

GAS AND ELECTRIC NEWS

PUBLISHED BY

THE ROCHESTER RAILWAY & LIGHT CO.

VOL. 3

APRIL 1916

No. 10



Station No. 35 on Litchfield St.

GAS AND ELECTRIC NEWS

Vol. 3

APRIL, 1916

No. 10

Electric Distribution Department Methods

BY A. J. WAGNER

THE writer feels safe in saying that the work involved and the methods pursued in the Distribution Department are only in a small measure known to the majority of the Rochester Railway and Light Company's employees. Going into detail as little as possible and eliminating statistics, the writer hopes to interest those who know, and familiarize those who do not, with the work

and routine of the department, the extent to which it is dependent on other departments for the speedy completion of its allotted work, the economical use of labor and materials, and the amount of work involved both in the field and office to properly construct and maintain the electrical arteries that distribute light and power to the Company's consumers.

When a prospective consumer ap-



Erection of Transmission Line Tower at Crossing of 11,000 Volt Symington—Charlotte Line over Buffalo, Rochester and Pittsburgh Railway.

plies to the Rochester Railway and Light Company for electric light or power, he fills out a printed form at the Application Counter on the ground floor of the main office. The questions contained in this form, if properly answered, furnish the information desired by the departments directly involved in supplying the consumer with electrical energy. After the form has been made out by the prospective consumer, it is sent to the Credit Department for consideration, and, if passed, is then sent to the Order Department, where a work order is issued on the Electric Meter Department for meter installation. Before the meter is installed, however, the Meter Department issues a final order on the Distribution Department to install a service, the necessary information as to the load demand accompanying the order so that the Distribution Department can calculate the proper size of conductor for the service.

After the installation of the service, an inspector from the Electric Meter Department makes a thorough inspection of the completed work and, if satisfactory, orders the electric meter installed. To further the completion of the work, it is the duty of the contractor who installed the interior wiring, to notify the Board of Underwriters that this particular piece of work is ready for their inspection. The Electric Meter Department, on notification from the Board of Underwriters that the work is satisfactory, then installs and connects the meter to the interior wiring.

If in the judgment of the Order Department or the Electric Meter Department a certain installation requires special engineering attention, it is at once referred to the Engineering Department which gives it the special attention it demands.

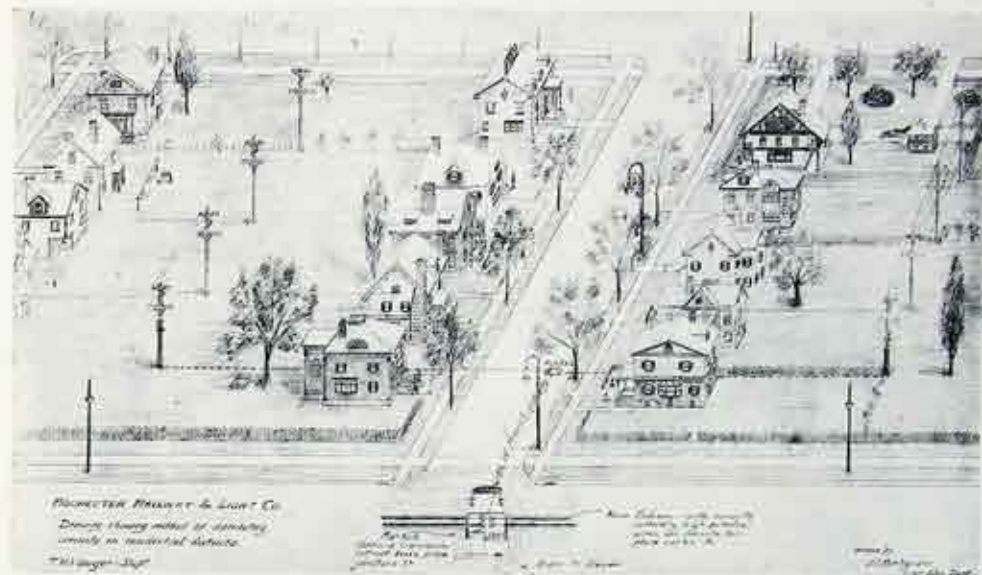
That the installation of services is but a small part of the work cov-

ered by the Distribution Department, is realized by noting that Rochester and vicinity have approximately 1751 miles of overhead and 1036 miles of underground conductors to be maintained and kept in commercially good working condition. A certain class of workmen are constantly repairing sections of the overhead system, not because the continuity of the service is being affected, but because this would eventually be the case if hazardous conditions were allowed to exist, as aerial construction is affected by the elements to a far greater extent than underground.

In any class of work where the human element is introduced, it is unnecessary to state that infallibility cannot be found, but by the constant introduction of new methods of construction and improved apparatus designed for the distribution of electrical energy, the guarantee of constant service can be assured, barring the action of the elements over which no human agency has control.

Complaints of low voltage, winks or fluctuations on the system which are brought to the attention of the department are not usually realized by those not familiar with such conditions, to be in a class of complaints that must be sought out and located before a remedy can be applied. This work takes time. If the complaint is chronic and cannot be found by the ordinary means, it is brought to the attention of the engineering staff who give it special attention.

Poor lighting, or power conditions, can result from a number of faults. If the voltage on the system is habitually low, it usually means overloaded transformers, and transformers of a greater capacity must be installed. If the trouble is such as to cause winking of the lamps, fluctuations or surges, it may be attributed to unbalanced condition of



Rear Lot Line Distribution and Subway Construction

the primary feeders; instantaneous ground caused by the swinging of the primary or secondary conductor against some of the pole fixtures, trees or any grounded object; or the amateur wireless telegrapher whose installation may consist of a $\frac{1}{2}$, $\frac{1}{4}$, or in some cases, 1-K.W. installation. The constant closing and opening of the operator's key on an average of twenty to thirty times a minute, depending upon the operator's speed causes on closing the key, a rush of current which temporarily deprives the surrounding consumers of adequate supply.

Anyone, on registering a complaint with the Distribution Department, can, to a certain extent, diagnose his own trouble. To illustrate: If the lights wink only when the wind is blowing strongly, make a note of that fact, and when the complaint is entered with this information, the men who are given this particular piece of work will be instructed to look for a primary or secondary whose radius of swing brings it in contact with the pole fixtures or nearby tree when the wind is blowing. If the

lights become suddenly dim, stay so for a short interval and then come back to normal, the department if apprised of the fact, would look for a small shoe repairing shop whose operator, on pressing a shoe with a new sole against the buffing wheel to give it the finishing touch, sometimes presses so strongly against the wheel that the motor operating the buffer reduces its speed. The motor demands more current from the line and reduces the voltage, but on removing the shoe, it regains its normal speed causing the voltage to rise. Then again, if the lights seem to have the faculty of instantaneous winking, generally around the neighborhood of ten o'clock P.M., the conclusion would be that an ardent believer in Marconi was somewhere on the secondary system, and such changes would be made as would apply to this particular condition.

About the only conception that the average observer has concerning the amount of labor involved in high tension transmission line construction is what he actually sees when witnessing the erecting of poles and

the installation of fixtures and conductors; but before this part of the work can be started, there are a great many details which must be worked out through mathematical calculations and the drafting board.

The securing of a right-of-way on which to erect the transmission line is the first step to be considered, and such deciding questions enter into the choice as prosperous manufacturing districts, thriving villages and towns. If difficulty arises in obtaining easements from property owners or the natural contour of the country demands difficult and expensive construction, other and less expensive routes must be considered, such as a railroad right-of-way. If the route decided upon should be on a railroad right-of-way, permission is requested of the railroad company accompanied by a plan showing the proposed route, also detailed plans and specifications showing the method of construction. These specifications embody such details as height of poles, type of crossarm, type of insulator, voltage test—wet and dry—stress on insulator, spacing of poles, sag of conductor, stress on conductor under maximum conditions such as wind pressure and when surrounded by ice, sleet or snow, size of conductor, type of tie used to hold conductor on insulator, method of serving conductor, strength of pin and crossarm, type of anchor and where placed, and location of storm guys.

If it is found necessary to cross the tracks of the railroad, special construction is demanded, and this necessitates the making of another set of drawings embodying this special construction, which is submitted to the railroad company. As a rule steel towers are demanded by the railroads, but if, in the judgment of those responsible for the construction of the line, the cost of steel towers at that particular time would be

prohibitive, the Rochester Railway and Light Company requests permission to erect a temporary crossing consisting of wooden poles. Such permission, covering a period of one or two years, is usually granted by the railroad company. If at the expiration of this time, steel towers have not been placed at this particular location this company is notified by the railroad company.

It is then necessary to proceed with a drawing to show the proposed tower locations. Elevations must be taken, a contour map prepared showing the character of the ground at the tower locations, and the whole submitted to the railroad company for its approval. If approved, the manufacturers of steel towers are requested to submit bids accompanied by drawings showing their particular design. The tower drawing decided upon by the Distribution Department is then sent to the railroad company for approval and, if satisfactory to the railroad company's engineers, is returned to the Rochester Railway and Light Company who then informs the manufacturers to proceed with the construction.

These towers are delivered in sections, depending upon the height, and are assembled and erected by employees of the Distribution Department. There are times in field work when good judgment solves problems that would ordinarily be worked out beforehand. Some detail has been overlooked and it is up to the man in the field to decide, and where such cases have occurred in the past, the Department has yet to find one where a foreman in charge of work of this character has not been equal to the occasion.

There are at present 53 men in the Overhead and 19 men in the Underground Departments respectively. The Departments require the use of ten trucks and two teams for the transportation of men and materials.

Testing a Station Gas Meter

BY J. P. HAFTENKAMP

TO the casual observer or visitor to the Gas Meter Shop the testing of a gas meter seems a very ordinary and simple operation. The standard apparatus for this work is a miniature one-lift holder of 5 to 10 cubic feet capacity. This lift, which is an inverted bell, rises and falls in a tank of water. The testing medium is air and by opening a valve and raising the bell, a known quantity of air may be confined under this bell and above the water. The meter may then be connected to the test holder and the air exhausted through the meter under test. A comparison of the dial registration with the scale on the test holder completes the test. To insure absolute accuracy, it is highly essential that the air for testing, the surrounding atmosphere in the room, and the water in the testing holder be of the same temperature. What I have mentioned above applies to all meters up to those rated at a capacity of 600 cubic feet of gas per hour.

This Company recently purchased and installed a station meter having a maximum capacity of 300,000 cubic feet of gas per hour. The builders guaranteed that this meter would register within 3% from 30,000 to 50,000 cubic feet per hour and within 2% from 50,000 to 300,000 cubic feet per hour. It was also specified that the test be made by connecting this meter against a proved meter or a storage holder under satisfactory conditions. Test meters of this size and capacity are unheard of and if they could be had, the cost of making such connections would be prohibitive. It was consequently decided to make the usual holder test. The question of satisfactory conditions is a very important one, and stated briefly means a time in the year when the gas, the

atmosphere, and the water in the holder tank approach the same temperature. When we realize that the works holder tank used in this test contains approximately 1,000,000 gallons of water and is of 1,000,000 cubic feet gas capacity, it is seen that to get similar temperature conditions is a practical impossibility. However, for reasonable differences certain corrections for temperature and pressure of the atmosphere may be applied to give reliable results.

The test holder was carefully calibrated so that its lifts, sheets, and rivets could be transcribed to read directly in cubic feet. The inlet and outlet pipes were drilled so that a thermometer could be inserted into the center of the flow of gas. Provision was also made to take pressures exerted by the holder, the pressure of the atmosphere or barometer reading, temperature of the water in the holder tank, and the temperature of the atmosphere surrounding the holder. The engineer for the meter company advised drilling the top of the holder and suspending a long stem thermometer into the center of holder interior. As no such instrument was available, I suggested a method which met with approval and apparently justified its value as shown later in the test.

In making such a test the sun is a most disturbing element so it was necessary to wait until evening before collecting data. All watches, thermometers and water gauges were carefully compared so that final information should be correct and accurate. At 5:10 P.M. October 22, the 1,000,000 cubic feet holder at the Works was put on to the city service and prepared to receive the test gas. During the emptying process the following data was collected:

Table I—Emptying Holder

Time	Temperatures, Degrees F.		
	Tank Water	Atmos.	Outgo. Gas
5:10	65.50	56.75	61.50
5:25	65.50	56.25	63.00
5:40	65.25	55.25	62.00
5:55	65.00	55.75	61.00
6:10	65.00	55.25	59.75
6:25	65.00	53.75	59.00
6:40	64.50	53.75	57.75
6:55	64.50	52.75	57.25
Total	520.25	439.50	481.25
Average	65.03	54.94	60.16

After the holder had reached a safe low point carefully checked initial readings were made of the position of the holder and the reading on the meter under test. With this information the manufacturing process was resumed, the holder was slowly filled with gas being pumped through the meter and the data shown in Table II, Filling Holder, below was collected:

Table II—Filling Holder

Time	Temperatures			A Inch. Holder Press.	B Barom- eter	C Holder L S R	1000 Cu. Ft. Gas	Meter Read	1000 C. F. Gas Meter'd
	Tank water	Atmos.	Income Gas						
7.00	64.50	52.75	73.00	2.7=0.199	29.71	1 7 0	200	022452	
7.15	64.50	52.75	78.00	2.7		1 9 10		022518	
7.30	64.50	52.75	79.00	3.0	29.71	1 11 11		022584	
7.45	64.00	52.75	79.75	4.6		2 1 28		022646	
8.00	64.00	52.75	80.25	4.6	29.71	2 4 11		022711	
8.15	63.50	52.75	80.50	4.6		2 6 14		022776	
8.30	63.50	52.25	80.75	4.6	29.72	2 8 18		022837	
8.45	63.50	52.25	80.75	4.6		2 11 0		022900	
9.00	63.50	52.25	80.75	6.4	29.72	3 1 9		022965	
9.15	63.50	51.75	81.00	6.4		3 3 15		023031	
9.30	63.50	51.25	81.00	6.4	29.72	3 5 17		023091	
9.45	63.00	51.25	81.00	6.4=0.471		3 7 22	894	023154	702
Total	765.50	627.50							
Avg.	63.80	52.30	80.00						

A= Holder pressure in inches of water, initial and final reading converted to corresponding inches of mercury to conform to barometer reading.
 B= Pressure of atmosphere or barometer readings in inches of mercury.
 C=L denotes lifts of Holder out of water.
 S denotes sheets.
 R denotes rivets.

Great care was taken to get the final position of the holder and the meter reading at the end of the test.

By referring to Table I, it will be seen that the temperature of the outgoing gas was almost exactly midway between the temperature of the tank water and the atmosphere. During the filling process these temperatures had a wider range, which tended to disturb the accuracy of the test. During this process a thermometer suspended through the crown would have given an equalized temperature, for it is needless to say that the incoming gas at a temperature of 80° F. at 7:00 P. M. had not remained at this temperature inside the holder to the end of the test but had fallen in temperature. How much had the temperature fallen was the question, and it was decided to put this holder on the city mains for a short time to arrive at this information, which resulted as shown in Table III, next page, Emptying Holder after test.

Table III—Emptying Holder after Test

Time	Temperatures		
	Tank Water	Atmos.	Outgo. Gas
9:50	63.00	51.25	53.50
9:525			55.00
9:55	63.00	51.25	56.50
9:575			57.00
	63.00	50.75	Lost Therm.
10:06	63.00	50.75	57.00
10:09	63.00	50.75	56.50
10:115			56.75
10:14			56.75
		254.75	340.50
	63.00	50.95	56.75

Another interesting point is again here noted in that the outgoing gas was almost exactly midway between the temperature of the tank water and the atmosphere.

With this data at hand the following conclusions were arrived at although any number of varying combinations may be made with but very insignificant changes in final results. Referring to Table II, the initial gas was of 200,000 cubic feet volume at a pressure of 2.7 inches of water or 0.199 inches of mercury, plus a barometer of 29.71 inches, or 29.909 inches of mercury. Table I shows this gas to have been of a temperature of 60.16° Fahrenheit. A standard cubic foot of gas is measured at 60° Fahrenheit and 30 inches of mercury. By referring to a well known table based on a law in physics, one cubic foot of gas under 29.909 inches of mercury and at a temperature of 60.16° Fahrenheit would be of a volume of 0.977 cubic feet when measured under standard conditions as above noted.

Hence $200,000 \times 0.997 = 199,400$ cubic feet of gas in this holder at the beginning of the test.

The final uncorrected gas in the holder was 894,000 cubic feet. (Table II). This gas should be corrected for a pressure of 6.4 inches of water or 0.47 inches of mercury, plus a barometer of 29.72 or 30.191 inches

of mercury. Also for the following temperatures:

Average tank water Table I 65.03° F.
 " II 63.80° F.
 " III 63.00° F.

Total 191.83

Average 63.94°

Incoming Gas Table II..... 80.00
 Outgoing Gas Table III..... 56.75
 Atmosphere Table III..... 50.95

Total.....251.64
 Average..... 62.91

Now, one cubic foot of gas at 30.191 inches mercury and 62.91° Fahrenheit is a standard cubic foot of gas, hence the final volume of gas in the holder at the end of the test was 894,000 cubic feet.

Hence $894,000 - 199,400 = 694,600$ cubic feet as measured by the holder.

Amount recorded by meter = 702,000 cubic feet. (Table II).

Excess amount recorded by meter = 7,400 cubic feet.

$\frac{7400}{694,600} = 1.07\%$ high.

This is an actual test made of the Thomas Electric Gas Meter recently installed at the Gas Works.

Too Much Light

"Years ago," said Guy Bares Post, the actor, "I appeared in an amateur performance of a play that had a distinct religious flavor. The leading player had studied for the ministry and had a deep sonorous voice. In one of the scenes the lights were supposed to be turned down and a raging storm simulated. The accompanying lines were:
 "Oh, Lord, deliver us from the powers of darkness."

"The leading man spoke the lines, but darkness didn't follow. He spoke them again, and still the stage was distressingly light. Finally he roared:

"Oh, Lord, deliver us from the power of darkness and also give that fool gasman sense enough to turn down the lights."

"The gaslights went down, and the audience roared."—Pacific Service Magazine.

Steam Main to Brewster-Gorden Warehouse

BY C. G. BINDER

AMONG the steam consumers connected to the Company's lines within recent months was the new Brewster-Gorden Warehouse, located on Canal Street near the Buffalo, Rochester and Pittsburgh Railroad.

The Steam is supplied from Station 35, through a main running



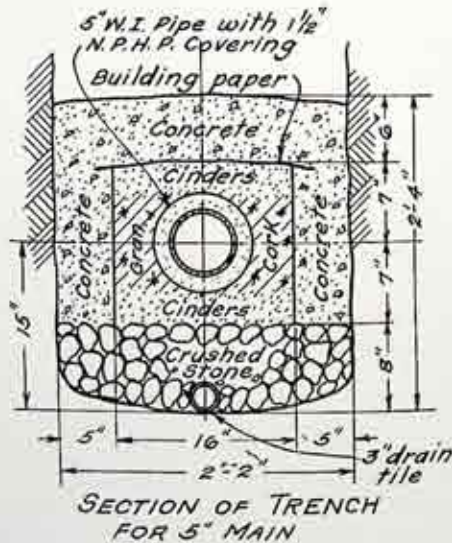
General View of Construction

underground in the alley between the Utz & Dunn and Schlegel Buildings from the east end of the station to the east side of Canal Street. From this point the main runs north just inside the curb line of Canal St. to the warehouse. The main from the station to Canal Street is 5 inches in diameter and 227 feet long; the remaining section 250 feet long being 3 inches in diameter. Sufficient capacity was provided so that additional loads may be added. The

pressure carried is 100 pounds per square inch. As a pressure of 2 to 5 pounds is sufficient for heating, a pressure reducing valve was installed at the Brewster-Gorden Building. This valve is provided with an adjustable weighted lever so that any desired pressure can automatically be carried.

The main is 3 feet 6 inches below the surface of the street and is protected by an inverted U-shaped concrete box which rests on a crushed stone foundation. Below the crushed stone is placed a 3-inch drain tile which is connected to the sewer, and serves to drain off any water which may seep through the ground. The pipe is insulated with 1½ inch Non-pareil high-pressure covering and granulated cork. Above and below the covering are placed cinders which serve as a saddle for the pipe to rest on and as a form for the concrete cover, respectively.

In the design of a system of steam piping, one of the most important problems is a proper provision for the variations in length of the pipe, which occurs every time the steam



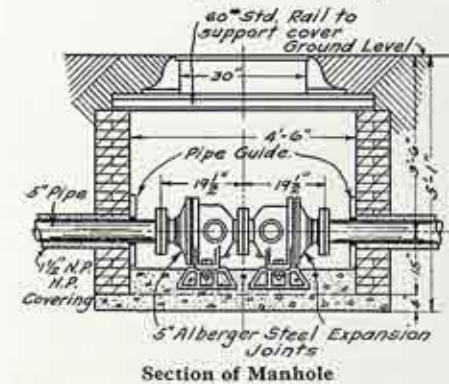
is turned on or off. Steel pipe elongates about 0.008 inches per 100 feet of length for each degree F. rise in temperature. In lines carrying 100 pounds pressure, there is a temperature rise of 288 degrees above the normal underground winter temperature of 50 degrees F. Hence, under these conditions, the total amount of expansion for every 100 feet of steel pipe is 2.3 inches.



Oxy-acetylene Welding

The interior forces in the metal produced by expansion are very great, and the entire line must be allowed to expand freely and at the same time be properly anchored and guided. The movement or travel of the piping due to expansion or contraction is cared for, in power plants, by long radius bends and loops. In underground construction in the congested districts, other methods have to be resorted to, the most common being the use of expansion joints. There are several different types of joints, the one used in this work being manufactured by the Alberger Pump & Condenser Company. This joint is built up of a number of circular discs stamped from plates made of chrome-van-

adium steel, having an exceptionally high elastic limit. These discs are welded together, forming a flexible bellows, which absorbs the movement of the pipe. Each joint is



capable of taking care of a 2-inch movement of the pipe.

Along the line there are four manholes in which are placed the expansion joints, opening for service connections, and drips for draining the condensation from the line.

One of the novel features of the installation is the absence of joints between the manholes. This is very desirable, as a steam leak due to poor joints is a serious matter in underground construction. The pipes were welded together by the oxy-acetylene method, the work being done by the Rochester Welding Works under the supervision of Mr. S. W. Miller of that Company.

The Davis-Bournonville Welding Apparatus was used. This apparatus consists of two tanks, one supplying oxygen, the other acetylene; a cutting off torch and a welding torch. The oxygen tank carries a pressure of 1800 pounds per square inch and contains 100 cubic feet of free gas at 62° F. The acetylene tank carries a pressure of 150 pounds per square inch and contains 300 cubic feet of gas at 62° F. Acetylene, free from air, and compressed to a pressure of about 30 pounds per square inch, is liable to explode should the contain-

ing tank be jarred or shocked. In order that the acetylene may be safely handled at 150 pounds pressure, asbestos, or some similar substance is placed in the tank and saturated with acetone. The acetone readily absorbs the acetylene gas, and in this state the gas is non-explosive at high pressures. Each tank is provided with a pressure regulator which feeds the gases at a constant pressure through rubber hose to the torch.

The cutting off torch, by which the pipe is cut to the required length, has a tip with three orifices. A mixture of oxygen and acetylene is supplied to the outside orifices, forming the heating jets; oxygen, at a



Details of Pipe Covering

higher pressure, to the middle opening, forming the cutting jet. The welding torch has just one orifice which is supplied with both oxygen and acetylene. These gases when united in the proportion of $2\frac{1}{2}$ parts of oxygen to 1 part of acetylene, produce perfect combustion and a very hot flame. In actual practice, however, the torch consumes 1.14 to 1.28 parts of oxygen to 1 part of acetylene.

After the pipes are cut to the required length and the ends cleaned of scale, they are welded together with pure Norway iron. It is es-

sential that the flame be of the right character. An excess of oxygen will burn the pipe, while an over abundance of acetylene will carbonize it. The strength of the weld is practically that of the pipe and is fully double the strength of screw joints. In general the pipe is connected to the expansion joints by means of Van



Construction Force

Stone flanges which have proved to be much more reliable than screw flanges. This is the first installation where the welding method has been used by this Company and the results have proved to be very satisfactory.

The installation was made by Mr. Frank Rich of the Gas Street Department and Mr. "Bill" Enos of Sta. 3.

Capital and Labor

The misuse of the term "capital" is responsible for no end of mischief.

In economic literature and every day speech it is common to use the phrase "labor and capital" as if the two were antagonistic—opposed one to another.

As a natural result all sympathy veers to the side of labor and a false issue is created.

Why?

Because labor is *human* and capital is *material*, and when the impression is conveyed that labor is arrayed against capital, sympathy inevitably flows to the human side.

Capital is simply wealth used to produce more wealth. It is at the service of anybody and everybody; *capital would exist just the same in a socialistic community.*

Labor may have a quarrel with *employers*, whoever they may be, *but not with capital.*

Labor and capital are required to produce wealth, just as a man and a spade are required to dig, and there is no more antagonism between labor and capital than between a man and the spade which is his capital.

—Public Service.

Safety Mechanism for Elevator

BY L. I. HALL

There has recently been installed on Station No. 3 elevator, a set of safety-stop devices controlling the electrical operating mechanism indirectly by the relative positions of the car with respect to the landings and the horizontally sliding doors.

Referring to the diagrammatic sketch,—

When the car is directly opposite the floor level—within the limits of a few inches—a trip lever T is actuated by passing over a bent piece B fastened on the car body. This trip lever frees the automatic latch A from its seat, thereby allowing the door, if so required, to be opened in the usual manner by pressing on the hand latch H in direction of the arrow. The moment this hand latch is released in any way, the door is thrown back slightly from its locked position by means of a spring operated lever L, which presses against the upper edge of the sliding door. This lever at its opposite end closes electrical contacts C, when the landing doors are shut, with a shunt relay circuit, wired to all the doors similarly in series, and to a remote control switch R in the basement. This switch remains open at all times when the landing doors are open, or it is thrown open by a spring whenever the relay circuit is opened in any way. A solenoid D instantly closes the switch when current flows.

When all is ready to start the car, the landing door is closed and latched, thus closing the relay circuit. Then when the operating cable in the car is pulled, the starting switch S in the basement is thrown over, and the solenoid of the remote control switch is energized, thus closing the switch and instantly allowing the current to flow through the controller to the motor, thereby starting the car. Should the car

reach either extreme end of its travel, an automatic stop will also open the relay circuit and shut off the current to the motor, as usual.

In case some one should open a door just at the moment the car was passing the trip lever T and when the cable had not been pulled for that purpose, the motor would be

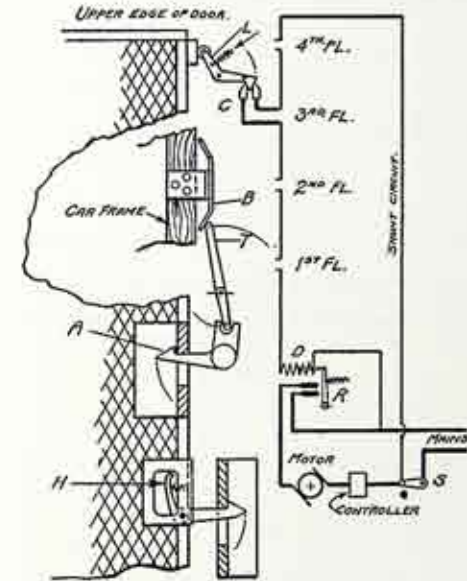


DIAGRAM OF SAFETY ELEVATOR MECHANISM
RUNNING POSITION.

stopped and the car would slow down, stopping quickly with a heavy load and more slowly with light load, due to the effect of the counterweight. The car could not be moved again till the door was shut and would start at once unless the cable had in the meantime been pulled to the stop position.

It is impossible to start the car when a door is open at any landing, thus preventing accident at such points by persons at another landing pulling the starting cable.

Safety comes first also by the inability for anyone to jump on or off the moving car at any landing, for, as previously mentioned, the landing door cannot be opened except when the car is in the correct position.

Gas and Electric News

Published Monthly by the
ROCHESTER RAILWAY and LIGHT CO.
34 Clinton Ave. N., Rochester, N. Y.

FREDERICK W. FISHER Editor
PHILIP F. STEPHENS Assistant Editor
DWIGHT C. ROCKWOOD Photographer

Department Correspondence Staff Sales

H. O. STEWART Industrial
JOS. P. MACSWEENEY Domestic
Electric Operation

A. S. MACDOWELL Generation
ARTHUR J. WAGNER Distribution
Gas Operation

WILLIAM H. EARLE Manufacture
WILLIAM F. SKUSE Distribution

Auditing

F. H. PATTERSON
Engineering and Construction
H. C. DEFFENBAUGH

Vol. III APRIL, 1916 No. 10

Personal success to most men and women means a higher paid job.

The problem is, "How to get it."

The problem should be, "How to fill it," for when a man or woman is able to fill a better job, the job is waiting for them either in their own organization or in some other.

The good jobs exist, and the better the job the harder it is to fill it.

Those individuals who get the good jobs are those who deserve them in practically all cases.

Some persons are naturally fitted for the better jobs because they inherit success making qualities, and because their natural endowments and opportunities have been greater.

Some persons fit themselves for the better jobs by sheer force of character.

It is done by self mastery, by the elimination of undesirable qualities, by the cultivation of desirable qualities and by the acquisition of knowledge.

Study the successful men and women of history, or those whom

you know. If you desire success equal to theirs, imitate their methods, unless you can invent better methods of your own.

Become convinced that you will in all human probability get what you deserve, and then deserve more.

Make it a personal issue with yourself to know just where you stand, and do it now.

Educational Work for the Company's employees was begun on March 13th. An Educational Board consisting of Mr. Herman Russell, Assistant General Manager, Chairman; Mr. Ivar Lundgaard, Manager of Industrial Sales Department, and Mr. F. W. Fisher, Safety Engineer, has been appointed to co-ordinate the work of 29 of the Company's experts, who will lecture monthly to selected groups of employees.

Educational Groups have been established as follows: Industrial Sales, Domestic Sales, Meter Reading, Gas Shop, Electric Meter, Service Improvement, Telephone, Appliance, Application and Information Departments, also certain Station Operators. As now laid out the work includes about 475 employees.

In each of these groups a monthly meeting is held, at which Company operations are discussed with the expert executive and operating employees of the Company. The meetings are held on Company time, and attendance is required from the selected employees. Individual employees will be sent to more than one group meeting, at the discretion of the superintendents concerned. The papers presented will in most cases be printed and distributed upon application, to group members.

The work, as outlined, is expected to serve a double purpose. The Company will have a better informed and more highly skilled operating staff, while the individual employee is

assisted in his own personal advancement through the opportunity to acquire knowledge derived from long personal experience.

The speakers and subjects for the remainder of the year 1916 are as follows:

I. Lundgaard, Why Are We in Business?

I. Lundgaard, Electricity and Gas, Their Respective Fields.

J. P. MacSweeney, The Creation of Public Good Will.

C. A. Tucker, The Finances of the Company.

W. S. Wallace, General Salesmanship.

W. S. Wallace, Review of Sign Sales as Applied to Shop.

R. D. DeWolf, How Electricity is Made.

J. P. Haftenkamp, How Gas is Made.

E. L. Wilder, Effective Speaking and Letter Writing.

E. C. Scobell, Public Service Commission Regulation.

L. W. Layman, Service Improvement.

V. C. Hoddick, Test and Calibration of Gas Meters.

B. B. Yeomans, Industrial Gas Service.

Charles Miller, Electric Motor Service.

A. S. MacDowell, Conversion of Electricity.

C. G. Durfee, Calibration and Test of Electric Meters.

F. C. Hellen, How Gas is Distributed.

J. O. Montignani, How Electricity is Distributed.

L. A. Newman, Methods and Efficiency of Reading Meters.

W. Consler, Construction and Installation of Electric Meters.

W. E. Drew, Construction and Installation of Gas Meters.

F. G. Hubbard, Repairing Gas Meters.

F. H. Patterson, The Order System.

J. B. Eaton, Stores and Obsolete Material.

D. M. Beach, The Legal Status of the Company and its Employees.

A Lineman—His Creed

BY WM. T. HANZSCHE

First. I believe in safety. Just as a good sailor takes no chances, making no short cuts among rocks and shoals, so the lineman must never disregard his warnings or danger signals, nor court disaster by rash venturing.

Second. I believe in fidelity. I must faithfully perform my every task. Where but one in a thousand neglects his duty—be it naught but the tapping of a wheel, the setting of a bolt or the driving of a nail—there can be no safety.

Third. I believe in sobriety. The steady nerve, the sure hand, the cool head, the sound judgment, are things indispensable to my work. The least indulgence may impair them and without these there can be no safety.

Fourth. I believe in courtesy. In showing good will I gain good will. Good service depends upon good will given and good will received.

Fifth. I believe in economy. Wastefulness is evil. Nothing that can be of use may be wasted, not a pound of waste, not a gill of oil, not a scrap of paper, in the sum of saving lies much gain surely profiting them that save.

Sixth. I believe in organization. Civilization is built only by men holding together for the common good of all. True organization considers all; the worker, the employer, the public at large—each for all and all for each.

Seventh. I believe in efficiency. In seeking large yields from economized effort we lighten our labors and increase in proportion the returns from our work.—*Edison Current Topics, Los Angeles.*

Mouth Infection

This Company has repeatedly called attention to the necessity for the care of the body through the Eastman Bulletins, the Company bulletin boards, magazine, weekly meetings, etc., with great success.

Among the rules given for the preservation of health, those relating to the care of the teeth are exceptionally important, and for the sake of adding such emphasis that the instructions previously given for the preservation of the teeth will be actually carried into effect, the accompanying radiographs illustrating pyorrhea, root infection, unsanitary crown and bridge work, etc., are shown.

Many of the country's most progressive doctors are agreed that mouth infection is a hitherto unsuspected source of all sorts of bodily ills. Teeth improperly treated, or not treated at all may lead to general infection of the body blood stream, and the result is often manifested by partial loss of sight, heart, kidney, stomach and general diseases of the system. Aside from the mechanical difficulties of chewing caused by poor teeth with the subsequent digestive disorders, and the easily recognized pyorrhea, there often are as the radiographs show, diseased conditions around the roots of the teeth themselves.

The reader is urged to study the radiographs carefully, and to make application of the illustrations to his own condition. Note the unsanitary crown and bridge work, wherein sharp projections are left to retain food which will decompose and cause bad breath, decayed teeth, infection and subsequent systematic disturbances, etc. Note the root canals which are only partially filled. The portions not filled are simply breeding places of infection which nature is unable to eliminate. A tooth in which the nerve has been

killed has no blood supply, and consequently the system is unable to clean out these cavities when they are infected. The white spots indicate pus or "matter" as it is commonly called. There may be no local manifestation of these conditions but they are none the less dangerous for the blood is constantly infected from these pus spots and is carrying the poison all through the body.

It is entirely outside the limits of this article to describe symptoms, or to reiterate the various rules for the preservation of the teeth which have already been presented many times. It is proper, however, to strongly emphasize the necessity of giving the teeth adequate attention. A periodic examination and treatment by a competent dentist, with subsequent thorough daily cleansing does not call for a prohibitive expenditure of time or money on the part of any one.

EXPLANATION OF RADIOGRAPHS

Figure 1—Extensive bone destruction resulting from dead pulp (nerve). A—Tooth, B—Healthy bone, C—Abscess and dead bone, D—Wire placed through root canal into abscess.

Figure 2—Unsanitary bridgework. A—Poor filling, B—Ill fitting gold crown, C—Abscesses due to infected teeth, D—Pyorrhea pocket caused by crown.

Figure 3—A—Root canal filled with infected matter causes abscess—B. C—Canal not properly filled, also abscessed.

Figure 4—Normal Conditions.

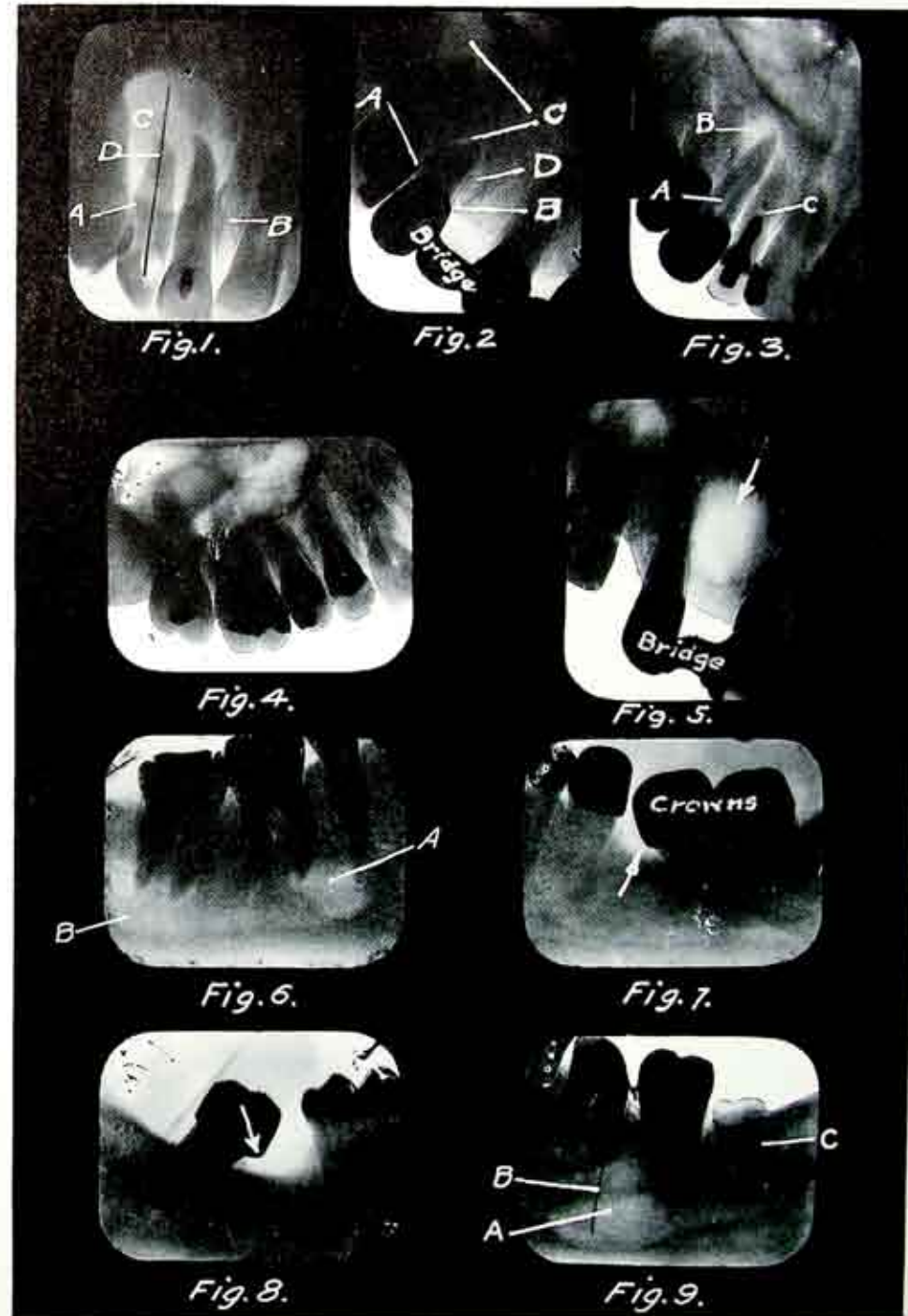
Figure 5—A—Large cyst resulting from the extraction of a diseased tooth.

Figure 6—A—Abscess involving two teeth, B—Abscesses on both roots.

Figure 7—Pyorrhea caused by gold crowns.

Figure 8—Ill-fitting crown.

Figure 9—A—Large abscess, B—Wire through tooth into abscess, C—Infected root.



Dental Radiographs by Dr. Smith, Rochester, N. Y.

Underground or Overhead Distribution—Which?

BY F. A. MILLER

In a list of wire lines, overhead and underground, giving totals for each year from 1901 to December 1st, 1915, the facts giving the growth of the Company's system are of interest, not only in showing a normal, healthy increase, but in indicating the trend of future distribution methods. The figures are:

Year 1901, Underground Cable.....	157.4 miles
Year 1910.....	515 miles
Increase.....	227%
Year 1901, Overhead Wire.....	568.9 miles
Year 1910.....	960.5 miles
Increase.....	69%

Year 1910, Underground Cable.....	515 miles
Year 1915.....	1036 miles
Increase.....	101%
Year 1910, Overhead Wires.....	960.5 miles
Year 1915.....	1751.6 miles
Increase.....	82%

A total increase in fourteen years, for underground cable, of about 600%, and for overhead wire, of about 200%.

This greater growth of underground cable as against overhead wire in the distribution system, in the proportion of 6 to 2, would indicate an eventual preponderance of the underground system over the overhead system; but a consideration of the figures of 1910, compared with those of 1915, shows a greatly reduced gain of underground cable over that of overhead



Former Overhead Line Construction on Portsmouth Terrace



Portsmouth Terrace after Construction of Subway

wire distribution. This reduced rate of gain is, no doubt, due to the development in the last five years of the rear lot line system which substitutes for somewhat expensive underground distributing methods, the much cheaper overhead construction, and which leaves the city streets equally free from poles and wires. The nearly uniform rate of increase of the two systems in recent years would indicate that the overhead system would nearly hold its own in growth, as compared with the amount of underground wire distribution, and it will probably be many years before the 1751 miles of overhead lines with the yearly increases, will be out-distanced by the 1036 miles of under-

ground lines, with their yearly increases. Until the rear lot distribution came into use, the trend of progress was no doubt toward the widest possible abolition of overhead lines, as being subject to criticism not only as to appearance, but also as to security and safety of maintenance against the elements. However, the rear lot line system has solved the criticism of unsightliness of poles in streets, and makes for economical and ready distribution to all prospective consumers. The accompanying photographs of Portsmouth Terrace clearly illustrate the desirability of subway and rearlot line construction from the viewpoint of both the property owner, and the general public.

Empire State Gas and Electric Association Meeting

BY A. J. WAGNER

The Distribution Branch of the Empire State Gas and Electric Association held a meeting at the Hotel Onondaga, Syracuse, New York, on March 10th. Among the eighty members in attendance were Mr. J. C. DeLong, President of the Association, Mr. F. J. Buchaca, District Engineer for the Syracuse division of the Bell Telephone Company and Mr. H. G. Harvey, Engineer of the General Electric Company. The Rochester Railway and Light Company was represented by Messrs. F. C. Alcott, A. J. Wagner, Seth Creighton, J. Logan, H. Hoagland, J. Cox and J. Downs.

The following subjects were discussed: Overhead Construction at Railroad Crossings; Protection to Secondary Systems including Motion Picture Theatres and Wireless Telegraphy Installations; Distribution Maps and Records; Joint Construction Work with Telephone Companies relative to lighting transformers on joint poles and joint construction agreements; Voltage Regulation for Suburban Districts; and Lightning Arresters for Overhead Distribution.

The meeting was opened by a paper prepared and read by Mr. G. W. Ide of the A. L. Swett Company of Medina, N. Y. This was a very interesting paper and inasmuch as the A. L. Swett Electric Light and Power Company has a very extensive high tension overhead system, its representatives were in a position to advise and debate from the standpoint of experience on almost any type of high tension switch. The one to which they and the majority of attending delegates were most favorably inclined was the Burke horngap, single pole, three unit type. These switches are operated from the ground by a vertical pipe so arranged that all three units operate simultane-

ously, the arc taking place on horns after the main contact has been broken. The ease with which these switches can be erected and the substantial material involved in their manufacture appealed to the distribution engineers as very desirable features. Several other types were mentioned but they did not bring forth such a discussion as the above type. The plug disconnecting switch as used by the Rochester Railway and Light Company was highly commended by the attending delegates, both from the standpoint of simplicity and ease of operation. The fact was brought out that this type is being used successfully on the Rochester Railway and Light Company's 11,000-volt lines, as well as those of 4150 volts.

The subject of overhead construction and railway crossings consumed the greater share of the morning session. On comparing notes as to the difficulty in obtaining any standard form of construction, the versatility as displayed by railway engineers was very evident and on this particular point, the discussion waxed very warm; also as to the time consumed by railway engineers in checking plans and elevation drawings of proposed crossings, and construction drawings. The general procedure as outlined by the attending delegates in applying for permission to cross railroad companies' property was about the same.

In actual construction, the usual type of grounding arms and diagonal grounding conductors are in use by all companies who have construction over railway property, steel towers being used on railway property and wooden poles on the highway. Mr. J. C. DeLong, President of the Association, announced under this head that a committee of members of the Association was at the present time co-operating with engineers of the railroad companies with the view of

arriving at some standard form of construction that would meet with the approval of all. At the present time nothing definite has been decided upon, as the committee is waiting for a decision on certain materials and types of construction by the Bureau of Standards at Washington, D. C.

The method employed for protecting secondary systems from instantaneous high current consumption and motion picture theatres, is that of placing the particular theatre on the 220-volt service, or the installation of an individual transformer. The same condition as applied to wireless telegraphy installation, is eliminated by several methods. The one most extensively used, is the placing of a non-inductive resistance such as a carbon rod of about 20,000 ohms, the central point being thoroughly grounded, between the service conductors on the consumer's side of the meter, also the installation of capacity at the same location with the central point grounded. Another method is the installation of reactances of about 6 inches in diameter and containing 100 turns on the consumer's side of the meter. The writer suggested that where the wireless aerial ran parallel and in very close proximity to the service conductors, that the placing of reactances at the connecting point of the service conductors and the main distribution circuit, would eliminate the high inductive effect on the main distribution system. The placing of the additional non-inductive resistance or capacity between the service wires at a point where the service enters the consumer's residence is also desirable.

In the keeping of distribution maps and records, every company represented used the card index system to a greater or less extent, each individual system applying to conditions that exist in each company's territory. As an illustration of keeping records

of poles by street location, the point was brought out by Mr. C. Selden of the New York and Queens Electric Light and Power Company that the above method would be impossible of application to that Company's particular condition, as its field of operation covers a number of districts, each district having a street of the same name, making it necessary to follow the consecutive numbering system. In Rochester—as in the majority of other cities—location of poles by streets has been adopted and found to be very successful.

In the discussion of the subject, "Joint Construction Work with Telephone Companies," Mr. F. J. Buchaca, Engineer of the Syracuse district of the Bell Telephone Company, gave a very interesting talk on the personal relations between light and power companies and telephone companies, particularly the spirit of co-operation that must necessarily exist to bring about a natural tendency for better and safer construction, and at the same time eliminate hardships or prohibitive costs for either company. To quote Mr. Buchaca, "The reason that the limit of 5,000 volts has been specified for light and power companies' conductors on joint construction work, is that in the art of telephony, it has been considered, up to the present time, impossible to insulate for any higher potential than 5,000 volts."

Some trouble was reported by attending delegates who had used pole type regulators, in that these had a tendency to hunt. The manufacturer was informed of this trouble and steps have been taken to obviate this condition in the future.

Under the subject of Lightning Arresters, attending delegates reported the use of a great number of types. The Burke combination choke coil and horngap arrester seemed to be favored to a greater extent than any other, and a number of com-

panies that have had experience with this type, agreed unanimously as to its satisfactory operation under all conditions. In discussing the advisability of using series resistance in the ground connection to limit the current flow, it developed that companies which had installed such resistances, have since removed them, claiming that lightning disturbances invariably fractured them and rendered them useless.

The A. L. Swett Company of Medina has a large number of small installations connected to high potential transmission lines, and all such installations are protected by choke coil and horngap arresters. The smallest installations connected to their lines at the present time, are $2\frac{1}{2}$ K. W., and these are for the purpose of supplying small rural consumers. In supplying such consumers whose connected load would be in the neighborhood of $2\frac{1}{2}$ K. W., the above company makes the following charges: A minimum charge of \$2.00 per month where the consumer is located 500 feet from the transmission line, in addition to the K. W. Hr. charge. With the regular K. W. Hr. charge of 10c less 10%, a revenue of \$4.00 per month is assured. For any extension beyond 500 feet, a charge of 90c per month in addition is made. If there is more than one consumer on any one secondary system the charges are divided evenly. These charges are to offset the depreciation of apparatus, etc., which is assumed at 8%.

Mr. H. G. Harvey of the General Electric Company gave an interesting talk on lightning protection for power installations connected to transmission lines. In the practice as outlined by the General Electric Company, the writer does not wholly agree. This Company advocates the installation of choke coils without the additional horngap, depending upon the electrolytic arrester at the station

to relieve the line of the detrimental surges. This means that an impulse or traveling wave caused by sudden local electro-static charges on transmission lines, such as a lightning stroke, must be choked back the length of the line, subjecting the insulation to a high potential stress before a path is provided to ground, which, in this case, would be at the station. The writer holds that any installation connected to a transmission line should be provided with a path to ground through horngaps in addition to reactances. In other words, the more direct the path to ground and the shorter the distance the surge must travel to find a path to ground, the less will be the strain upon the insulation of the line with detrimental effects arising therefrom.

During recess that was called at 12:30, the informal aspect of the different groups of delegates assembled in the hotel lobby was very gratifying, and the conversation that emanated from these different groups leads the writer to believe that the informal manner in which these meetings are conducted, tends to place at ease men who, under other conditions, would be very reticent in expressing their views on the subjects that are prepared for discussion.

In conclusion, the writer believes that this meeting was a very decided success and that the members attending returned to their companies with the satisfaction of having had some of their problems solved, as well as having helped to solve those of their fellow members.

When Money Talks

The cynic says that when money talks it usually says "Goodbye." These are the words of money in the pocket but money in the bank speaks a different language. It says, "Lean on me" or "I'm behind you" which are words of "interest."—*Kodak Park Bulletin.*

Rochester Art Commission

By T. H. YAWGER

Among the amendments to the Charter of the City of Rochester made last year, was an act empower-

ing the Mayor to appoint an Art Commission consisting of five members, whose jurisdiction, as defined by the City Charter, includes the following:

"A." All works of art, including paintings, mural decorations, stained glass, statues, bas-relief and other sculptures, monuments, fountains, arches or other structures of a permanent character, intended for ornament or commemoration to be acquired by the City of Rochester by purchase, gift or otherwise, and the location thereof, excepting however, monuments, tablets, tombstones or similar structures erected at private expense in Mt. Hope Cemetery.

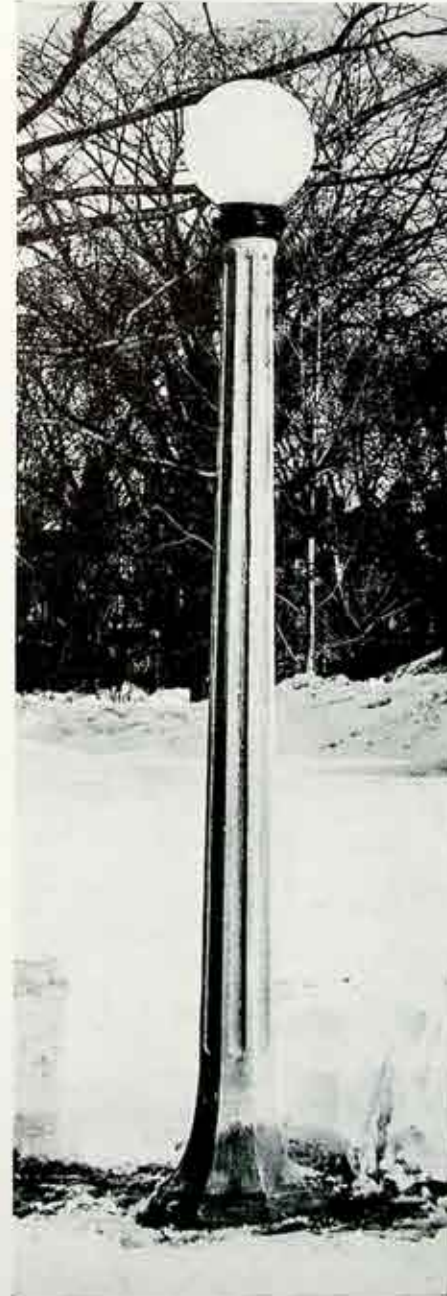
"B." All buildings, bridges, approaches, gates, fences, lamps and other structures erected or to be erected upon land belonging to the City.

"C." All arches, bridges, structures and approaches which are the property of any corporation or private individual and which shall extend over or upon any street, avenue, highway, park or public place belonging to the City.

"D." The removal, relocation or alteration in any way of any existing work of art in the possession of the City.

The permanent office of the Art Commission is now located at 112 Sibley Block, Main St. East, with James G. Cutler, President, Hon. H. H. Edgerton, ex-officio, Geo. W. Aldridge, James S. Watson, Geo. L. Herdle as commissioners and Alexander S. Hess, secretary.

Under the authority of the Commission, it is now necessary for the Rochester Railway and Light Company to obtain approval of all poles, lamps and lamp standards of present and future designs, before permission will be given to erect the same. Approval has already been given for the Company's cast iron and concrete standards for various



Approved New Concrete Standard

sizes of lamps and supports, including the new concrete standard shown.

The Company believes that the inauguration of the Art Commission for the City of Rochester, dominated by men of such wide observation and discriminating taste as Mr. J. G. Cutler and his associates, will make a marked impress in the constructing and re-constructing of our streets, buildings and public places, that will keep Rochester as it already is, one of the most beautiful cities in the country.

Appreciated Commendations

Mr. E. E. Strong, Supt. of Transportation of the New York State Railways, Rochester Lines, recently had a personal and very satisfactory example of the work of the employees of the Rochester Railway and Light Company. Messrs. G. Harris and J. R Pearson of this Company are commended by him in the following letter:

March 2nd, 1916

MR. R. M. SEARLE, Vice-President,
Rochester Railway and Light Company,
Rochester, N. Y.

My dear Mr. Searle:

I have frequently heard persons with whom I am acquainted, speak of the efficient manner in which workmen of the Railway and Light Company perform their duties, but it remained until recently for me to have personal experience with one of them.

I had occasion to have a range and water heater installed, also to have a coil put in the furnace. I do not know the name of the man who did this work but it was a pleasure to me to note the painstaking care with which he performed every detail of his work. All pipes were cut with exacting care and where it was necessary to cut a hole through the linoleum, it was done with such neatness that it did not mar the appearance of it. On the first day he did not complete the job and I was surprised to note that although the house was at the time unoccupied, he carefully swept up the shavings and dirt which had accumulated in the course of the day. As one who is ever trying to get men to think not only of getting work done, "in any old way," but to consider also the nicety with which that work may be done, I thoroughly appreciated the careful attention this man gave to his duties and desire

to congratulate you and your Company in having men (I assume that he is but one of many) who, without a supervisor, use such painstaking care.

With a hope that this man may know that his services were appreciated by the undersigned, I am,

Cordially yours,
E. E. STRONG.



The Reviewer of the Literary Department of the Rochester Herald, Mr. Howard S. Ruddy, likes the work of the Railway and Light Company's Service Department. Mr. Ruddy writes as follows:

February 24th, 1916

MR. R. M. SEARLE,
Rochester Ry. and Light Co.

Dear Sir:

I want to tell you how much I appreciate the new house-to-house gas inspection service which you have inaugurated, and of which I was made the willing victim, today.

It is a much finer thing, I suspect, than your patrons in general will recognize, and proves most conclusively that most of the annoyances to which gas consumers are subject are easily corrected. If there are any charges for the appliances which your agent attached to my fixtures, I shall pay them most willingly. With increased respect I subscribe myself most Sincerely,

HOWARD S. RUDDY,
52 Somerset St.

The Ambitious Frog

In old Aesop's fables we read of a frog
Who burst, like a bubble, in air,
While trying to show to his friends in the bog
The size of an ox who'd been there;
And the moral was drawn from this homely
old tale
That a man should take care what he tries,
And plod on through life on a nice modest scale,
Since only contentment is wise.

But my heart goes out to that cocky young
frog
Whose life was so recklessly spent,
Who burst into bits in the midst of his bog
Because on ambition intent;
But tho he was highly conceited, I know,
I'm strong for his courage and gall,
For it's better to burst in attempting to grow
Than to have no ambition at all
—Berton Braley in "Life."

Gas and Electricity in the Home

BY THE GAS DEMONSTRATORS

Mrs. Gabrielle Gay, Miss Frances E. Moore, and Miss Mona A. Pratt

The Business Girl as a Wife

She should make the best sort of a wife because she knows about the worries that beset a man in business.

She understands the value of money, having had to work for it herself.

She has probably learned to dress neatly and carefully, without extravagance.

She knows by experience the worker's need of a quiet, restful home at the day's end.

She has learned in her business career the necessity of system in all work.

She knows the unfairness of loading the business person down with household errands.

She knows how easy it is to be detained at the office and therefore won't fume if dinner is kept waiting.

She knows that there are bigger things in the universe than the trifling personal things that happen to her each day.

Her own experience has taught her that it is only in a cheerful, peaceful home, lit by the light of love, that the worker can find strength and refreshment to start each day's toil anew.

The Sunday Supper

With many the Sunday night supper is the most important event of the week. It comes at a time when people are rested and at their best, and can give a little time and thought to its preparation. Often the daughter of the house takes the responsibility of planning and preparing the meal, giving the tired mother a better chance to enjoy her friends and family. Any time from seven until eight is a practical and

popular time for the Sunday night supper because dinner is usually late. It is a good plan to have a fixed time for this meal so that friends may drop in and enjoy it in the informal American way.

Of course the prettiest silverware and daintiest linen is used with a centerpiece of flowers or fruit.

There are many and varied menus for this occasion. In some homes it is a regulation meal and in others it is a simple lunch. Cold roast meat, apple or cranberry sauce, fruit salad, cheese and nut-bread sandwiches with hot chocolate make a good combination. One successful hostess invariably serves potato salad. It is not an ordinary salad, but a wonderful combination of good things; chopped olives and pickles, a can of peas, chopped pimento added to the cubes of potato and the whole mixed with mayonnaise and garnished with a generous quantity of sliced hard boiled eggs. With this she serves cheese and nut sandwiches, pineapple salad, cake and coffee. Instead of the sandwiches one might have cold meat and rolls. Should it be desirable to eliminate the fruit salad, a relish could be served with the meat and an ice with the cake.

Often a chafing dish meal is the rule and when it is known that all chafing dish recipes are just as good if cooked in a double boiler on the gas range, a rarebit for the Sunday evening meal may be more common.

If something unusual is wanted one can have a Dutch Supper with pretzels and salted nuts, a menu composed of various, national dishes or a New England feast of baked beans, brown bread, pickles, jelly and coffee.

After a tramp or motor trip hot

waffles or pancakes with bacon or tiny sausages are a welcome treat.

There are many original but simple ideas which if carried out in the right spirit make a Sunday night supper a delight to one's family and friends.

Suggestions for a Chafing Dish Supper

Tomato Rarebit on Graham Toast, Thin Lettuce or Green Pepper Sandwiches, Coffee.

Shrimp Wiggle, Lettuce with Roquefort Dressing, Rolls, Coffee.



Recipes

TOMATO RAREBIT

- 2 tablespoons butter
- 2 tablespoons flour
- $\frac{3}{4}$ cup thin cream
- $\frac{3}{4}$ cup stewed and strained tomatoes
- $\frac{1}{8}$ teaspoon soda
- 2 cups finely cut cheese
- 2 eggs slightly beaten.
- Salt, mustard, cayenne.

Put butter in chafing dish; when melted, add flour. Pour cream on, gradually; and as soon as mixture thickens add tomatoes mixed with soda; then add cheese, eggs and seasonings to taste. Serve on graham toast as soon as cheese has melted.

SHRIMP WIGGLE

- 1 cup canned peas
- 1 can shrimps
- 2 tablespoons butter
- 2 tablespoons flour.
- 1 cup milk
- $\frac{1}{2}$ teaspoon salt.
- Dash of red pepper.

Melt the butter; stir in the flour and seasoning; then add the milk gradually. When it thickens empty into it the peas and shrimps; cover and when heated through serve in patty cups or on crackers.

COTTAGE PUDDING

This recipe if baked in a loaf or two layers makes a simple but delicious cake.

- 2 tablespoons butter
- $\frac{3}{4}$ cup sugar
- 1 egg
- $\frac{1}{2}$ teaspoon salt
- $\frac{1}{2}$ cup milk
- $1\frac{1}{2}$ cups flour
- 2 teaspoons baking powder
- 1 teaspoon vanilla (if desired).

Cream the butter, add sugar gradually and egg well beaten, mix and sift flour, baking powder and salt; add alternately with milk to first mixture, turn in cake pan or individual pans, bake in a moderate oven about 30 minutes. Serve with raspberry sauce.

Suitable Lenten Menus

DINNER

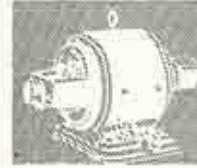
Broiled Bluefish with Drawn Butter Sauce, Potatoes Baked in Half Shell, Scalloped Oyster Plant, Cottage Pudding with Raspberry Sauce.

DINNER

Baked White Fish with Hollandaise Sauce, Lattice Potatoes, Scalloped Corn and Tomatoes, Lettuce Salad, Baked Stuffed Prunes.

FISH, BROILED IN THE GAS OVEN

Cod, haddock, bluefish and mackerel are split down the back and broiled whole, removing head and tail or not as desired. Salmon, halibut and swordfish are cut in inch slices for broiling. Smelts and other small fish are broiled whole without splitting. Clean and wipe fish as dry as possible, sprinkle with salt and pepper and place on well greased broiler rack. The broiling oven should have been lighted ten minutes before fish is put in oven. Place pan containing rack near the bottom of broiling oven and broil about twenty minutes, leaving the door open for the last five minutes. Slip from rack to hot platter and serve.



Sales



The Industrial Sales Department has installed on trial, an electric tempering oven in the factory of Huther Brothers, saw manufacturers. This oven has a heating space 24 in. by 24 in. by 8 in., surrounded on all sides by heat retaining walls of asbestos wool 4 inches thick. By means of a rheostat the temperature of the oven may be varied from 70 degrees to 1000 degrees F. The maximum load of the oven is 3.5 kilowatts.

Drawing the temper of steel after it has been hardened may be done by heating the steel up to a certain temperature on a hot plate or in an oil or lead bath or in an oven. The electric oven has many advantages over the other methods, one of which is that under normal operating conditions the maximum heat is only required when starting up in the morning with a cold oven.

A two weeks' test at Huther Brothers factory has shown that this oven may be operated by a consumer who is buying power on Class III of the Three-Rate Schedule at a cost of approximately \$7.00 a month.



The construction of the section of the Barge Canal between the Genesee river and Lincoln Park has been let to the Woolsey Construction Company. After a careful investigation, the contractor decided to use electric power for most of the work. An 11,000 volt transmission line will be run the entire length of the contract in order to supply power at several locations. A pumping plant having a capacity of 200 horsepower will be installed at the river end of the contract. Compressed air will be used for rock

drilling. An air compressor, connected to a 200 horsepower motor, will be mounted on a large flat car so that it can be moved along the bank as the drilling is completed. The transformers for this motor will probably be mounted on a car which will be connected to the one carrying the air compressor. Other machinery for concrete mixing, rock crushing and hoisting will very likely be motor operated. An extensive system of lighting will be installed for night work.



Mr. Royal Parkinson, General Manager of the Despatch Heat, Light and Power Company, through the special wiring campaign in Victor, accomplished the wiring of twenty-seven houses, three of which were tenant houses. Thirteen of the owners used the standard fixtures offered, and fourteen selected their fixtures. Twenty-four paid cash although terms of one year were offered. The special offer provided for wiring only part of the house, but each of the twenty-seven wired the whole house. The average price paid was \$90.00 per house, which shows that considerable business for which low price is not an inducement is available, and that only concentrated attention to the matter of wiring is necessary to secure it. The main features of the special offer were a flat price of \$152.50 gross for three rooms, and a unit price of \$2.95 for each additional outlet. These prices included service charge, fixtures and lamps ready to light.



The Domestic Sales Department has been equipped with two folding

cots for use in case of illness. One of the cots has been placed in the Women's Dressing Room in the basement, and the other in the Consumers' Ledger Department. The cots are made of canvas and steel, and can be used as stretchers. Two additional cots have been purchased for the use of the women employees at the Front Street offices.

A "repeat order" was received from Mr. Richard Gorsline a few days ago. A little less than a year ago, he installed an electrically operated refrigerating plant in his new apartment house on Chestnut Street, which is used to cool the refrigerators throughout the building. Mr. Gorsline is now erecting a larger apartment house on Alexander Street which will have electric refrigeration throughout.

The Victor Milling Company at Victor, New York, recently enlarged its mill, the additional equipment being driven by a 75 horsepower synchronous motor. An additional transformer installation of 3-25 kilowatt units is to be put in to supply power for the increased load.

Michaels, Stern & Company has decided to install electrically operated elevators and clothing machinery throughout its Clinton Avenue factory and shut down the steam engine. The elevator service will be improved and the total cost of operation considerably reduced.

The Domestic Sales Department has made an improvement in its display facilities by enclosing the north window on the ground floor of the main office.

The Gay Mfg. Company is now moving into its new factory on Railroad Street and some of the electric motors are already in operation.

During the storm of March 15th the snow drifts in front of the Clinton Avenue office were four feet deep. One of the Company's electric trucks was equipped with huge sideboards, and served to remove the snow cheaply and quickly.

The new Y. M. C. A. Building on Gibbs St. was opened during the last week of March. The Rochester Railway and Light Company is furnishing all the electric power required to light and operate the building, also gas for all the cooking.

Messrs. Frank Marino of 25 Jay Street, Frank Montonaro of 21 Saratoga Avenue and F. M. Chase of 424 Court Street have installed gas heated bakers' ovens.

The Stewart Oliver Company has just placed an order with the Rochester Railway and Light Company for an enamelling oven.

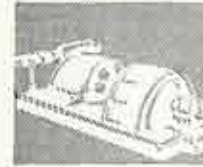
The Hotel Richford has signed a contract for a complete gas equipment for the kitchen.

Mr. Thomas Hodson's new cafe is gas equipped throughout.

Elec. Distribution

Mr. George Wetzel has taken charge of the work of rearranging the street lighting circuits and replacing the old type of enclosed arc lamps with 600 c. p. Mazda Class C. lamps. The work is now well under way.

Work was begun April 3rd by Supt. T. H. Christie on the new street lighting of Chestnut Street. Ten 500 watt nitrogen mazda lamps are being installed between Court Street and East Avenue.



Electric Generation



On Friday, March 17th, a 1500 K. W. railway rotary converter burned out at Station No. 3. This occurred at 9:00 A. M. and the machine was back in service at 11:28 Sunday night. It was necessary to remove thirty armature coils and turn down the commutator which had been damaged by the flash-over. Spare coils are kept in stock for all standard electrical units, which enables repairs to be quickly made. Mr. Miller's men are to be congratulated on the unusually short time required to make repairs on this unit. In connection with this accident, it was rumored that "Pat" O'Neill was responsible for the fireworks as a St. Patrick's Day celebration.

The old Lincoln Mill dam at East Rochester was destroyed on March 27th, as a result of the extraordinarily high water in Irondequoit Creek. This marks the final disappearance of Spring Lake which was largely reduced in size two years ago when the old power house was shut down and all the gates in the dam were opened.

It is interesting to note that the railway peaks at Station No. 6, during the early part of March, were as large as those occurring during November and December of last year. This is very unusual and is accounted for by the heavy snow falls, necessitating the use of the rotary plows, etc.

What the Company's Stations Are Doing

Commercial Steam Data

Commercial Steam Output as of December 31st, 1915.

	1915	1914	1913
Sold.....	281,085,300 lbs.	227,016,294 lbs.	216,711,623 lbs.
Used by Company.....	15,113,330 lbs.	13,694,958 lbs.	9,746,000 lbs.
Total.....	296,198,630 lbs.	240,711,252 lbs.	226,457,623 lbs.
Consumers.....	41	36	24

Total K.W.H. Output of Stations

	1915		1914	
	Steam	Hydraulic	Steam	Hydraulic
Station 2	.....	.....	668	.....
" 2A	.....	23,239,000	.....	12,295,258
" 3	11,645,200	.....	22,032,128	.....
" 4	.....	12,270,992	.....	12,819,299
" 5	.....	34,017,974	.....	29,308,430
" 6	.....	105,628	.....	154,021
" 15	.....	11,823,020	.....	9,464,200
" 26	.....	257,476	.....	421,840
" 35	100,401	.....	74,714	.....
Canandaigua	60,000	.....	60,900	.....
Float Bridge	3,080	.....	.....	.....
Totals	11,808,681	81,714,090	22,168,410	64,463,048

Three 2500 K. W. transformers have recently been loaned to the Union Carbide Company at Niagara Falls to enable the Niagara, Lockport and Ontario Power Company to meet the contract conditions of that Company. This reduces the transformer capacity at Station No. 33 to 6000 K. W., but as the heavy winter loads are over, this will be adequate for summer conditions and the transformers which were loaned will be re-installed before heavy autumn loads again occur.

At Station No. 35 a $7\frac{1}{2}$ K. W. A. C. arc transformer burned out at 10:00 P. M., October 24th. Spare coils were installed on the following day and the transformer put back in service in time for the arc load the following night.

The amount of electricity used to run a street car is surprisingly large. The following table shows the itemized average cost of running an electric car one mile on all solvent railways in Massachusetts for the period October 1, 1903, to September 30, 1908.

Electricity.....	4.29c
Wages.....	5.14c
Salaries.....	1.02c
Repairs on cars.....	1.05c
Repair of car equipment.....	0.88c
Line repairs.....	0.31c
Track and road bed repairs.....	1.12c
Removing snow and ice.....	0.21c
Damages and legal expenses.....	0.80c
Miscellaneous.....	1.58c
Overhead expense.....	5.43c

Total average cost of running a car one mile.....21.83c

The cost of electricity is therefore nearly 20% of the total.



Gas Manufacture



Number 4 water gas machine, the large twin generator set, was shut down for repairs on March 3, after running continuously since November 2, 1915, a period of four months. The following table shows briefly what the machine has consumed, and what it has produced in that time.

Number of days run.....	120
Number of actual running hours.....	2,644
Number of runs made (est.).....	18,508
Pounds of coke burned (est.).....	13,214,000
	or 6,607 tons
Gallons of oil burned.....	1,591,895
Pounds of steam consumed (est.).....	15,070,800
	or 502,360 B. H. P.
Cubic feet of air used for blowing (est.).....	682,948,200
Cubic feet of gas made.....	400,000,000

The major repairs on the machine consisted in renewing the fire brick lining of both generators, rechecking the carburetor, removing, cleaning, and replacing the checker brick

in the superheater, and installing new hot valves, both top and bottom, on both generators. The rechecking operation alone means the double handling of 6,240 fire brick for the carburetor, and 12,000 for the superheater.

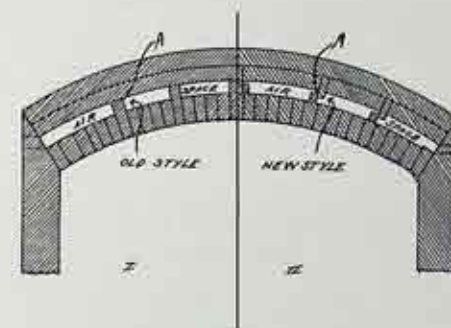
When the top hot valve of the north generator was removed the pipe flanges between which the valve is located drew away from each other a full half inch more than the thickness of the valve. To fill in this space when placing the new valve, it was necessary to insert a steel ring. It was impossible to get a suitable steel plate from which to cut a ring on short notice, and recourse was had to drawing the ring from a steel bar $3\frac{1}{2}$ inches wide and $7/16$ of an inch thick. The required diameter

was thirty-six inches. Note that the ring was drawn or turned on edge, keeping the plane of the flat bar, not bent end for end as a segment of a cylinder. The task was accomplished with considerable dexterity by Mr. James Kerr and his assistant Mr. Edward Hoffman.

Minor alterations have been made in the seven foot rotary scrubber, in order to isolate the first three sections. These isolated sections are to be supplied with oil tar in an effort to dissolve the naphthalene and other substances which tend to choke the wheel bundles, and decrease the operating life of the machine between cleaning periods. In order to do this, a blank steel plate, with paper gasket, was bolted over the opening between the third and fourth sections. As soon as the machine was operated, however, water rapidly entered the oil tar sections and entirely displaced the tar. Investigation showed that the bundles of the fourth wheel were carrying so much water up with them, that, as it drained down during the upper part of the rotation, it spilled along the shaft, and over the partition into the third section. From there it naturally flowed into the first and second sections and ultimately forced out all of the oil tar. The only way this could be overcome, was to remove all the bundles from the fourth wheel, and run that section as a blank.

The accompanying sketch illustrates the difference between the stoker arch formerly used in the Detroit stokers, and that now advocated by the Detroit Stoker Company, and recently built into the stoker of No. 1 Sterling boiler at the Gas Works.

The arches are alike in their main features. That is, both consist of a bottom or fire brick arch, and an



Figures showing comparison between old and new types of stoker arches

upper arch of common red brick, with an air space between the two. This air space is divided at the crown by a partition wall running entirely through the arch. On each side of this wall are two other division walls, one extending two-thirds and the other, one-third of the way from front to back.

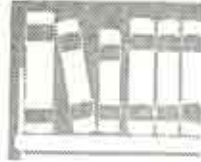
The secondary air entering at the front of the stoker is distributed over the entire arch surface by this system of dividers.

Fig. I shows that the division walls in the old form of arch are laid up with the bottom arch, and extend just to the inner surface of the top arch. It is evident that any distortion of the arches induced by expansion and contraction, might easily break the joint at "A," and allow the secondary air to short circuit down to the combustion chamber, and thus destroy the purpose of the division walls entirely.

Fig. II shows the improved type of arch. In this case, part of the division wall is laid up with the top arch, and extends into the air space about two thirds of the way down. To complete the wall, a course of fire brick is laid on top of the bottom arch, against the upper face of the division curtain, but without using any binding material at joint "A." The overlap acts as a sliding joint, and makes up for the arch movements, and hence maintains tight partitions throughout.



Auditing



Monthly Report on New Business

Net Increase in Consumers in first two months of 1916			
	Dec. 31, 1915	Feb. 28, 1916	Increase
Gas.....	69,090	69,381	291
Electric.....	19,664	19,844	180
Steam.....	41	41	
	88,795	89,266	471

Net Increase in Consumers in twelve months ending February 29, 1916			
	Feb. 28, 1915	Feb. 29, 1916	Increase in year
Gas.....	67,824	69,381	1557
Electric.....	17,133	19,844	2711
Steam.....	37	41	4
	84,994	89,266	4272

Statement of Consumers by Departments as of February 28th

Feb. 28	Gas	Elec.	Steam	Total	Increase Each Year
1908	37,358	5,362	....	42,720	.....
1909	40,811	5,743	....	46,554	3,834
1910	45,458	6,459	....	51,917	5,363
1911	50,686	7,841	14	58,541	6,624
1912	55,338	9,414	19	64,771	6,230
1913	60,039	11,985	23	72,047	7,276
1914	64,814	14,169	29	79,012	6,965
1915	67,824	17,133	37	84,994	5,982
1916	69,381	19,844	41	89,266	4,272

Inc. in 8 Yrs.	Gas	Elec.	Steam	Total
8 Yrs.	32,023	14,482	41	46,546

Increase in Consumers by Months

	1914	1915	1916
Increase in January.....	228	364	252
" " February.....	231	144	219

Company's Savings Depositors

STATEMENT TO APRIL 1st, 1916

No. of depositors April 1, 1916.....	68
Increase during March, 1916.....	12
Amount deposited April 1, 1916.....	\$519.00
Increase during March, 1916.....	104.50

Miscellaneous Data

	Feb. 28 1915	Feb. 29 1916	Increase
Miles of Gas Main.....	422	435	13
Miles of Underground Cable.....	978	1,039	61
Miles of Overhead Line..	1,649	1,767	118
Miles of Subway Duct..	850	906	56
No. Street Arc Lamps.....	4,325	4,184 (Dec.)	141
No. Street Incandescent Lamps.....	3,630	4,466	836
Total No. Street Lamps	7,955	8,650	695
No. of Employees.....	902	994	92
Amt. of Pay-roll (Mo.)..	\$67,737.35	\$79,213.71	\$11,476.63

Co-operative effort on the part of the General Safety Committee, the Purchasing Department and the various foremen interested, has resulted in a marked economy in the use of rubber gloves by the Company's employees as shown by the accompanying tabulation.

Year	Pairs of Gloves Used
1913	206
1914	153
1915	104
1916 (3 months)	15

At this rate there will be sixty pairs of rubber gloves used in 1916. This statement does not indicate that the legitimate use of rubber gloves is being discouraged, with consequent increased risk to Company employees, but that the purchase of better gloves with more care in their use and storage is responsible for the saving, which at an average price of \$2.50 per pair is a considerable amount.

Employees Benevolent Association

Statement to Feb. 29, 1916

Receipts		
Cash balance on hand Jan. 31, 1916.....		\$3,996.77
Dues from Members.....	\$428.40	
Initiation fees from members.....	9.00	
Death assessments from members.....	1.00	
Sale of Buttons.....	.25	
Members Additional Insurance.....	151.12	589.77
		<u>\$4,586.54</u>

Disbursements		
Sick Benefits.....	385.94	
Accident Benefits off duty	78.88	
Accident Benefits on duty	83.19	
Doctors' Examinations.....	12.00	
Death Payment (J. Stuart Feeley).....	217.50	
Group Insurance Premium	2,144.10	2,921.61
Cash balance on hand Feb. 29th 1916.....		\$1,664.93

NOTE—Sick and Accident Benefits for February, covered 424 working days off duty.

Balance Sheet Feb. 29, 1916

Assets		
Cash on hand.....	\$1,664.93	
Roch. Ry. and Light Co. Bond.....	975.00	\$2,639.93
		<u>\$2,639.93</u>

Liabilities		
None		
Surplus.....		\$2,639.93

Membership

January 31, 1916—No. members.....	673
Affiliated during February.....	16
Unaffiliated during February.....	9
February 29, 1916—No. members.....	680
May 31, 1915—No. members.....	602
Increase in nine months.....	78

The Employment Bureau has issued a new "Change of Address" card, which is now being distributed. All employees of the Company are requested to fill out the card and return it to the Bureau promptly.

The street telephone formerly at Backus and Emerson Streets, is now located at Emerson St. and Dewey Ave.

One of the Reasons

Mrs. Jones was a saving lady and it was her hobby you see, To use but very little gas and less electricity.

Last month she received a bill and into the office came Saying that it was so awful high she really must complain.

"Now my Hubby is a quiet man of frugal tastes" she said, "I've been away for two full weeks and at nine he's been in bed."

"I'll send my Hubby in," she cried, "And see what he can do, I'm a poor defenseless woman, not a man you're talking to."

So into the office came her Hubby with the bill. He said, "My wife was in here yesterday and I'm afraid she raised Sam Hill.

"I didn't do as I told her on every night at nine But I was winning poker hands which pay this bill just fine."

Now to her friends went Mrs. Jones, and it went down in history, How her poor Hubby and herself, were done by the Gas Company.

By C. C. Clark
Appliance Department

Mr. Leon Newman, of the Meter Reading Department, states that his department has just completed the work of preparing the new meter read slips and placing them in books according to routes. These read slips are designed to record the readings for four years in the future, and are a substantial economy to this department as against the old method of preparing new slips each year.

The Purchasing Department disposed of \$8,309.98 worth of scrap materials during the month of February.

A lady bought a gas stove from the Company and, after the departure of the solicitor, called her father who was ninety years old and asked him how he liked it. He had never seen a gas stove before and when she told him it was not necessary to use coal or wood his curiosity was aroused. The lady left him alone and went next door to see a friend's new gas stove, and on returning found her father sitting beside the gas stove with all jets open, but not burning, waiting for the tea kettle to boil. He said, "Jane, your d—d old stove is no good; burning the hard wood shavings is the best, and another thing, you had better put me to bed as it makes my head ache."—T. H. Ward, Service Maintenance.

Mr. L. W. Layman advises us that a glass enclosed gas meter has been installed on the Complaint Counter operated by air instead of gas. It has proved of considerable interest to the Company's consumers, many

people stopping each day to watch it and ask questions regarding it. It is hoped that the knowledge of the internal mechanism of the meters will lend confidence in their operation generally.

Mr. F. F. Houlahan analyzed the requests for duplicate bills and found that during the month of February 2039 duplicate bills were prepared, of which approximately 95% were required owing to the neglect of consumers to bring the originals to the office.

Mr. John Kohl of the Addressograph Group, states that the two coats of white paint on the walls, and the new inverted lights have improved the department very materially and raised its efficiency.

A new 26" Chandler knife to cut all sizes of paper and cardboard has been installed in the Addressograph Group.

Engineering and Construction

Experiments are being conducted in the Company's Research Laboratory to determine the practicability of using protective reactances in the secondary network of the 60-cycle distribution system when the network is fed from a number of transformers connected in parallel. In case one transformer of a bank drops its load, the adjacent transformers become overloaded and also drop out of service, due to the blowing of their fuses, thereby crippling the service over a large area. The purpose of these reactances is to protect the adjacent transformers. The idea of providing such protection was con-

ceived by Mr. J. C. Parker and is being developed by Messrs. J. O. Montignani and J. F. Putnam who promise shortly to make an interesting report on the result of their investigations.

Mr. A. H. Lamey has solved the problem of using electric trucks for short hauls through heavy snow on hills. He bolts short pieces of channel iron on the drive wheels, and the iron edges cutting through the snow and ice furnish almost perfect traction.

The work of demolishing the Allis-Chalmers Engine at Station 3 is

Personals

The mother of Mr. G. A. Donie died March 24th, 1916.

Mr. James Lewis, of the Order Department, has resigned to accept a position with the George Brownard Company.

Mrs. Denio has been called to Waterloo on account of the illness of her mother.

Mr. John T. Heckel, who has been working on subway records, has resigned.

Mr. Andrew Sturrock, of the Order Department, has resigned to enter business for himself.

Mr. Gerald G. Wilkin and Mr. Sidney F. Tirrell have been employed in the Meter Reading Department.

Assistant Treasurer C. A. Tucker has returned from a three weeks' vacation spent at Atlantic City.

Mr. R. M. Farnham, of the Application Group, is absent on account of an attack of lumbago.

Miss Edna Lord and Miss Adelaide Rice have returned to work after brief illnesses.

Miss Charlotte B. Atkinson is with us again after a short visit to Atlantic City.

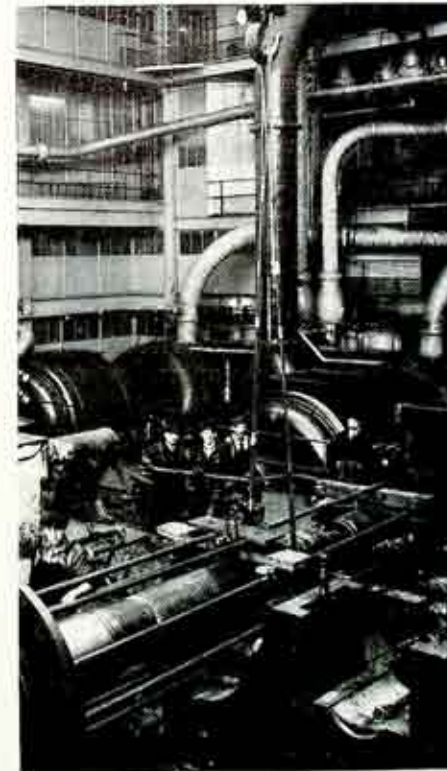
New employees in the Relief Group are: Messrs. Henry W. Reed, B. W. Barnes and S. Y. Whitehouse.

The infant daughter of Mr. Frank Kowiak of the Gas Shop died on February 19th.

Mr. James Wilson, of the Addressograph Department, has resigned to accept a position with the Star Egg Carrier Company.

Miss Elizabeth Richmond, of the Order Department, has been home during the past week suffering from an attack of tonsillitis.

completed and the construction forces are now busily engaged in removing the old engine foundations. This is being done through the use of dynamite, and extraordinary care is exercised to prevent flying pieces of rock from injuring the workmen or the adjacent machinery. The accompanying cut illustrates one of the final stages in the work of taking down the engine, wherein Mr. A. H. Lamey and his men are shown removing the hubs from the shaft, using a powerful hydraulic jack designed by Mr. Lamey for this purpose.



Using hydraulic jack on Allis-Chalmers Engine, Station 3

A transmission line in California runs 115 miles in a perfectly straight line, with the exception of a single angle of deflection. The line carries electrical energy at 110,000 volts from the Drum power house to the Cordelia substation.—Eng. Record.

Mr. Harold Kelly, son of Mr. Lewis Kelly of the Line Department, is out again after a two months' illness.

Mr. P. B. Seymour of the Auditing Department has become a member of Company H, Third Regiment, National Guard, N. Y.

Assistant General Manager Herman Russell was in Manistee, Michigan, recently on account of the severe illness of his father.

Mr. L. C. Kimpal of the Engineering Department has been rated Boatswain's Mate, 1st class, in the 6th Division, Naval Militia, N. Y.

Mrs. M. Clum, of the Order Department, has been home during the past week suffering from an attack of La Grippe.

Mr. F. Fletcher and Mr. William Jackson have been transferred from the Meter Reading to the Collection Department.

Mr. Edward Hoffman, stock keeper at the Gas Works, announces the birth of a daughter, weighing 8 $\frac{1}{4}$ lbs., on April 1st.

The Stork recently visited the home of Mr. Bert Adams of the Gas Shop. "Bert" is now the proud father of an 11 pound baby boy.

Mr. and Mrs. Frank McSherry of Canandaigua welcomed a baby girl, Dorothy Jane, to their home on March 16th.

Mr. Jas. Donlon, Night Foreman of the Line Department after 1 A. M., is looking for a larger house having about five rooms with a large yard for a playground.

Mr. F. B. Pierce, of the Line Department, has been helping many of the Company's employees at Front Street, to understand the details of the E. B. A. insurance, and will be glad to help others.

Mr. John Barry of the Line Department would like to play first base on one of the Company's baseball teams this season. John is a good player all right.

Mr. F. H. Patterson, Assistant Auditor, gave a talk before the Alexander Hamilton Institute at the Brick Church, March 29th, on "Special Accounting Topics."

Supt. T. H. Yawger is preparing an article on, "The High Water of 1916 in Rochester," for publication in the next issue of Gas and Electric News.

Mr. John Patterson, City Treasurer of Toronto, Canada, and father of Mr. Fred Patterson, Assistant Auditor of this Company, died at his home on February 23rd.

Messrs. Hyman Greenburg and William Predmore, of the Meter Reading Department, have been transferred to the Telephone and Order Groups respectively.

The new Todd Electric Billing Machines are now in operation in the Billing Department and are working very satisfactorily. Miss Ida C. Cook operates both the gas and electric billing machines.

Mrs. Smith, wife of Mr. Daniel Smith of Station No. 26, who was taken to the Hahnemann Hospital on March 14th, is now well on the road to recovery.

Mr. Henry Harvie, who for a short time has been connected with the Engineering Department, has resigned to accept a position as Chief Draftsman of the Hydro-Electric Power Commission of Ontario, Canada.

Mr. Henry King of the East Rochester construction crew, who plays a variety of instruments in the Park Band, has acquired a new bass horn.

Mr. Bernard J. Hogan has been engaged as a meter reader.

Mr. W. T. Nolan gave a very interesting talk before the Alexander Hamilton Club at the Brick Church Institute on March 15th. His subject was "The Keeping of Consumers' Accounts."

Mr. R. D. DeWolf, Mechanical Engineer of the Company, has been commissioned Lieutenant in Command of the Seventh Division of the 3rd Battalion of the Naval Militia, N. Y.

Mr. F. H. Patterson, Assistant Auditor, has prepared a paper for the American Gas Institute, on "Organizing for Cost Reduction in the Consumers Bookkeeping Department."

Mr. Chas. Feely, the Charlotte inspector of the Line Department, is back at work again after several days' sickness with the grippe.

Miss Freda Ziegler, daughter of Mr. George A. Ziegler of Station No. 5, died Wednesday morning, March 15th, 1916, at the family residence, 1335 Clinton Avenue North, aged 24 years.

Mr. O. M. Curtis, President and Manager of the Northern Wayne Electric Light and Power Company of Wolcott, N. Y., died on February 2nd, in the Hahnemann Hospital in Rochester. Mr. Curtis was well known by many in the Rochester Railway and Light Company.

Mr. Wiltred Cook, of Saginaw, Michigan, has become a member of the Engineering Department and will do special designing work under the supervision of Mr. F. J. Howes.

Mr. Cook, before coming to this Company was employed on hydraulic appraisal work for the Detroit-Edison Company under the direction of Professor H. E. Riggs, of the University of Michigan. He was graduated from the University of Michigan in the class of 1914 and in 1915 he received the degree of Master of Science from that University.

Mr. F. H. Patterson, Assistant Auditor, is teaching a class of thirty-two at the R. B. I. one night each week. The work consists of the second term in the Pace and Pace Course in Accountancy.

Miss B. G. Masters of the Draughting Department has invented a new dessert. Miss Masters served herself with ice cream and apple pie at the Y. W. C. A. the other noon, and after spreading the "cream" on the pie, and taking a liberal bite, found that she had apple pie a la cottage cheese.

Mr. W. H. Stevens has joined the drafting division of the Engineering Department and will be engaged in the laying out and checking of mechanical and structural work. He has had considerable experience in the design of multi-stage turbine pumps with the Cameron Steam Pump Works and the Goulds Pump Co.

Mr. L. M. Keller, who has been a member of the Industrial Sales Department since August, 1911, left the employ of this Company on March 13th to become Manager of the Northern Wayne Electric Light and Power Company of Wolcott, N. Y. Our best wishes go with Mr. Keller in his new work.

The city banks have requested the Company to segregate the Canadian money turned in from the coins of Uncle Sam, and the prepaid meter readers find it most convenient to do this at the time of reading the meters. When meter reader Mr. Lambert Van Damm opened one of the quarter meters recently he found two quarters, one United States and the other Canadian. He put the U. S. quarter in his bag, and the Canadian in his pocket, and as he did this he heard the householder who had followed him into the cellar say: "That's a good boy to look out for yourself, I won't tell on you!"

Mr. Thomas Morrow of Station No. 4 had a surprise Saturday, March 18th, while working on the racks. A cake of ice came down the race with a large sea gull frozen to it. Mr. Morrow released the gull from the ice, took it into the station, and after keeping it warm for a few hours, let it fly away.

Twenty couples from the Main Office held a very successful dance at Jackson's Hall on Lake Avenue Boulevard, Saturday evening, the 25th of March. It was strictly informal and everyone had a good time. A chartered car carried the party from the Company Offices and returned very early Sunday morning. Refreshments were served and music was furnished by Storey's Orchestra.

One of the Company's employees was examined by the doctor when he came to work a year ago, and a recent similar examination disclosed a gain in weight of 24½ pounds. The doctor said, "Pretty healthy place to work in the Gas Department, eh?" "Oh! yes," replied the employee, "but then you know I was married last year."

Last Friday the members of the Despatch Heat, Light and Power Company and their families held a dinner party at Maplewood Park, on East Avenue, in honor of Mr. A. E. Whittleton who is to resign from the Company after five years of service. All entered into the informal fun and had a thoroughly good time. Mr. Whittleton is to move to Lock Berlin, where he owns a farm.

The men in the Line Department have established what they call, "The Fourth National Bank," which consists of a chalk box fastened to the wall, and into which each man drops a cent every time he swears. The "Bank" was open for business on April 1st, and on April 4th it was half full of pennies. Mr. Alcott says that he expects to be able to buy a real Packard when the bank breaks.

Of the interesting events of Everyman's Night, April 3, in connection with the opening of the Y. M. C. A. building, were the athletic contests open to the industrial organizations of the city. This Company was represented in both the tug-of-war and relay races, winning both events. The tug-of-war team, under the leadership of Mr. A. H. Lamey, easily outclassed its opponents and is to be congratulated on its fine showing.

Mr. Edward A. Roeser, former Assistant Secretary of the Manufacturers' Council of the Rochester Chamber of Commerce, has joined the Industrial Sales Department. Mr. Roeser was connected with the Hydro-Electric Commission of Ontario, Canada, for two years as a member of the laboratory staff, having charge of all testing in connection with illuminating engineering. He is a former Rochester man, a graduate of Mechanics Institute and of the University of Michigan, class of 1913.

Mr. MacSweeney relates some experiences of his own which indicate the necessity for service maintenance men. One is about a family which had only one tip for their Bray burners, and the members of the family carried this tip from room to room as they had need of light. Another relates how a couple had plugged a broken fixture in a bedroom with a piece of wood, and were in the habit of congratulating themselves every morning that they were still alive. His best one however is about a case where he found a split pipe in an attic in which all previous investigators had been told by the complainant that it was useless to go. The gratified consumer said, "Until now I always wondered how you earned your money."

Going some, Always open, Safety, Service, Happy, On the job, Progressive.

—Stanley Burne