turns no spindles; intentions subdue no stubborn soil; mere purpose never paid a dividend.

A friend is one who knows all about you—yet does not tell your wife.

The man who marries his job usually has A Bank Account for best man.

A lot of people like to throw hot rivets when they know the other fellow hasn't a bucket ready to catch them.

Telephone courtesy is one of the big things in business. Therefore let's help to distinguish our Company by courteous telephone manners.

There is so much that is bad in the best of us

And so much that is good in the worst of us

That it doesn't behoove any of us  
To talk about the rest of us.

The Pittsburgh Post tells about a young fellow who sidled into a business house, unreeled his line of talk, told them that he was a 1912 graduate, and offered his services. The head of the firm looked the graduate over casually.

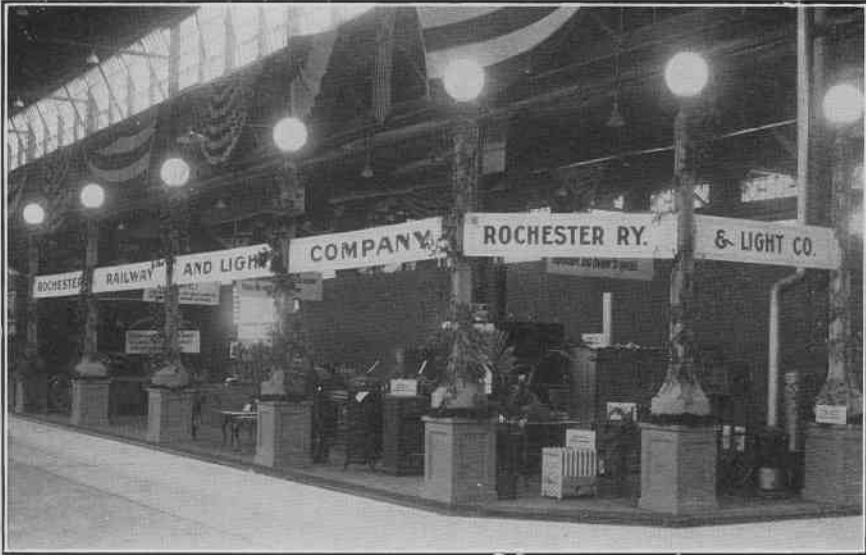
"I have no position to offer you," he said.

"You misunderstand," responded the graduate. "What I want is not a position but a job."

Two minutes later he was at work.

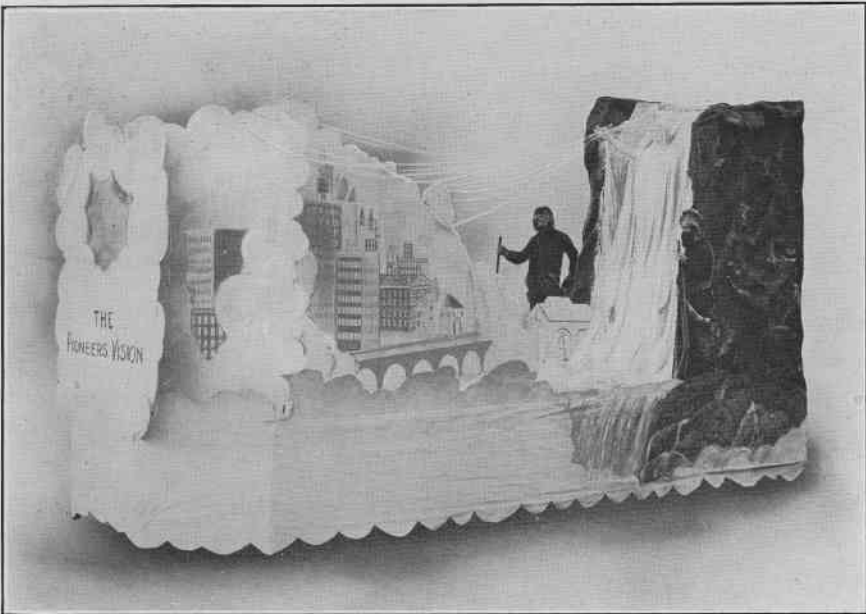
"What is the secret of success?" asked the Sphinx. "Push," said the Button. "Take pains," said the Window. "Never be led," said the Pencil. "Be up to date," said the Calendar. "Always keep cool," said the Ice. "Do business on tick," said the Clock. "Never lose your head," said the Barrel. "Do a driving business," said the Hammer. "Aspire to great things," said the Nutmeg. "Make light of everything," said the Fire. "Do the work you are suited for," said the Flue. "Get a good pull with the ring," said the Door-bell. "Be sharp in all your dealings," said the Knife. "Find a good thing and stick to it," said the Glue. "Strive to make a good impression," said the Seal.





#### AN ATTRACTIVE BOOTH

Among the many beautiful booths at the Rochester Industrial Exposition there were none perhaps that delighted visitors so much as our Company's attractive display of exhibits, which was in charge of F. H. Klein. The booth was in charge of Charles F. Schake, assisted by the following: Fred Clabby, Bert Yeomans, Wesley Steinman, James Fasenella, Raymond Landers, H. W. McIvor, F. C. French, Arthur Gosselin, F. C. Conway, William Asart, Dell Neverett and Howard Chase.



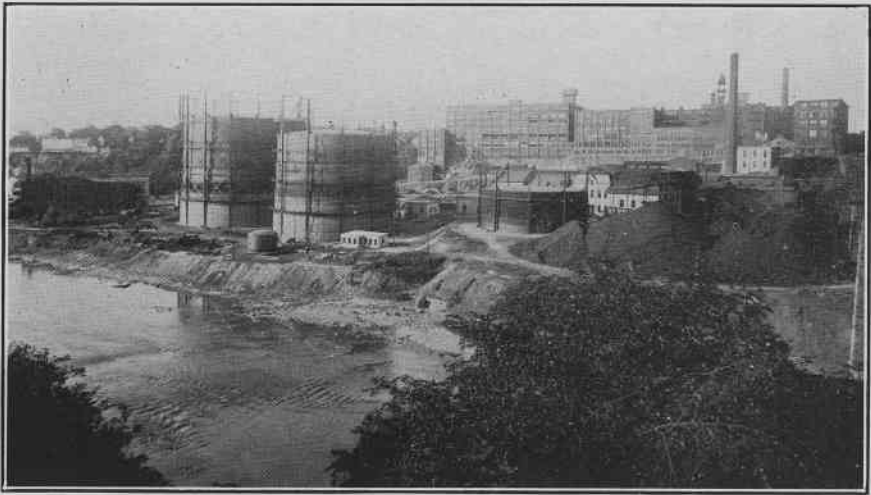
#### "THE PIONEERS' VISION"

The Company's beautiful float, which attracted much attention in Rochester's centennial parade September 16th. The two pioneers were represented by James Babcock and Frank Colvin.

## A Record in Gas Consumption

The heaviest day (7 A. M. to 7 P. M.) consumption of gas in the history of gas lighting in Rochester was recorded at the Gas Works on Wednesday, September 11th. A total of five million cubic feet for 24 hours was reached, 3,200,000 cubic feet being burned from 7 A. M. to 7 P. M. The remarkable feature of this interesting fact is that it was a "summer load," indicating, according to Mr. Russell, that maximum

cubic feet. Owing to the great amount of electricity in general use for all purposes, there is an erroneous impression among the public that there must necessarily be a decrease in the gas consumption. Such is far from being the case, as the above facts show. Like electricity, there is a growing demand for gas for a multitude of purposes, both lighting and heating in home and factory. Besides its use in the pop-



Gas Works—The two big gas tanks on the river bank hold three million cubic feet of gas or, according to the record of September 11th, sufficient to last the city of Rochester twelve hours.

loads in the future will be in summer rather than in winter, which in the past has held the record for big consumption.

Put in another way the record of September 11 was an increase of 18 per cent more than the consumption for the same date last year. The average daily increase for 1912 over that of last year has been 450,000

ular "gas range," it is consumed in immense quantities for various time and labor saving purposes in the largest industrial plants. For instance, the Bausch & Lomb Co. is now using about 40,000 feet a day at its plant, the larger part of this being used to heat muffle annealing furnaces where gas has very largely replaced the use of oil.

To achieve what the world calls success a man must attend strictly to business and keep a little in advance of the times.



### **Col. Moulthrop Addresses N. E. L. A.**

The regular monthly meeting of Company Section, National Electric Light Association, was held in the directors' room, Tuesday evening, September 3d, a large attendance being present. The meeting was called to order by President MacSweeney. The Secretary's report of the previous meetings was read and approved.

President MacSweeney then called upon the tellers, Messrs. L. W. Layman and J. B. Switzer for the result of the election of officers for the ensuing year, which was as follows: President, Joseph P. Haftenkamp; Vice-President, F. W. Fisher; Secretary and Treasurer, Charles S. Jennings; Executive Committee, George Bailey and W. J. Julian.

After the announcement of officers, the retiring President, Mr. MacSweeney, gave the chair to the new President, Mr. Haftenkamp, who conducted the meeting.

Col. S. P. Moulthrop gave a scholarly and instructive talk on "The Early History of Rochester and Its First Settlers," which was very much appreciated by all. In the course of his remarks Col. Moulthrop told of a skull that was found near Charlotte that proved this section was once occupied by a prehistoric race. The speaker also narrated many interesting facts concerning the early history of Rochester, his

address being listened to with rapt attention and pleasure.

On motion of Mr. Layman, seconded by Mr. MacSweeney, a rising vote of thanks was extended to Col. Moulthrop for his excellent lecture.

On motion of Mr. Houlihan, seconded by Mr. Switzer, a rising vote of thanks was extended to the retiring officers, after which refreshments were served.

The Friday morning meetings were resumed September 6th, Mr. Searle presiding at the opening session. At this meeting Mr. Haftenkamp gave an interesting explanation of the method used in cleaning out boilers.

Referring to the new state law on the "storage of explosives" Mr. Searle said he wished to emphasize the necessity of all employees making themselves familiar with the principal provisions of the new law. Many things, he said, which were formerly legal were now illegal. Any violation of the law would make not only the Company liable, but employees as well.

In reply to a request of Mr. Hutchings as to work accomplished during the summer months, Messrs. Pratt, Hoddick and Wolff outlined briefly the work done in their respective departments. This included the new East Avenue lights, gas service to White City and Summerville, and

the improvements being made at No. 3 Station.

Mr. Hutchings complimented Messrs. Powell and Lamey on the way the big excavation for the new turbine had been done at No. 3 Station. The work, he said, had been carried on without interfering with the operation of the plant. It was a difficult job, done expeditiously without needless risks, and in complimenting Messrs. Powell and Lamey, Mr. Hutchings said their work meant a great deal to the Company.

Mr. Wolff took occasion then to compliment Engineer Powell and Mr. Enos of No. 3 Station on the clever way in which they had removed the piping from the boilers, their work being quickly and well done.

The meeting adjourned with the statement from Mr. Hutchings that it had been a very interesting and instructive session.

At the meeting September 13th Mr. Searle urged the necessity of discussing economies in the various departments. No matter how uninteresting the smallest economies might appear to department heads, they would, he pointed out, be of great value to others when discussed at the meetings.

Mr. Pratt reported that the new lights were in operation on East Avenue. Mr. Searle said he had met many persons who were agreeably disappointed in the new lights.

Mr. Russell said he had never seen a more beautifully illuminated street, the white lights producing a beautiful effect. The new lighting system was, in a word, the nearest approach to daylight that he had ever seen.

Mr. Searle stated that while in New York last month he had met D. K. Brodenhead, of London, England, who told him that the fame of

the Rochester Railway & Light Co. had reached the great English metropolis.

"You have," said Mr. Brodenhead, "one of the most progressive companies in the United States."

"That is a pretty nice compliment," commented Mr. Searle, "and it comes because we have the nerve to do a thing right."

Before the meeting ended Mr. Searle urged those present to visit No. 3 Station and see the improvements being made there.

At the meeting September 20th Mr. Granger A. Hollister presided. Mr. Hellen read a very interesting paper on "Impressions gathered at the annual convention of Gas Distribution Superintendents at Chicago, September 9th." This paper will be published in full in next issue of GAS AND ELECTRIC NEWS.

### **Many Thanks Mr. Dietrich**

Rochester, N. Y., Aug. 30, 1912.

Mr. Joseph P. MacSweeney, Rochester Railway & Light Co., Rochester, N. Y.

Dear Mr. MacSweeney—I have had the pleasure of receiving your May, June, July and August issues of the GAS AND ELECTRIC NEWS. This is one of the best little house organs that has come to my notice and I am very much obliged to the sender for having put me on the mailing list.

A publication like the GAS AND ELECTRIC NEWS makes for bigger, better business and greater co-operation in any corporation. May you continue to grow and prosper.

Cordially yours,  
GEORGE DIETRICH.

# ELECTRIC DEPARTMENT



A new 3,000 horsepower transformer is being installed at No. 6 Station.

The village of Charlotte has also signed a contract with our Company to supply electricity to the village.

The town of Chili has signed a contract with our Company to supply light and power to residences in the Elmwood Tract.

An illustrated article describing the new East Avenue lighting system will appear shortly in the Electrical World.

S. G. Rhodes of the New York Edison Company was here last month. Referring to the new East Avenue lights he said it was the best lighted residence street in the world.

The 2,100 horsepower turbine at No. 5 Station has just recently been completely overhauled and cleaned. Although of modern design, the repair work on this turbine necessitated the handling of 3,260 different parts.

The largest incandescent lamp in the world was on Exhibition at the Company's booth at the Exposition. It was being exhibited at the convention in Hot Springs, Va., where Mr. Durfee spirited the novelty back to Rochester with him. It cost \$10,000 and furnishes a light equal to 2,750 candlepower. Mr. Durfee, of course, merely borrowed the light!

## Mr. Yawger's Press Originality

Mr. Yawger has the rare and happy faculty of handing out some remarkably original stories to the newspaper boys. The following one appeared in the Democrat and Chronicle the other morning and is a gem in itself:

"I was down at No. 2 station this afternoon looking over some of the work under way there when there came before my eyes the most beautiful woman I have seen in some time," said Thomas Yawger, of the Railway and Light Company, Saturday evening. "She was pretty nearly covered with dirt, yet through it all her countenance bore a resigned look and the smile in her eyes was very winning. I asked her what the trouble was and if she was hurt. Oh, no, she was not hurt, she said, but there was a lot of men in the building, she knew, for she saw them from the top of the bank, which is a good many feet above the roof of the station. She was selling books, and she did not see any other way to get down so came down the bank.

"I would not try to go down that bank myself without an accident insurance policy, but she did it. I wish I could sell power the way that woman can sell books. She said it was a part of the business, and then she began to tell me of the glories of Julius Caesar or some other fellow of the dim past. I bought the book and some more of the men, entranced or hypnotized, bought of her. But I'll sell that book to Parker or De-Wolf and get my money back.

"Say, don't you need such a book in your business? This Caesar wrote a lot of stuff—"

The reporter had business elsewhere.



Mr. Hellen attended the convention of Gas Distribution Superintendents, held in Chicago early last month.

The booster and governor house at the gas works is now being remodelled and enlarged. A new pump with a capacity of 5,000 cubic feet per hour is also being installed.

For the benefit of our readers who do not know what a governor is, we wish to explain that it is an apparatus for regulating the pressure of gas.

Two miles of gas mains are to be laid in the new Sibley Tract. Each lot in the tract will be piped for gas.

The new Summerville and White City services are now completed and gas turned on. The residents are greatly pleased.

Mr. Hellen estimates that the population of Rochester is at least 250,000. He bases his figures on the number of gas services installed since the last census in 1910. According to Mr. Hellen the average total of new services for the past three years has been 10,783. Multiplying this total by 3.7, which may be taken as the average number of persons in a family, the result is 39,897. Adding 39,897 to 218,149, the population according to the 1910 census, and a total of 258,046 is obtained. Allowing for deductions for services installed in suburban homes, etc., Mr. Hellen figures that the real population of Rochester is at least 250,000.

### Opportunities Get Away

Many an opportunity gets away from a man, while he sits on a park bench, worrying about the future.

Walk through any of the parks in a big city on a mellow spring day and notice the various types of men occupying the benches.

Many there are, whom the world calls "hoboes,"—professional "bench warmers," social outcasts, tobogganing straight into the welcoming arms of oblivion. But here and there you'll see a face bearing a different message—a face that tells you of a hopeful, ambitious spirit, stunned for the time by adverse fortune but eager for an opportunity—another chance.

The day is perfect. The warm spring sun and the fitful breeze charm the opportunity-seeker into languor. He wishes he had an opportunity—knows he can make good when given the chance and thus dreams away the forenoon, while all about him amid the bustle and hum of a great city's business life, opportunities galore are beckoning, yes, fairly shouting at him. But he is too busy—dreaming.

Never mind the future; that will take care of itself, as long as you take care of the present. The thing for you to do now—to-day—is to look for your opportunities; they are all around you, awaiting recognition.



We're glad to see that genial Pat Martin is recovering from his recent accident.

There are two kinds of jewels in Mr. Nolan's department—Ruby and Pearl.

We are sorry that Miss Grace Belding has had to go away on account of ill health. She has our best wishes for a speedy recovery.

Miss Teresa Murphy visited at Avon the week end of September 15th. Teresa says, "He's just a cousin of mine."

The boys in Mr. Nolan's department are very curious to know the name of a certain new ornament which some of the girls are wearing. Hush, boys! It's a ———, you know!

Miss Amelia Herald spent a week recently in the beautiful city of Spencerport. Amelia says she'd like to live there. Someone else in Spencerport has the same wish, Amelia.

Harry H. Steinhauser, a graduate from the University of Michigan, has joined the engineering staff as assistant to Hydraulic Engineer Franklin J. Howes.

We are pleased to hear that Foreman J. Stanley Clark of No. 34 Station is recovering from serious burns received at the station on August 16th.

Our beloved paymaster, William Gosnell, came back from vacation minus his mustache. "Reason," says "Bill," "it was a germ-catcher." Where were you, Bill? In the garden of love?

Arthur Spencer Kittle, representing a New York banking concern, was in Rochester, Saturday, August 31st, looking over the properties of the Rochester Railway & Light Company.

Mr. and Mrs. Granger A. Hollister have returned from Kennebunkport, Me., where they spent the month of August. The journey westward was made in part by automobile and in part by rail.

When gentle Ada Cullen of Mr. Nolan's department saw some rare and unique hosiery dangling from a clothesline four stories high she laughed so much that now she's afraid she'll grow fat.

Clayton Woodward and Miss Ruth Banford were married September 2d. We extend to both our warmest congratulations. Employees in room 10 gave "Claytie" a lively time just after the ceremony.

Staff Photographer D. C. Rockwood spent a pleasant vacation in Syracuse. We were glad he wasn't away more than a week, because he takes all the pictures for the magazine, so many of which have given pleasure to our readers.

Foreman H. Sugden, of the Gas Works, has returned from a three weeks' outing in Calgary, Canada. While there he seemingly made the acquaintance of the "Big Wind" for like our paymaster he is now minus a mustache.

Allan Yatteau, the 14-year-old son of Frank Yatteau, won a scholarship for a three-year course at Mechanics Institute. Allan took the examination in competition with graduates of the public and parochial schools. Best congratulations, Allan. May you win many more honors.

Just a few days after Henry Gazell, of the Draughting Department, had been married, on August 24th, a bold, bad robber crept into the bridal chamber and stole \$2. Henry came down to the office greatly excited and said he was glad the robber didn't take more.

Francis M. Hanratty, who has been employed in the gas street department for the past two years, left Monday, September 30th, for Cincinnati, where he commenced a three-year course in the Ohio College of Dentistry. Before leaving, Francis had the pleasure of entertaining his father and sister, who came all the way from Ireland to visit him.

Francis, you have our sincere wishes for success. Stick and win.

One trunk, two suit cases and a companion recently returned to Rochester with H. C. Neefus, assistant engineer at the gas works. The party spent two weeks at Bald Mountain House, Adirondack Mountains.

George Mabee, chemist at the Gas Works, was much disappointed because Mr. Neefus did not bring back specimens of the famous Neefus Mountain peaches which he promised George.

### 900 Ft. Wireless Tower

The new wireless station at Nauen, near Berlin, Germany, which is to replace the tower blown down in a terrific storm last March, is now approaching completion. The new tower is nearly 900 feet in height, and it is anticipated that its radius of action will include New York City.

### Tom Treynar

We regret to announce the death of Tom Treynar, who for the past 15 years had been assistant engineer at No. 3 Station. "Tom" passed away after a brief illness at St. Mary's Hospital on August 28th. He was a faithful, industrious employee, held in high regard not only by the men over him, but also by those who were associated with him at Station 3.

To his relatives we offer our deepest sympathy.

### Edward Lawson

Death came suddenly to Edward Lawson, who was accidentally electrocuted at No. 6 Station on September 9th, which was also the unfortunate young man's twenty-fourth birthday. Edward was an ambitious young man, who had many fine traits of character.

To his relatives, and in particular to his sorrowing mother, we beg to extend our sincerest sympathy.

### Removes Rain from Glass

Glycerine and kerosene mixed in equal quantities is a most handy liquid for preventing rain from accumulating on the windshield of a car. A small amount rubbed on the windshield will cause the rain to run off as rapidly as it strikes the glass. Chauffeurs will find this remedy of great value when driving through a rain storm.





## AMONG OUR EXCHANGES

### Thanks to Brilliant Lights

In connection with the compliments which the Rochester Railway & Light Company has received on the East Avenue lights, one of the superintendents received a message saying that a ring dropped from an auto Wednesday night had been easily recovered on the return of the party because of the brilliance of the street illumination.—Rochester Herald.

### Medal for Safety Device

The Allgemeine Electricitäts Gesellschaft, of Berlin, has placed at the disposal of the American Museum of Safety the Rathenau gold medal for award annually for the best device or process for safeguarding life and limb or promoting health in the electrical industry. The competition is open to every country in the world, the only condition being that the device or process must be exhibited at the American Museum of Safety in New York City.—Electrical World.

### Charging Stations for Electric Automobiles

The touring department of the Automobile Club of America is taking steps to have charging stations for electric automobiles established at convenient points in New York State along the roads between New York, Poughkeepsie, Schenectady, Amsterdam, Utica, Rochester and Buffalo, giving electric vehicles a touring radius of 40 miles. The bureau is also taking up the matter of creating available routes throughout the southern tier of counties. It is pointed out that charging stations must be established before business can be obtained. A good example is found in the city of Rochester, N. Y., where the number of electric pleasure vehicles has increased in a few years to 720, owing largely to the existence of adequate charging facilities. On the other hand, the city of Albany, N. Y., which is said to have no charging facilities, has less than six pleasure cars of this type. In this connection, however, it may be recalled that Albany is a city of steep hills.—Electrical World.

### Praise for East Avenue Lights

S. G. Rhodes, of the New York Edison Illuminating Company, has asked that a concrete pole such as is being used in the illumination of East Avenue, which he considers nearest the ideal that he knows, be shipped to him. He will have it set up in Central Park for the Art Commission to inspect. If approved, the type will be used in Central Park's new lighting system. "The Electrical World" has written Thomas Yawger, electrical superintendent of the Rochester Railway & Light Company, for a description of the light and standard.—Post Express.

### A Protection for Women

Heretofore women were somewhat fearful of promenading on East Avenue at night, because the light was far from satisfactory. Henceforth they will be as safe on the well lighted sidewalks as they would in their own drawing rooms. The expressions of satisfaction which have been received at the light company's office are many. It is declared that it is doubtful if any city in the country will have a more beautifully lighted street than East Avenue when all of the lamps have been put in operation.—Democrat and Chronicle.

### Pleased With September Issue

The September number of the Gas and Electric News, a monthly issued by the Railway and Light Company, is out. This periodical is published primarily for the information of employees. The September issue eclipses any yet published. It is well edited and the news of the various departments is well arranged.

The articles are spicy and written by the ablest men in the Company. Throughout are suggestions applicable to every line of business. On the cover is a reproduction of the Rochester Industrial Exposition poster.—Democrat and Chronicle.

There's a man in the world who is never turned down, wherever he chances to stray; he gets the glad hand in the populous town, or out where the farmers make hay; he's greeted with pleasure on deserts of sand, and deep in the aisles of the woods; wherever he goes there's the welcoming hand—He's the Man Who Delivers the Goods.