

GAS AND ELECTRIC NEWS



DECEMBER, 1913

Published monthly by the
ROCHESTER RAILWAY AND LIGHT CO.

ROCHESTER, N. Y.

For the Information of Its Employees

GAS AND ELECTRIC NEWS

PUBLISHED MONTHLY

By the Rochester Railway & Light Company, for the information of its employees. Free to all Employees.

All news for publication should be addressed to the
EDITORIAL DEPARTMENT

JOS. P. MacSWEENEY.
Managing Editor

32 Clinton Ave. North

VICTOR T. NOONAN
Editor

Contributing Editors

Robert M. Searle, James T. Hutchings, Thomas H. Yawger, Herman Russell, John C. Parker, Frank Hellen
K. A. Schick, E. C. Scobell, J. W. Morphy, James B. Eaton, Royal Parkinson, F. A. Miller.

Vol. 2

DECEMBER, 1913

No. 8

Boston to Chicago in a Bailey Electric Roadster

1302 Miles Actual Course—1500 Mile Run

This run was made by Colonel Bailey, General Manager of S. R. Bailey & Co., Amesbury, Mass., to still further prove the availability of the electric automobile equipped with an Edison battery to do hard service in actual touring. Just previous to this run, Colonel Bailey made a 600 mile tour from Boston through the mountains of Vermont and New Hampshire, and on his return from that trip he made the following statement: "The reasons why such a tour as this is possible now, and was not before, are, first: the Edison battery, the characteristics of which permit quick charging and partial charges at any rates available, as distinct from long, slow, complete charges and discharges; and, second, that the extremely high rate of discharge required in mountain or hill climbing does not injure the Edison battery."

The car used was a Model F Roadster, from stock, new and untried. It was equipped with a G. E. motor and 60 cells A-6 Edison battery. Colonel Bailey was accompanied by Mr. H. J. Foote of the company as a traveling companion.

The first stage of the tour began on Tuesday, October 14th, and was from Boston to New York City,

through Worcester, Springfield and New Haven. The total distance, 239 miles, was covered in 11 hours, 8 minutes running time, absorbing all road stops. This was an average of twenty-one and one-half miles per hour. The run to Springfield was against a strong head wind, that to New Haven, 66 miles, was made at 23.5 miles per hour. A stop over night was made here by request, and the run into New York the next afternoon, 78 miles, was on one charge at a little better than 20 miles per hour.

Several days were spent in New York City at the Electric Show. The next part of the run began Sunday, October 19th. At this point the weather conditions changed remarkably. Fine weather was followed by ten days of the heaviest rainfall of the entire year. In spite of the wet, heavy roads, the first day's run to Albany, 150.3 miles, was made in two runs with a rather long boost at Poughkeepsie. The car was put on charge that night in Albany, or rather it was put in a garage with the intention of having it charged, but on the next morning, Monday, October 30th, on arriving at the garage, it was found that nothing had been done. The car was transferred to the Electric Light Company's

plant, but as it was impossible to obtain a high rate of charge practically a day was lost, only eighteen miles being covered to Schenectady that evening.

On Tuesday the trip was continued up the Mohawk Valley against a strong head wind with frequent heavy rain squalls to Utica, 79.8 miles, in four hours and fifty-one minutes. This included going through four miles of open highway construction. The run of 50 miles to Syracuse was made after a boost at Utica. Total for the day, 129.8 miles.

On Wednesday the weather was fair during the day. Roads fine. A stop was made at Geneva for a boost, and the run to Rochester, 46 miles, was made in two hours. After another partial charge in Rochester, the run of 77 miles to Buffalo was made after dark in a light rain. Total run for this day 173.5 miles, at an average speed of 21 miles per hour.

At Buffalo a half day stop was made on account of special business. The run continued in the afternoon. For ten miles out of Buffalo the road conditions changed entirely. From here to near Painesville, Ohio, there are no macademized roads, very little of even gravel roads, and while they are reported to be quite passable in dry weather they were certainly atrocious under the influence of the week's rain. Nevertheless on Thursday a distance of 104.3 miles was made to Erie, Pa., with a boost midway at Dunkirk, N. Y.

Friday morning opened, raining harder than ever. The start was late on account of somewhat weak charging facilities, and the roads worse than any yet encountered. Several deep river bottoms had to be passed by means of steep descents and ascents through the clay banks. The power used over this stretch was about four times that used previous-

ly, and which very few cars of any kind had attempted to travel. Ash-tabula, 45 miles out, was reached too late to get a full charge required, though most generous service was rendered by the local central station manager. The charge had to be continued the next morning, and the run was made into Cleveland during the afternoon, 59.6 miles.

In Cleveland a stop was made over Sunday for rest and to acquire road information. This was not encouraging as Colonel Bailey was informed of one stretch in which a good gasoline car had only been able to make forty miles in nine hours. Nevertheless a run of 61 miles to Norwalk, Ohio, was made over this route, and after a boost a short evening run was made to Fremont, Ohio, still in the rain. Eighty-five miles for this day.

On Tuesday a run of some 33 miles was made to Toledo over good, but quite worn, wet macadam road. A fairly good charge was taken here during the day, and the run continued West. Some ten miles from Toledo the macadam road ended, and the rain-soaked clay and sand road continued to the Indiana line. The night was spent at Wauseon, and a boost taken at Archbold, 10 miles on, next morning. The run was continued to Kondallville, Indiana, some 85 miles. The roads became better in Indiana, though heavy from rain, and here Colonel Bailey joyfully telegraphed that "the worst was over." He was doomed to disappointment. Thursday morning opened with a lively snow storm, which turned to rain. A "boost" was taken at Goshen, Ind., 36.3 miles, during luncheon at South Bend, 24.7 miles, was reached quite early. The night was spent here as Colonel Bailey realized his pleasant anticipations of meeting many old friends of his carriage manufacturing days.

Friday, the last day out, was the only fair day since leaving New York, but the road to La Porte, 27 miles, was next to the heaviest stretch yet met with. The 76 miles from here to Chicago were fine running, though two and more hours were lost through mis-direction and getting lost in East and South Chicago.

The trip was completed with no accident to the car nor failure of any part. While some of the day's runs were short and the speed low they were as far and as fast as other cars. The car was mired some four times during the trip, but came out under its own power in every case but one. Many gasoline cars were passed on the road; very few indeed passed the Electric. Colonel Bailey reports that had the weather conditions been fair, the ride would have

been a pleasure and the run could easily have been made at an average of about 150 miles per day at good motoring road speeds.

Receipts were taken for arrival and departure between stopping places. The total distance covered on the route was 1,302.5 miles.

The average running speed for the entire distance was 17.8 miles per hour. The average speed absorbing all road stops was 15.7 miles per hour. These stops included not only those for inquiring the way, railroad gates, etc., but for getting arrested and going to court, stopping for luncheon, changing tire chains, getting out of mire, etc.

The 239 miles from Boston to New York were made at 21.5 miles, absorbing all stops. In fact, on all good roads 20 miles per hour was exceeded in spite of rain.*

An Ad-Man's Nightmare

Budweiser's a Friend of Wilson's
—That's all—That the Name Implies.

His Master's Voice Comes Out
Like a Ribbon and It Floats While
You Sleep.

He Won't be Happy till He Gets
That Tired Feeling That Made Milwaukee Famous.

A Cube Makes a Cup that Chases
Dirt That Won't Come Off. Best
and Goes Farthest on The Road of
Anthracite.

Good Morning—Have You a Little
Fairy that Don't Know Beans? Don't
Shout.

Ask the Man to Let the Gold Dust
Twins Hammer the Ham what Am
Best in the Long Run.

A Kalamazoo Direct to the
Strength of Gibraltar Makes Hard
Roads Easy for 57 Varieties of 20-
Mule Team.

A Handy Electric Machine

For an all-around labor and time saving device the electric power machine patented by an Ohio man deserves a medal. This machine will freeze ice cream, the inventor claims, in a few moments, crack ice for grape fruit and soft drinks, sharpen tools, clean silver and do a host of other things that ordinarily are done by hand. It also has an attachment that will operate any washing or ironing machine that has a fly-wheel. An emery wheel sharpens knives and scissors; a brush wheel cleans powder and dirt from the crevices and embossing of silver; a buffer polishes the silver, and so on, almost ad infinitum. The ice crusher is a galvanized hopper, and large chunks of ice poured into the top come out of the bottom in little pieces. The machine is designed to be hitched to an electric light socket.

Improved Method of Pole Raising

By J. O. MONTIGNANI

The most common method of setting or raising line poles is for a gang of men to surround the pole and with a long wooden handle steel pointed pike shove it up to a

When, therefore, this Company was preparing to start the work of installing some six hundred concrete poles, each weighing a little over one ton, in the new lighting district, town of Greece, it was suggested that a considerable expense could be avoided by providing some improved method of raising and setting the poles.

To this end it was decided to build a portable gin-pole or gin-wagon and the results so far obtained seem to have justified this step. With two men and a driver, between thirty and forty poles, on an average, are being set daily in about seven and a half working hours.

The gin-wagon built by the Line Department is different in some respects from those used elsewhere; one notable feature being the use of the gin-pole at the side instead of the end of the wagon, which permits of the wagon being driven close up to the hole at the side of a highway, thereby leaving the thoroughfare unobstructed. Another feature is the fact that the gin-pole is resting on the ground when in use and but little strain is thrown on the wagon which is consequently a comparatively light vehicle.

The work of installing the poles is in charge of Foreman John Cox, who also had charge of building the gin-wagon and made a number of valuable suggestions regarding its construction.

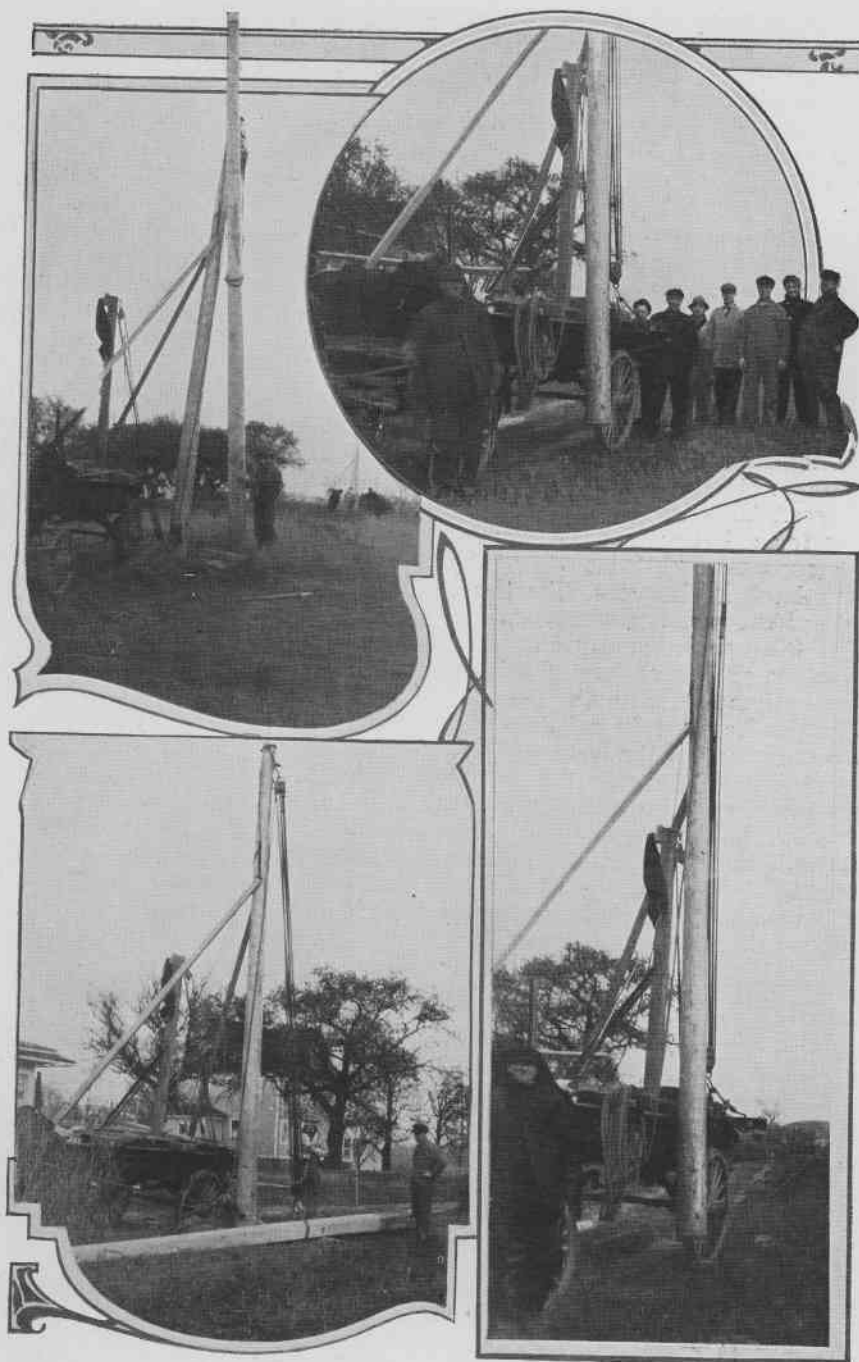


FOREMAN JOHN COX.

vertical position and into the hole. When poles are extra heavy and unwieldy it is usual to erect a "gin-pole" along side the hole and by means of a rope tackle raise the pole to its proper position.

Both of these methods are slow and laborious, the former requiring from six to ten men to pike the pole into place, the latter involving the slow process of raising, guying and rigging the gin-pole at each hole.

If no one ever dared to break the rule of doing as father did, we still would be living in caves and trading stone hatchets for juicy roots.—Character.



Above illustrations show simple way in which heavy concrete poles can be set with 9-inch pole.

The Major-Domo Vacuum Cleaner

What It Is and What It Can Do

The MAJOR-DOMO Vacuum Cleaner is a gas machine and makes use of a steam-jet to create the suction. This is not a new use for a steam-jet, for that is a well known means for exhausting air, and has been widely and successfully used for a long time where steam under pressure is available, as where a boiler affords steam for power purposes. But the MAJOR-DOMO makes the steam-jet available for dwelling houses and other buildings that are not supplied with steam pressure. This is accomplished by using for a boiler and heat producing means a coiled copper tube and a bank of burners, like those used in instantaneous water heaters.

The Cleaner is usually placed in the cellar, and is connected with a chimney flue and with the gas and water service pipes in substantially the same way that the water heaters are. A vacuum service pipe is run from the cleaner up to the different floors of the house, including the attic, where hose connections are located.

The machine is started by opening a water valve that admits water to it, and this is done from the first floor by means of a chain. When the water valve is opened the water pressure of the service-main is brought to bear upon the gas valve to open it, whereupon the burners light from a pilot, and in less than a minute the cleaner is in full operation.

The machine carries between twenty and thirty pounds of steam pressure. The small amount of steam in the boiler at any time will be best appreciated from the fact that only about three gallons of water are used in an hour's operation. The burner is under gas control that prevents the steam pressure

from rising above a fixed point, and, furthermore, it cannot rise above the water pressure without shutting off the flow of water to the boiler.

Certain resemblances between the MAJOR-DOMO Cleaner and instantaneous water heaters have been mentioned, but there the resemblance ceases. The generation of steam for the purposes of the cleaner presents an entirely different problem from that of heating water for domestic use. The fundamental requirement of every vacuum cleaner is a strong suction of adequate volume that shall be maintained constant. This is accomplished in the MAJOR-DOMO by ingenious but simple valves, and these are the only moving parts in the machine. Their range of movement is only a fraction of an inch, but their efficiency is such that the pressure of the steam as it is discharged from the steam-jet fluctuates within three degrees.

Pumps and motors must operate at high speed when used for operating vacuum cleaning apparatus. They must be kept oiled, and even then they rapidly wear out. The MAJOR-DOMO Cleaner has a decided advantage in this respect.

Another advantage that the MAJOR-DOMO has is that it is adjustable to vary the strength of the suction as desired, without making any alterations in the machine. This is important in that it has enabled the manufacturers to attain the exact degree of vacuum and volume best suited to domestic cleaning, and also because it enables them to meet different requirements with one machine.

A feature of this cleaner upon which emphasis is laid is that the fine dust and disease germs that constitute part of it are incinerated and

discharged out of the house through the chimney. The steam with which the dust is discharged is highly superheated, and the dust is also subjected to the hot products of combustion as the latter pass off to the chimney. The temperature of the dust-laden air as it passes from the cleaner into the chimney is over 500° Fahrenheit.

This Cleaner is also equipped with safety devices that eliminate danger of an explosion. The only door that gives access to the burners is locked when gas is turned on to the machine, and cannot be opened till the gas has been turned entirely off, except to the pilot light. When the door is opened the gas control valve becomes locked so that it cannot be turned on till the door is closed tight, whereupon the door is locked again by turning on the gas.

By means of this simple combination of a coiled copper tube, burners, valve and steam-jet, an efficiency of about three-quarters of a horse power is developed with twenty-five pounds water pressure, and approximately a horse power with thirty-five pounds water pressure.

The machine consumes about 85 cubic feet of gas per hour under 25 pounds water pressure, and about 100 cubic feet per hour under 35 pounds water pressure. At the higher water pressure it moves over 60 cubic feet of air per minute through 25 feet of 1½" hose, and over 80 cubic feet through a 2" pipe inlet at the machine. At the lower water pressure mentioned the machine moves over 50 cubic feet of air per minute through 25 feet of 1¼" hose.

24 Years Ago!



Above photograph was taken in 1899, and shows four employees of old Gas Company. From left to right they are: H. P. Gould, Timekeeper; W. P. Patrick, Cashier; A. L. Jameson, cashier and Jos. P. Mac Sweeney, Order Clerk. Mr. Patrick and Mr. Jameson are no longer with Company.

In a new oven invented by a Denver man meats are cooked in air heated by electricity and compressed by a motor-driven pump, which is claimed to reduce shrinkage to a minimum.

An electroscope for detecting the presence of radium discharges, so delicate that it measures current strengths as small as one ten-trillionth of an ampere, has been made in Paris.

Following an old custom, most of the monuments in a cemetery in a Maine town bear on one side photographs, suitably protected against the weather, of the persons buried beneath them.

The death rate in the Canal Zone so far this year has been 21.8 per thousand of population as compared with 49.94 per thousand the year before the United States began its control.

"Somebody's Mother"

The woman was old and ragged and gray,
And bent with the chill of the winter's day;
The street was wet with a recent snow,
And the woman's feet were aged and slow.

She stood at the crossing, and waited long,
Alone, uncared for, amid the throng
Of human beings who passed her by
Nor heeded the glance of her anxious eye.

Down the street, with laughter and shout,
Glad in the freedom of "school let out,"
Came the boys like a flock of sheep,
Hailing the snow piled white and deep.

Past the woman so old and gray
Hastened the children on their way,
Nor offered a helping hand to her—
So meek, so timid, afraid to stir
Lest the carriage wheels or the horses' feet
Should crowd her down in the slippery street.

At last came one of the merry troop—
The gayest laddie of all the group;
He paused beside her, and whispered low,
"I'll help you across if you wish to go."

Her aged hand on his strong young arm
She placed, and so, without hurt or harm,
He guided the trembling feet along,
Proud that his own were firm and strong.

Then back again to his friends he went,
His young heart happy and well content.
"She's somebody's mother, boys, you know,
For all she's aged and poor and slow;
And I hope some fellow will lend a hand
To help **my** mother, you understand,
If ever she's poor and old and gray
When her own dear boy is far away."

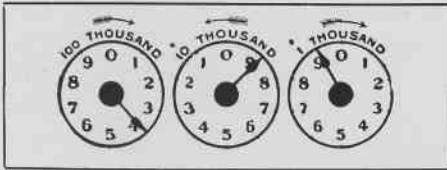
And "somebody's mother" bowed low her head
In her home that night, and the prayer she said
Was, "God, be kind to the noble boy
Who is somebody's son and pride and joy."

How to Read Gas and Electric Meters

By L. E. SANDERSON



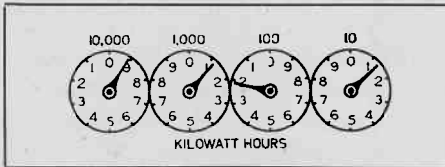
It is the aim of this Company to instruct customers how to read their meters. Therefore, to accomplish this, we need the cooperation of all our employees. The necessity for reading gas and electric meters and checking the amount of gas and electricity consumed is just as important as the checking of any other household commodity. A gas meter registers in cubic feet, and to get the complete index two ciphers are placed to the right of the figures shown on the dial, which is always read from right to left.



The above illustration shows dials on a gas meter. The right hand dial (marked one thousand) indicates one hundred cubic feet of gas from one figure to another. The middle dial (marked ten thousand) registers one thousand cubic feet from one figure to another, and the third, or last dial to the left, indicates ten thousand cubic feet from one figure to another. Each dial to the right must make one complete revolution before the dial to the left registers one figure. In other words, take the 1,000 cubic foot dial shown above and always read the nearest figure on the dial to which the hand actually points, which on dial is "9." On the middle dial, if the hand is between two figures, always read the lesser of the two and remember you cannot read the highest figure until

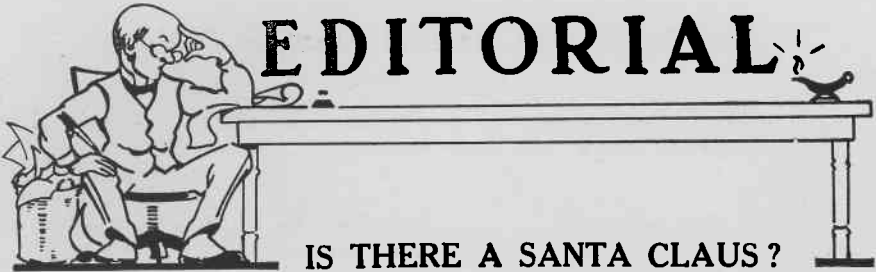
the hand on the preceding dial has passed the cipher going toward the one. In this case the middle dial shows the hand as not having quite reached the "9." It is read as "8" and the third dial to the left is read as "3," being between "3" and "4," and cannot be read as "4" until the hand on the preceding dial to the right has passed the "0," moving toward the "1," the dial above reading 38,900 cubic feet.

In order to compute your bill subtract your last month's reading from your current reading and difference will be the gas used to date in cubic feet. Multiply that by $9\frac{1}{2}$ c a hundred and that is the amount of your bill to date.



The above illustrates dial on an electric meter. An electric meter registers in kilowatt hours, but is read in the same manner as a gas meter, the above cut being read as 9,121 kilowatts.

Subtract the previous reading from your last reading and it will give you the amount of current consumption in kilowatt hours for the period in question. Should the face of the meter show a figure following the word "constant" or the word "multiply," this means multiply the difference by this "constant." Meters with a "constant" other than unity are for mechanical reasons so constructed that they register on the dials only such proportion of the actual current used as requires multiplying the index or difference by the "constant."



IS THERE A SANTA CLAUS?

During the Christmas season some years ago a little girl wrote to the editor of a great New York newspaper and asked this question:

"Some of my little friends say there is no Santa Claus. Please tell me the truth—is there a Santa Claus?"

That same question has been asked before and since by many a child the world over. Christmas has come and gone and still found many a tiny heart pondering over the reality of the good Saint's mystic visit. Christmas is coming again, and we anticipate that same question in the homes of our readers where there are the watchful eyes and expectant hearts of little ones who believe in the coming of Santa Claus.

To all the "wee" tots who belong to our little family of readers we would say there is indeed a Santa Claus. He exists just as certainly as love and generosity and devotion exist, and he will exist as long as the hearts of fatherhood and motherhood fill the world with love.

Destroy belief in Santa Claus and there will be no longer any child-like faith, no poetry, no romance to sweeten the first memories of home

and childhood. It is such memories of the long ago—memories of father and mother, of the old chimney corner and stockings well filled by loving hands—these are the memories that will come to our hearts in after years to fill them once again with Christmas carols of childhood's happy past.

Nobody sees Santa Claus, but that is no sign that there is no Santa Claus. The most real things in the world are those that neither children nor men can see. Do you ever see the fairies dancing on the lawn? Of course not, but that is no proof that they are not there.

Tell the little ones once more that sweet old story of Santa's coming. Let them go to sleep dreaming of a little man in a chariot who speeds across the mountain tops with wonderful toys and dolls for good little boys and girls.

Santa Claus still lives, and a thousand, yes, ten thousand, years from now he will still continue to gladden the hearts of fathers and mothers and children.

To our readers, particularly the little folks, we wish a happy Christmas. May big folks share with tiny hopeful hearts in the gladsome coming of Santa Claus.

Mutual Appreciation

Last month's issue of the magazine was well received by our readers, who seemed more than usually appreciative of the November issue. Many have told us that they thought it was the best published so far. It is encouraging to us to have so many of our fellow workers come to us and tell us they like the magazine. Such appreciation is indeed a stimulus for making "Gas and Electric News" a helpful medium to all the Company's employees. Indeed it is our aim to make it a Friend to all.

We are human, and the kindly appreciation of our readers stirs us to try and do better. We take this opportunity of thanking so many who have received the magazine with many compliments.

On our side we are also indebted to all our contributors, who have done their share in helping us to make this magazine not only readable but attractive and interesting. Just one word more: When we are a day or two late, be patient with us.

To all, again, we say Thank You.

"The Relation of Public Utilities to the Public"

By Former Governor Stokes, New Jersey

It seems to me that a publicity department is just as much a part of your business, or of any public utility enterprise, as is the engineering corps or the bookkeeping staff. The people are from Missouri; they must be shown; and if you do not show them, your enemies will, and will judge you accordingly. I like myself the spirit of that little clipping that I cut some time ago from the Michigan Investor, which seems to me to sum up the philosophy not only, perhaps, of individual life, but of public life. That declaration was as follows:

"Silence under unjust accusation is finely poetic, but a protest at the right time is effective when dealing with Lobo, the leader of the pack.

"Corporations that remain silent under the gee-haw lash of the business baiter have their silence pointed out as proof of guilt.

"The world accepts a man at the estimate he places on himself. To let the misinformed expound and explain to the public, and you yourself make no sign, is to allow the falsehood to pass as current coin. And soon it becomes legal tender. According to the common law of England, a path across your property that is once used by the people becomes theirs for all time.

"It is not the thing itself that lives; it is what is said about it.

"You must advertise wisely and discreetly, so as to create public opinion that is favorable to you."

Now that philosophy sums up a fundamental principle of the relation between the public man and his constituents and the public enterprise and its patrons; and that is one of the needed reforms, if it is a reform, in the public business of today. It is effective and wise adver-

tisement. But so long as we have newspapers, we must recognize the fact that to some extent they live upon advertising, and that in itself is an evidence that advertising pays. It is the medium through which the merchant teaches his patrons to buy his goods. Advertising is education in commercial circles, just the same as the school teacher and school book and schools constitute education in childhood.

And so public utility corporations, like those you represent, must advertise, perhaps not so much your goods, but your intentions and your purposes and your plans to benefit the public and to render service. As a matter of fact, a public utility corporation is for service. That is the excuse for its existence; that is the reason the people grant you a franchise. It is the principle of service; and service is the text from which you should continually preach your sermons to your patrons.

Satisfied patrons are the chief assets of any concern. That is true not only of the mercantile house, but it is especially true of the public utility corporation. The patron of a merchant tailor, for instance, is a voluntary patron. Your patrons are largely conscripts; they are compelled to buy of you; they have no other choice but darkness. Moreover, a person who buys of his grocer has after payment a possession that he can see and feel; the patron who buys of you buys something which is used and exhausted before payment—something that he can neither weigh nor see nor feel.

It is the utter dependence of your

patrons and the public upon you for honest weight and measure and quality of that mysterious substance you sell that makes necessary such confidence in your integrity and fair dealing as is required of no other class of merchants or vendors of commodities.

Indeed, these relations between you and the public make you practically a trustee. In your transactions the doctrine of "Let the buyer beware" cannot apply; that is, your patron cannot take care of himself. Now in a large majority of business dealings and transactions the buyer is to a large extent responsible for his purchases. For instance, in a horse trade you have your eyes and your hands, and you can tell something about the bargain, and if you are wise you depend more upon your eyes and your hands for the character of the horse than you do upon the honor of the other trader.

It is one of the highest tributes to you that the public depends upon your honesty and fair dealing as it does upon the honesty and fair dealing of no other class of patrons. And that, gentlemen, is what makes you a trustee for the public and for your patrons. It is this relation that perhaps sometimes makes your patrons unreasonable. I sometimes think that the relations between you and your patrons are somewhat like the relations between a child and its parent. The child depends upon its parent exclusively and sometimes gets peevish and fretful. Your own patrons depend upon you absolutely for the character of what you sell

them, and they must accept your account as verity.

In this kind of relation the value of the service rendered is more appreciated than it is where the vendor or seller and the purchaser are upon equal terms. And so a gas or electric company that makes evident its desire to please, to serve the public, to render the best service possible, to remedy every just complaint and to look after even unjust and unreasonable complaints, to ask its patrons if they are satisfied and for suggestions of betterments, such a company as that creates the impression that the patron is their chief concern; and when you have once created that impression and gotten the confidence of your patrons and the public, then the relations between you and your patrons are always friendly and cordial.

In the little bank with which I am associated I make it a rule never to advertise its success or its prosperity. All that I advertise is the amount of interest that we pay our patrons; I tell them what we are doing for them. That arouses their interest. I want to make them feel

that that bank is their bank and that they are its partners; and the very minute I succeeded in doing that they became its advocates and its friends. And so a gas or electric company that wants the good will of its patrons or of its community—and no public utility enterprise can long survive without the good will of the public—must try and convince the public that what it desires to do is to render good service and effectively aid its patrons.

I appreciate the fact that the average business man hesitates about talking over his business affairs with the public. I myself have the utmost confidence in the fairness of the people if one is frank and tells them his story. The people as a rule are sympathetic. Yet those same people are suspicious and hard to deal with if you are silent and mysterious and withhold from them the information to which they feel they have a right. And for that reason you have your choice between maintaining silence, telling them your story and winning a sympathetic ear, or, on the other hand, arousing their suspicion.

Unfortunate is the blunderer, for he shall inherit the foot of the ladder.

The woman who goes around lecturing about the way to make home happy doesn't fool anybody.

WHEN YOU WANT TO BOOST A FRIEND
DON'T TELL HIM HOW GOOD HE IS: TELL
OTHERS.

GENERAL SAFETY

Herman Russell, Chairman

John C. Parker

Thomas H. Yawger

H. P. Gould



J. W. Morphy, Adjuster

Frank Hellen

Victor T. Noonan, Secretary

COMMITTEE

The Prone Method of Resuscitation

The great value of the Prone method of resuscitation from electric shock has been frequently brought to the attention of employees of this Company. A special medical commission appointed by the National Electric Light Association to determine the best method of resuscitation in electric shock has just published its report in favor of the Prone method, which has been used with much success in cases where the victims have received very high voltages. In our own Company two lives at least have been saved by the prompt application of the Prone method.

We are indebted to Dr. Charles A. Lauffer, medical director of the Westinghouse Company, Pittsburg, for courtesy of the accompanying illustration which shows the three simple essential features of the Prone method, which may be easily learned by even a child.

In a pamphlet published by Dr. Lauffer, he gives three forms of unconsciousness to which the Prone method may be applied. These are:

When the diaphragm is paralyzed, the man stops breathing, the heart action becomes feeble and irregular, and there is unconsciousness. This condition of suspended animation can arise from several causes:

I. Electric Shock—By its action on the nervous system, the passage of an electric current may arrest the diaphragm.

II. Asphyxiation—There are 40 or more non-respirable gases, which, upon entering the lungs, paralyze the respiratory center in the brain (medulla); exclusion of air, as in a closed vault, or in drowning, produces asphyxia, due to the lack of O_2 and the retention of CO_2 . Certain drugs, as opium, in a similar manner arrest the action of the diaphragm. Chloroform and ether may act in this manner.

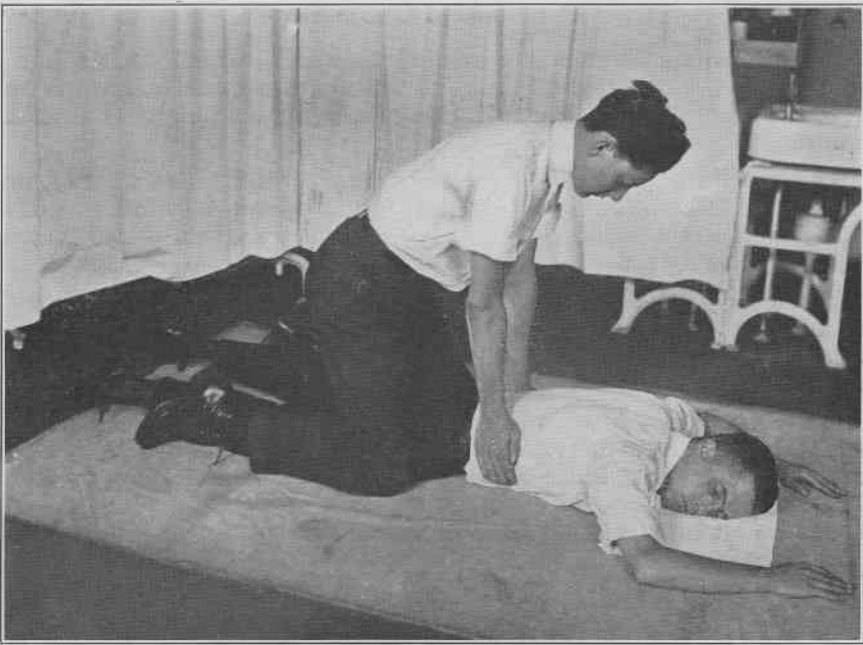
III. Traumatic Shock—A blow on the head, jaw, or neck, or over the solar plexus, will paralyze the diaphragm. A man who gets such a knock-out blow must be made to breathe until his disturbed nerve centers recover their normal functions.

From whatever cause his diaphragm is paralyzed, it is self-evident that if the man's life is to be saved, **ARTIFICIAL RESPIRATION MUST BE EMPLOYED** until his disturbed nerve-centers recover their normal functions, that is, **UNTIL HE IS ABLE TO BREATHE FOR HIMSELF**.

Please remember that **THE VICTIM OF ELECTRIC SHOCK IS SELDOM KILLED OUTRIGHT BY ELECTRICITY**; he needs artificial respiration. And the same may be said of the victim of gas, water, steam, ammonia, etc., who require assistance until normal breathing is restored.

How To Use the Prone Method

Dr. Lauffer reduces the rules for the use of the Prone method to the following five under these headings:



The above figure illustrates the three essential points in the Prone Method of artificial respiration: (1) The patient's position. (2) The operator's position. (3) The position of the operator's hands.

Courtesy Dr. Lauffer, Westinghouse Co.

The Position of the Patient

The patient is laid on his stomach, face turned to one side, so that the mouth and nose do not touch the ground.

The patient's arms are drawn away from his body, or extended above his head.

The patient's mouth is cleansed of mucus, blood, serum, tobacco, chewing gum, false teeth, by a stroke of the finger. This prone position causes the tongue to fall forward of its own weight, as well as facilitates the

removal of liquids from the mouth and air passages by gravity. It is this fact that makes it possible for one man, alone and unassisted, to save the life of a comrade in drowning, electric shock, or other condition requiring artificial respiration.

The Posture of the Operator

The operator kneels, straddling one or both of the patient's thighs, or kneels by either side of the thighs, facing the patient's head.

The operator's hands are placed on the outer ends of the patient's lowest ribs; the fingers curl around under the body, and are out of the sight of the operator. Care is observed to keep the hands away from the spine, and to avoid pressure on the pelvis.

The Mode of Operation

The operator's thumbs are rotated outwards, which assists him in holding his arms straight; he does not use his arm muscles, but his body weight is brought from his shoulders, by bringing his body and shoulders forward.

This weight is gradually increased (there is no sudden thrust), until at the end of three seconds of vertical pressure upon the lowest ribs of the patient, the force exerted is felt to have compressed the parts, then the weight is suddenly removed.

When the pressure is thus exerted on the lowest ribs, the organs under the diaphragm (the liver, stomach, spleen, kidneys, etc.,) drive up the diaphragm; when the hands are removed, or the pressure remitted, the displaced organs drop back to their normal relations.

When the diaphragm is thus forced to rise, the lungs are emptied. When it descends a partial vacuum exists, and the lungs are filled by atmospheric pressure. The lungs are thus passive, like in normal breathing. Hence, by the prone pressure method, there is no possibility of lacerating lung tissue, such as is liable to occur when mechanical apparatus of the bellows type is employed.

Rate Per Minute and Duration of Operation

The rate of operation should be about 12 a minute.

The lungs should be thoroughly emptied by three seconds of vertical pressure, in the manner described; then the hands are removed, and the refilling of the lungs takes care of itself.

Pressure and release of pressure—one complete respiration—occupies about five seconds.

This rate can be approximated by the operator following his own deep regular respiration, if he is alone; or by counting, or he can use his watch. If comrades are present, he can be guided by them.

Such efforts are usually successful within 25 minutes, but should be continued indefinitely, without interruption for any cause. One hour, even two hours or more, may be required to bring him to.

Supplemental Assistance

While the artificial respiration is being carried on, a second party should clear the mouth of all foreign material, then hold continuously a cloth saturated with aromatic spirits of ammonia near the nose. The collar and neck band may be loosened.

While this is being attended to, a third party summons the doctor.

No liquids should be given by the mouth while the patient is unconscious. How would you like somebody to give you a drink of water when you were asleep?

On the arrival of the doctor, he can stimulate the heart of the patient with such drugs as atropine and strychnine, and can direct the supplying of external heat, if there is collapse, or the weather is cold; and he can direct the infliction of such pain as is deemed requisite, such as pulling the patient's hair, pounding him with a board, slapping, rubbing, stretching the sphincter and muscle, pulling the tongue.

It is advisable to protect the patient's body from a cold floor by placing his body on a rug or blanket. An electric heated blanket is particularly recommended, as the application of heat is of great help in restoring the patient.

All employees should carefully read Dr. Lauffer's rules for the Prone method as given above. Become familiar with them. Better still, demonstrate the method on one another. Knowledge of it and confidence in its use may help save a life at some unexpected moment.

WHILE THERE IS A SIGN OF LIFE THE PRONE METHOD SHOULD BE USED, if necessary for several hours. If it fails the Pulmotor may then be tried.

Guardians of Safety

With this month of December, we end another year—practically our fifth of organized effort to prevent accidents among employees of this Company. We refer to this because as the days and months, and even the years go by we are all getting closer together in the cause of safety.

In the past year a great deal has been accomplished to prevent and reduce the number of accidents in all departments. We know that a great many accidents have been prevented; some of these might have been fatal. Through the splendid co-operation of foremen and men our Company has won considerable reputation by what has been done, and we believe our work has been inspiring and helpful to many other companies. But we want to do better. There are a great many accidents that we must eliminate, and which we will eliminate with your help.

Beginning, therefore, January 1, 1914, with your co-operation we will all try and make a record. If every man in the organization co-operates with the General Safety Committee, we will next year have the lowest number of accidents in the history of the Company for any one year. In every accident prevented, serious disability, even life, may be saved.

Accidents prevented mean so much more happiness and prosperity in so many homes. As the policeman is the guardian of public peace, so each one of our workers should actively enroll himself in the fight against the common enemy, DANGER, and become the guardian of industrial safety. Report every condition that you think might cause an accident, and we ask all foremen to receive such suggestions kindly, for even if there is no real danger, no harm is done in receiving suggestions. A thousand employees who use a thousand pairs of eyes in looking for the little things that may cause accidents will mean that we will have in our own organization a thousand guardians of safety, whose work for the saving of life and limb will continue all the time, day and night, from January 1st to December 31st.

Beginning, therefore, January 1st let us all make a new start. We can have no success without the co-operation of every man in this organization, and whatever success we are having we wish to emphasize right now is due to the co-operation of the foremen and men in all the departments who have given us such splendid assistance during the past year.

You have done good work, boys; just keep it up and do better if possible.

Why An Electrician Shouldn't Wear a Derby

While a substation foreman of one of the electric lines in Northern Indiana was explaining to his men recently some work in a newly built substation, he took off his derby hat and pointed out with it some of the details in construction. He fell dead.

It was found that the rim of the hat had come in contact with wiring which completed the circuit from the high tension line through his body. Examination of the hat showed that the rim was reinforced with a small steel wire.

In view of the above incident, it would be well for all men who have occasion to work in the vicinity of high tension currents, or other electric wiring, to bear this fact in mind.

Don't allow floors to become smooth or slippery and don't allow projections to trip a person.

Don't pile material in such a manner as to entail danger of its falling.

Automobile accidents in our Company are preventable. There must be no speeding. This rule conserves both autos and men.

The dandelion undoubtedly gets there because it's first up in the spring, last out in the fall, and on the job every minute.



For every sticker there are a dozen of quitters.

A gossip is a person who can make five by adding two and two together.

That man is happiest who succeeds in making others happy.

Nothing produces so many failures as the fear of failure.

To start things coming your way—go after them.

Hard work wins battles—all things else are its tools.

The moving picture business prospers because it is never at a standstill.

A chronic grouch often hides a multitude of virtues that will make you feel ashamed of yourself.

Helping the man to make good is also making good for the man who helps him.

There is no better way to learn the exact condition of your own business than compare it with others.

There is a future for the fellow who does the best he can—and then some. It's the "then some" that counts.

The truly efficient man knows what to do next, how to do it, and then has enough ambition to go out and do it.

When I feel like finding fault, I always begin with myself, and then I never get any farther.—David Grayson.

The man who not only keeps pace with the times, but just a little ahead of 'em, sticks out from the bunch like a large wart on a small pickle.—Service.

It's good to have money, and the things that money can buy, but it's good, too, to check up once in awhile and make sure you haven't lost the things that money can't buy.—George Horace Lorimer.

Happiness springs from the heart, not from the pocketbook.

Aspiring Vocalist—Professor, do you think I will ever be able to do anything with my voice?

Perspiring Teacher—Well, it might come in handy in case of fire or shipwreck.

Some of the Officers of the E. B. A.



W. J. SUTHERLAND
Trustee



P. J. O'NEILL
Trustee



WILLIAM WHITE
President



"PAT" MARTIN
Trustee



A. D. REES
Trustee

*In
Fraternity
There
is Safety*

Employees Benevolent Association

OFFICERS

WILLIAM WHITE, President
A. H. LAMEY, Vice-President
WILLIAM T. NOLAN, Secretary
GEORGE BAILEY, Financial Secretary
THOMAS NASH, Treasurer

TRUSTEES

PATRICK O'NEILL A. D. REES
GEORGE BAILEY PATRICK MARTIN
W. J. SUTHERLAND

DIRECTOR

VICTOR T. NOONAN, Sec'y General
Safety Committee

Some time early in January the members of the Employees' Benevolent Association will hold their first annual banquet, plans for which were discussed at the last meeting on Wednesday evening, November 5th. All those present were unanimously in favor of having a banquet, which it is believed will strengthen our organization and give the employees an opportunity of meeting each other in a way that they have never done before.

In order to give as many members as possible an opportunity of assisting in planning for the banquet, President White left further discussion of the matter over until the December meeting, when, if it is finally approved, committees will be appointed and arrangements made. If all goes well the banquet itself will be an event full of happy surprises for all, and we believe that it will be the most successful event of its kind ever held by the employees of this Company. We want every member of the E. B. A. to take a personal interest in the banquet and help make it a memorable event. Further plans, the date and place, and all about the music, speakers, and guests of honor will be announced in the January issue.

Five hundred of the new safety buttons were received for distribution at the November meeting, and it was thought when we placed the order that we would have sufficient buttons to last for a good many months. But we were mistaken, for all the buttons were gone by the end of November, which indicates the rapid growth of membership in the E. B. A. Five hundred new buttons have been ordered, and among these are a number especially designed as clasp pins for the girls.

At the time of writing we understand the membership is about 700, and it is expected that by January the membership will be creeping up to the 1,000 mark. All who have heard about our E. B. A. have been astonished at the extraordinary hold it has taken on the employees of this Company. In the first two months 413 members were enrolled, which we believe is a record. All this proves that the spirit of co-operation permeates the ranks of our organization from top to bottom. All the members of the association are to be congratulated on the zeal and personal interest they have shown in their new association. The charter will close this month, and before it does we would like to see every permanent employee of the Company a member of the E. B. A. In particular, we would like to see the young women join our ranks. We have a splendid body of girls in all the various departments, and we know that they are not going to be behind in showing their live interest in an association which has been founded primarily to help one another in the hour of sorrow, distress, sickness, or death. We want all the girls with us as members, because they can be of great practical help to the organization in a multitude of ways. All of us

will best appreciate the E. B. A. in that hour, when sickness has laid its hand upon us, or perhaps when death has visited our home and left its sad and heavy burden on our shoulders. In such hours of grief there are few who can stand alone.

If you have not already joined the E. B. A., do so at once. Every permanent employee should be a member. Give your name to your foreman or department head, or send it in to the Secretary, Mr. W. T. Nolan, at the General Offices, and your membership will be taken care of.

During the winter months we plan to have a number of interesting, helpful talks by Company officials and department heads. Mr. Searle has consented to give the members a talk at the December meeting if his engagements permit. At the January meeting we hope to have the pleasure of hearing Mr. Hutchings. Mr. John C. Parker has also promised to give a talk at an early date.

New Electric Egg Tester

Since the pure food crusade has brought about a closer investigation into the antecedents of eggs there has been a marked increase in the invention of egg testing devices. One of the newest is the electrically lighted tester, devised by a Canadian. A hollow upright has an electric lamp inside. At the top and near the top of one side are openings, and in the narrow space between the two openings is pivoted a mirror that consists of two leaves set at angles to each other, and that one always acts as a closure to one of the openings when the other is used as a reflector. An egg is placed in the top opening, small end down, and the light turned on inside. With the aid of the mirror and the powerful condensed rays the eggs can be easily tested.

Another Veteran



William Beaton of the Underground
Dept., 20 years in Company's
service.

In the world's great game, when you hear the cry, "Play Ball," don't yawn and stretch and settle down. Jump up, get busy, and put them over hot and strong.



JOHN CONWAY.

JOHN CONWAY

John Conway, fireman at No. 3 Station, died at St. Mary's Hospital as a result of typhoid fever on November 19th. Mr. Conway was born in Ireland in 1870 and came to this country nine years ago. For nearly six years he was employed by this Company, first at the Gas Works and then until his death at No. 3 Station. He leaves a widow and one daughter, Florence, ten years old, and a nephew, William Gorst, and niece, Elizabeth Gorst, both employed in Mr. Nolan's department.

Mr. Conway was a man of lovable character, and was always light hearted and cheerful. He was very popular among his fellow workmen at No. 3 Station, to whom the news of his death came as a distinct shock.

He was a member of the Employees' Benevolent Association, who sent a beautiful wreath for the funeral. Wreaths were also received from Mr. Nolan's department and the firemen at No. 3. To his widow and family we extend our deepest sympathy.

G. NORMAN RICE

G. Norman Rice, brother of Miss Adelaide Rice, of Mr. Nolan's department, died on November 9th, aged twenty-five years. Mr. Rice was employed in the City Engineer's Office, where he was held in high esteem. To his sister and surviving relatives we offer our sincere sympathy.

WILLIAM STOLL

Just as we go to press we learn with regret of the sudden death of William Stoll, on Thanksgiving evening, November 27th. Mr. Stoll was employed at the Gas Works for the past ten years as an oiler, and was held in high regard by his superiors and fellow workers. Just a year ago his wife died, leaving in his care eight children, who are now left without neither father nor mother.

Mr. Stoll was a member of the E. B. A., which was represented at the funeral by President White and a delegation of members. To his children and relatives we offer our deep sympathy in their sad bereavement.

ELECTRIC DEPARTMENT



N. E. L. A.

The November meeting of the Company Section, N. E. L. A., was held in the Directors' room Tuesday evening, November 11, Mr. Fisher presiding. After the Secretary's report was read and approved, Mr. Fisher introduced Mr. S. Samuel Landon of the Tuec Company, who gave an illustrated lecture on "Vacuum Cleaners." This proved very instructive and interesting. Mr. Landon discussed the invention of the first cleaner and reviewed its construction down to the present time, after which he gave a demonstration of his machine.

Following the meeting a lunch was served.

At one of the Friday morning meetings last month, Mr. Burt Larraway, General Manager of the Jackson, Mich., Lighting Company, was present and gave a little talk. Mr. Larraway, who was formerly employed by the Rochester Railway and Light Company, said when he came to this Company ten years ago the office force consisted of 58 employees. In those days, he said, the General Manager did most of the bookkeeping, and the chief ledger keeper was the only stenographer.

"I don't know of any company in the country," said Mr. Larraway, "that has had the remarkable growth of your Company, and you are to be congratulated for the great success you have had."

Be a Friend to Man

There are hermit souls, that live withdrawn

In a place of their self-content ;
There are souls like stars, that dwell apart

In a fellowless firmament ;
There are pioneer souls, that blaze their paths

Where highways never ran—
But let me live by the side of the road,
And be a friend to man.

Let me live in a house by the side of the road,

Where the race of men go by,
The men that are good and the men that are bad,
As good and as bad as I.

I would not sit in the scorner's seat,
Or hurl the cynic's ban—
Let me live in a house by the side of the road,
And be a friend to man.

I see from my house by the side of the road,
By the side of the highway of life,
The men who press with the ardor of hope,
The men who are faint with the strife.

But I turn not away from their smiles nor their tears,
Both parts of an infinite plan,
Let me live in my home by the side of the road,
And be a friend to man.



Mr. Parker spoke before the Baltimore Section N. E. L. A. last month on the various phases of central station service.

The new boiler house at No. 3 Station, which is now practically completed, is certainly a very attractive addition to the buildings at No. 3.

Messrs. Karl A. Schick, Joseph P. MacSweeney, Frank Hellen, Victor A. Miller, Vincent Hoddick, Bert Yeomans, Charles Schake, W. J. Brown, M. J. Reynolds and "Pa" Doud attended the National Commercial Gas Association Convention in Philadelphia, December 1st to 6th.

One of the newly invented nitrogen gas electric lamps has been installed in the Front Street yards. This light is so powerful that it illuminates the entire yard from Andrews Street to Central Avenue, and from the river to Mill Street. There ought to be no trouble in seeing those nails now!

Miss Katherine Price, stenographer in Mr. Scobell's office, won fifth prize for the best typewritten postcard essay in the 1913 national contest of the Business Show Company, New York City. The subject of the essay was: "Typewriter Speed and Accuracy."

Congratulations, Katherine!

Among those who attended the mid-year meeting of the Empire State Gas and Electric Association at Geneva on November 19th were the following: Messrs. F. Hellen, W. Drew, W. Skuse, W. Spears, H. Russell, J. P. Haftenkamp, W. Earle, J. Noble, K. A. Schick, J. P. MacSweeney, V. T. Noonan, B. Yeomans, J. W. Brown, J. Skuse, D. H. Rodgers, F. Hart, T. V. Fitzgerald, R. Gardiner, W. Howe, M. J. Reynolds, S. J. Goldberg, J. W. Morphy, J. B. Eaton, R. A. Landers, I. Lundgaard.

Reynolds Wins Contest

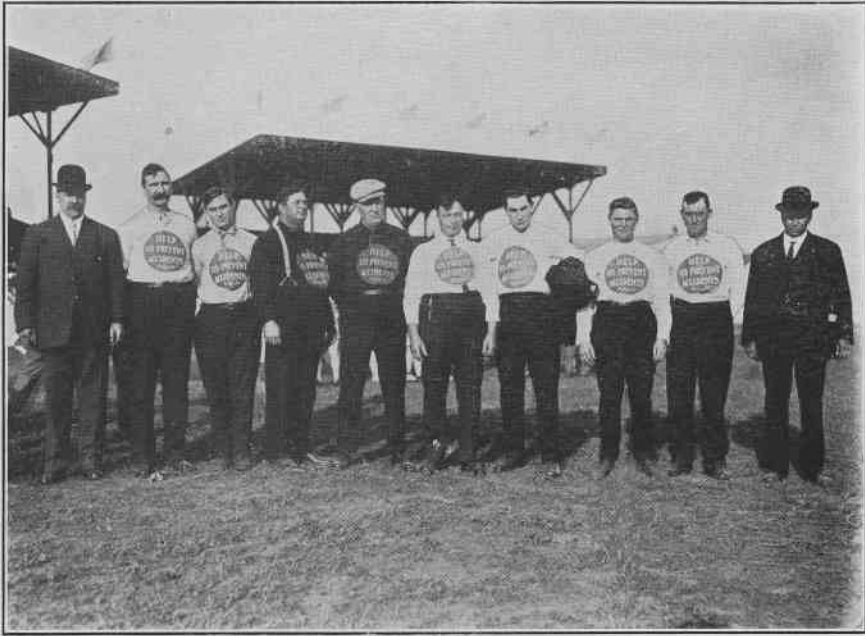
In a contest for the highest number of points scored in selling gas appliances during 1913, M. J. Reynolds won first place. As a reward Mr. Reynolds was sent to Philadelphia, all expenses paid, to attend the National Commercial Gas Association Convention, held December 1st to 6th.

Mr. Reynolds' score was 23,850, while honorable mention was given to D. Rodgers and W. J. Brown for 22,205 and 19,435 points scored respectively. Congratulations, Brother Reynolds!

"Can your wife bake bread in an emergency?"

"I suppose she kin, but she ginerally does it in a gas stove."—American.

Our "Safety First" Team



Rochester Railway & Light Company's tug-of-war team, which won first prize at Rochester Industrial Exposition in September. Each man wore company's motto on red ball, "Help Us Prevent Accidents." First man on left is John Conway, who has since died.

Colored glass hoods, to be slipped over incandescent lamps and fastened with clips, have been invented for temporarily changing the colors of electric lights.

A handy new fire extinguisher for household use contains two liquids which, when combined by turning the device over, ejects a heavy flame smothering foam.

Throughout the world one-fourth of all children die before 6 years of age, one-half before they are 16 and only one in each 100 lives to the age of 65.

The double track electric railroad which is being built between Tokio and Yokohama will be the most up to date in the Orient when finished early next year.

A motor driven plow of English invention automatically guides itself over a field after it has plowed the first furrow under the direction of a human mind.

A telephone which is claimed to be explosion proof and flame proof has been invented in England for use in mines or anywhere that explosive gases or liquids are present.



Miss Fannie Airy, who has been doing stenographic work on the second floor, General Offices, is now stenographer to Mr. Jennings on the first floor.

Mary Prindiville recently spent one of her Saturday afternoons cleaning windows. At least, this was the excuse she gave the following Monday morning when she couldn't use her arm.

Lafe Sanderson of Mr. Nolan's Department has been making gallant efforts to learn the slide rule from members of the Electric Department. We would like Mr. Sanderson to figure out the following for us: How many pancakes would it take to shingle his new hen coop.

A fine, healthy nine pound baby boy arrived at the home of George Swarthout, of the Underground Department, on October 29th. The little fellow has been named George James. To his parents we extend our best congratulations.

In proof of the saying "the cat came back," Miss Nora Black of Mr. Nolan's Department is able to vouch for the following:

On the evening of November 18, 1911, Nora's big tiger cat disappeared, and no trace of the animal could be found. On the morning of November 18, 1913, "the cat came back," much to the surprise of Nora and her mother, who at first thought it was the cat's ghost they saw, but a gladsome purr and a wagging tail were sufficient proof that pussy was there in body and not in the spirit.

While we are discussing cats, Mr. Stokes of Mr. Nolan's Department, owns a bull dog that has eaten three cats and one chicken in the last month. Any one who wants this dog can have him for the asking.

George Rice, of Mr. Nolan's Department, declares that Ann Slattery is quite an expert at sewing buttons on a coat.

John Gandy, of No. 3 Station, was quietly married sometime in September. We say quietly because we never heard of this happy event in John's life. If not too late, Mr. and Mrs. Gandy have our best congratulations for a happy and prosperous future.

Some of the girls have been asking when there will be another Safety rally. We were curious to know their interest in the matter and inquired why, and we are informed that at the last Safety rally in the Powers Hotel the girls had received boxes of candy, which explains their sudden interest again.

Mr. J. W. Fisher, of the Engineering Department, received a card last month from Foreman Frank Rich, who is visiting his old home in Italy. Frank sends his best regards to all his old friends here, and writes he will sail for this country on December 6th. Welcome back, Frank. We'll all be glad to see you on the job once more.

The stenographers on the second floor and many of the girls also in Mr. Nolan's office are learning to swim these days. This we consider a real "Safety First" stunt. Some of the girls, we hear, can navigate now like ducks. We'll surely have some real aquatic events at next year's picnic. We have all the names of the girls jotted down for Vincent Hoddick's annual carnival at the lake.

How Electricity is Safe Guarded

In one of the smaller villages of New York State, where electric lights were being installed for the first time, an elderly lady was badly frightened because the electric light wires passed her house. Her neighbors had talked of the dangers of electricity to such an extent that she was afraid of the insulated wires, which she thought contained all the power of the very lightning. Other residents of the village would not have their houses wired until they saw how harmless the lights were in the homes of their friends.

As a matter of fact there is not the slightest danger from the ordinary lighting circuit and when electricity is installed by a first-class wireman and with modern insulation there is very little, if any, danger of any one or anything coming in direct contact with the current.

Electricity, although it is invisible, is perfectly understood so far as its actions are concerned. It will flow easily and smoothly along a good conductor, such as copper wire, at the rate of 186,000 miles a second. Through other substances, offering more or less resistance, it flows somewhat less readily, generating heat in proportion to the amount of resistance in its path. Electricity, in some respects, behaves a great deal like light—there are some things it passes easily and

others which bar its passage entirely.

"Years and years have been spent testing out the materials which resist the flow of electricity," said a General Electric engineer, "and it has been proven that the very best insulation is dry air, closely followed by mica, porcelain, rubber, glass, fibers, etc.

Wherever electric wiring is installed in a building to-day, it is safeguarded against any possible chance of its "short circuiting" or flashing across an air gap and the wires are so covered with insulating material of the best quality that they can be safely handled at all times. In the modern buildings all the electric wiring is concealed so it would be quite impossible for one to handle the wires. Electric light wires in the streets are also heavily insulated. It is only where long transmission lines cross the country that the bare copper wires are used and these are raised high in the air, effectively insulating them from the ground, and further protected by great porcelain insulators often three feet in length. These insulators are built to withstand the heavy pressure of high voltage electricity as well as the great strain of heavy wires when covered by ice and snow.

Can You Solve This Tangle

Last Leap Year I did not want to embarrass my best girl to make her propose to me, so I asked her to be my wife, and she said, "I would rather be excused," and I, like an idiot, excused her. But I got even with the girl. I married her mother. Then my father married the girl. Now I don't know who I am.

When I married the girl's mother the girl became my daughter, and

when my father married my daughter he is my son. When my father married my daughter she was my mother. If my father is my son and my daughter is my mother, who in thunder am I? My mother's mother (who is my wife) must be my grandmother, and I being my grandmother's husband, I am my own grandfather.