

# GAS AND ELECTRIC NEWS

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VOL. 6

MAY, 1919

No. 11



Rochester Series—Oak Hill Country Club

Photo by  
Lodder

May, 1919

The war was at its flood,  
A year ago;  
Midst famine, fire, and blood  
The Hun defiant stood

A year ago.

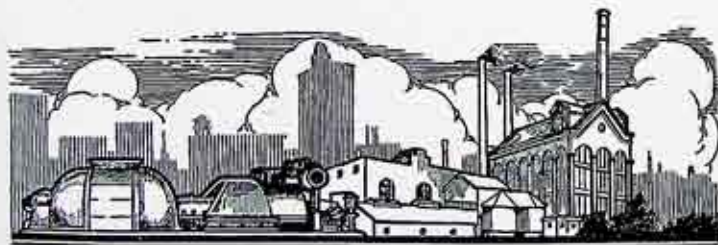
We battled with our might,  
A year ago;

We fought as freemen fight  
For justice and for right,  
A year ago.

No war cloud's in our sky,  
This peaceful May;  
The earth is purged; and high  
Our banners proudly fly,  
This peaceful May.

And meadows, trees, and grain,  
This peaceful May;  
Are decked with green again  
Like memory of the slain,  
This peaceful May.

ROBERT STEWART SUTLIFFE.



# GAS AND ELECTRIC NEWS

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## The New Laboratory

CHARLES H. STONE

AMONG THE great changes brought about by the war,—one worthy of note is an increasing respect for the chemist as a necessary aid in a rapidly widening circle of practical problems. In former years he was largely regarded as a theorist, although a few far seeing corporations have made use of the laboratory for many years past.

The time has now come however, when a very general appreciation of the value of chemical work is being manifested and the chemist's advice and results are no longer secondary, but have become primary factors in the determination of buying, selling and manufacturing policies. The Government very frankly recognized this during the war and it would be difficult today to mention a business where, at some stage or other the chemist has not a hand in determining the quality or quantity of the finished product.

The manufacture of gas and the residuals therefrom being largely a chemical process, it would seem natural that this should have been one of the first industries to control its procedure by laboratory tests. Until very lately however, this has been true of only a few of the largest companies.

The Rochester Railway and Light Company has always been on the lookout for advanced ideas and has been in the forefront among the ex-

perimenters. As a result, today it probably has the best equipped laboratory of any gas company in the State outside of Greater New York.

Until the beginning of the present year, the laboratory was located in very inadequate quarters at Front Street. In January it was moved to its new home at the East Station. Here it occupies two large rooms over the machine shop of the Construction Department, and a smaller room in the yard where the crushing and sampling is done. The electrical testing is still carried out at Front Street; such testing consisting largely of the examination of rubber gloves, both new and used, to see whether they will stand the voltage for which they are guaranteed.

The crusher room is equipped with two electric drying ovens, a two section ball mill, a new Braun disc pulverizer, capable of grinding to two hundred mesh, a riffle, a sampling table and a closet for samples.

The crusher and ball mill are power-driven and three samples can be ground at once if desired. All of the coal and coke samples pass through this room where they are dried at 105°C and ground to pass a one hundred mesh sieve.

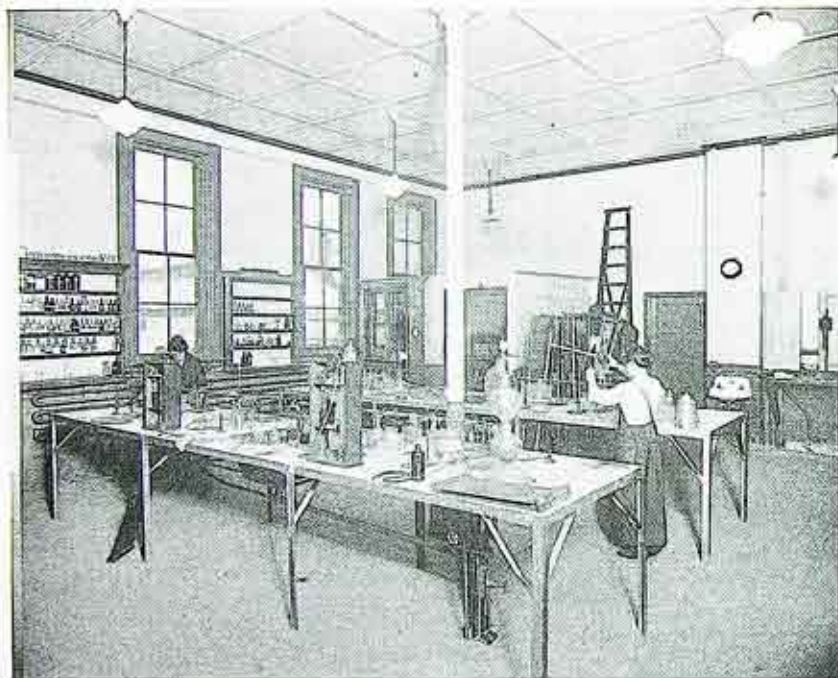
The coke lime used in the manufacture of carbide is also ground to one hundred mesh, as is the spent oxide. These are the main items which receive attention in the crusher

house, although there are often special samples such as slag or clinker, brick, lime, minerals etc., which also have to be crushed.

In the main laboratory, the east room is newly equipped while the west room has been used as a works testing station for some time. In the east room there are two benches sixteen feet long and four feet wide running through the center of the room

An arrangement of valves underneath the table enables one to shut off any line at a moment's notice. This is very helpful in case of a leak, a necessary change of piping or cocks, or an accident.

Each bench furnishes ample room for the work of four persons and each section, that is from sink to end of bench, is assigned to one member of the laboratory force, who alone has



East Laboratory—Showing Work Benches

and separated by an aisle. These are made of cement supported in an iron framework and are covered with one-quarter inch linoleum. In the center of each table is a sink with hot and cold water, suction and compressed air. On either side of the sinks and along the center line are reagent racks, made of angle iron carrying wire glass shelves. Underneath these shelves are the connections for gas, electricity and water.

the right to use it and who is responsible for its orderly and cleanly condition. Along a portion of the south and west walls is an oak bench on which are placed the water still, a balance and the Parr and Emerson Calorimeters.

The still is a Stokes automatic, capable of furnishing two and three-quarters gallons of distilled water every hour. It is heated by six Bunsen burners, preheats the incoming water

by the heat given up by the condensing steam and thus far has proven very satisfactory.

The balance is for weighing the materials which enter into the calorific testing of solid and liquid fuels.

The Emerson bomb calorimeter is generally used for determining the calorific value of coal, coke and oil, while the Parr is employed in the estimation of sulphur in the above materials.

Next along the west wall come two hoods made of iron and asbestos with a cement floor, and vented by a twelve inch galvanized pipe to the roof. It is intended that all evaporations or heating of substances which give off a dangerous or disagreeable vapor shall take place under these hoods, which are painted on the inside with an acid resisting paint and provided with sliding doors containing large glass panels so that operations may be watched without the operator coming in contact with the fumes. In one of these hoods is a hot plate and a water bath and the other is so arranged that a special furnace used for determining fusing points may be connected therein with five minutes labor. This furnace, patterned after suggestions of the Bureau of Mines, is heated by three tangential burners and will attain a temperature of at least 2,800°F. The motor and blower for this outfit are permanently connected on the floor beneath.

Following the hoods is a chest of drawers for corks, filters etc. On top of this chest is an electric oven, also an electric furnace usually carried at about 750°C for the determination of ash in coal.

On the north and east are cabinets for glassware, special reagents etc. In one corner of the room is a small office for the director, while in the opposite corner is a library and calculation room.

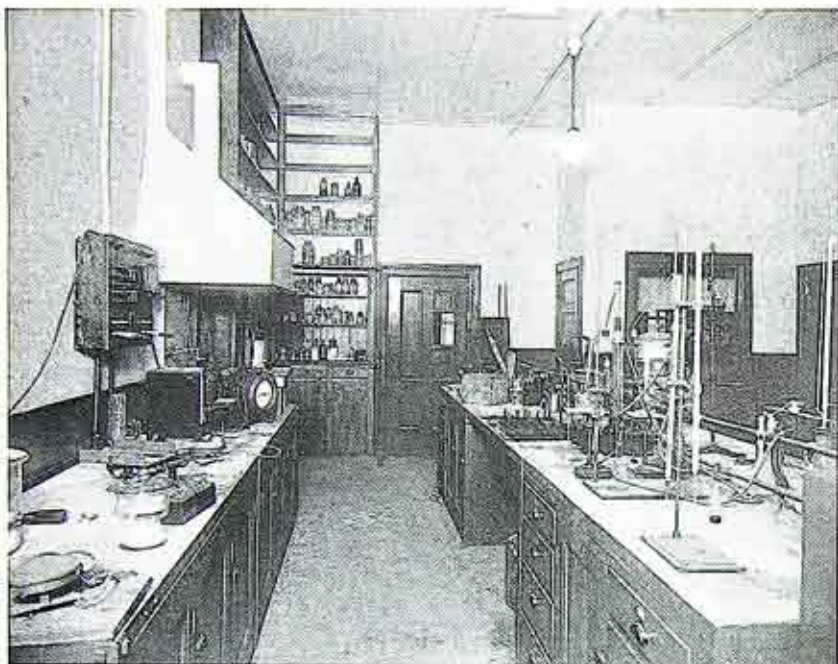
The library is not noteworthy for its number of volumes, and we hope it never will be. The Management

has been very generous however, and it is the purpose to carry here a small but carefully selected set of books, of which each shall be authoritative on its particular subject.

The west room contains most of the paraphernalia by which daily and even hourly check is kept upon the operation of the Gas Works. Here are the gas calorimeters in their cabinets, where the heating value of one or another of the gases is determined every hour of the day and night. Here is the gas analysis outfit, which might be called the interpreter, since from its results the superintendent can understand the reasons for fluctuations in the heating value and candle power, and can also explain the effects of changes in the operating conditions. Here is the dew point apparatus, whereby is told the lowest temperature to which the gas has been subjected in the mains; the hygrodisk for telling the percentage of humidity in the air and the barometer for determining the atmospheric pressure.

Built into this room is a dark room, in which measurements of candle power are made. Adjacent to this is another little indentation called the balance room, where are scales which will weigh accurately to one-four millionth of a pound. Along the north wall are two electric furnaces (one especially built for the determination of volatile in coals) and an electric oven, also a generator and meter by use of which the purity of carbide is determined. On a table in the center are done many of the volatiles in coal and all of the examinations of ammoniacal liquor. On the walls are cabinets containing a goodly array of chemicals and apparatus, for here too the Management has been generous and far-sighted and this makes a wonderful difference in the quality and quantity of the work turned out.

It takes a force of about a dozen to keep this part of the Company's wheels moving, and even at that,



West Laboratory—Showing Electric Furnace and Acetylene Generator

they move at times so heavily that the chemical doctors are just able to keep off dead center.

The volume and variety of the work required of the laboratory is a constant source of surprise to those not in close touch with its activities. As an illustration, since the 17th of February when the new set of records was started, there have been over five hundred and twenty samples brought into the laboratory for test, not to mention routine tests, such as B. T. U. gas analysis, candle power etc. Some of these tests could be finished in a few minutes, while others took several weeks. Of this number the greater part has been coals, oils and carbides, but as an example of the less frequent and more interesting samples, we might mention the following:

Gasoline	Wash Oil
Bezol and Bengas	Sulphuric Acid
Mercury	Battery Acid
Zinc	Lubricating Oils
Quicklime	Steel Rivets
Stove Polish	Residues found in Car-
Rust Remover	buretors and gaso-
Light Oil (Analysis)	line tanks
Light Oil (For co-effi-	Slag
cient of expansion)	Asbestos listing
Paints	Cable Compounds
Spent Oxide	Tincture Iodine

Concerning the routine tests, the yearly schedule calls for 19,710 B. T. U. tests, 1,095 candle power determinations, about 300 dew point tests, and between 700 and 1,500 gas analyses, so that there is a small chance of our ever being completely idle.

In addition to the above, since February 24th the members of the force have spent over two hundred and fifty hours in work outside of the laboratory. Such work has included special investigations at the Gas Works, the study of possible improvements at the Electric Stations,

and the analysis of flue gases at various factories and hotels in connection with the sale of coke.

As to the value of the work, we have our own opinion which is highly prejudiced; but it is not going too far to say that very many thousands of dollars can be saved by any company which makes intelligent use of the results obtained in a well-equipped laboratory. Take the case of coal for example. Two parties contending for our contract submitted samples in car lots, which reached us the same day, May 12th. Upon analysis, one of these coals was found to have 17.7% of ash and over 8% of sulphur; the other had 6.4% of ash and 0.95% of sulphur. The volatile was approximately the same in both samples. Based on a yearly consumption of 200,000 tons (a very modest figure) what would it have paid for an excess

of 11% of ash? Assuming a cost in the yard of only \$5.00 per ton, would there not have been \$110,000.00 wasted? And even this gives no consideration to the high sulphur, which would have greatly increased the cost of purification at the Gas Works and caused heavy corrosive damage at the Electric Stations.

It is believed that there are many as yet untried ways in which the laboratory can save money for the company, and it is to be hoped that each department will avail itself of the chemical and mechanical services offered, for only as we can help you and save you money, can we justify our existence. Make use then freely of the laboratory and of such brains as you may find there; call and see the equipment, consider it in connection with your problems and then go home and send us a sample big enough to see, and we will tell you all about it.



Showing Calorimeter Installation and Cabinet for Special Glassware

Carburetor floats (to determine relative penetration of motor fuel on the ordinary varnished float and on one coated with water glass).

## Electrical Hazards

THOMAS H. YAWGER

PROPERTY injury can be repaired or replaced and minor injuries to our person such as shocks, burns, etc. are in time restored by nature. But the line of demarkation between minor and major injuries caused by electricity is so faint and indefinite that it is well that we emphasize the necessity of teaching and training from an early period the child as well as those whose daily work brings them in contact with such hazards.

"A burnt child fears the fire" is a proverb and fact, the truth of which carries a lesson to the child throughout life. No watching or telling the child "don't touch it" will have any bearing on preventing a burn until personal experience has been painfully impressed upon the conscience of the individual. It is thus also to a certain extent with electricity. The watching and telling the beginner in electrical work and others outside this line that if they touch a certain innocent and inert looking object they will get a shock or burn does not carry the message, and unfortunately the result in some cases are not so small as to allow of recovery as in the cases of other hazards.

In the early days when the lightning was the only known source of electricity, the effects of which were impressed upon the individual by seeing trees shattered, animals and people killed, the fear engendered thereby was well founded and this fear carried with it the natural protective precaution.

As further along in our development static and galvanic electricity were discovered, the experimenters of these forces received shocks of more or less severity and the repetition of such causing pain and discomfort, they unconsciously took such precautions in regard to insulation and isolation as the state of the art would permit. These sources of

electricity being of low power capacity, the results were neither serious nor fatal.

The discovery along the middle of the last century of dynamic electricity brought forward numerous applications for the use of this force and as was natural in any new device or method certain hazards unthought of were brought to light and it was not until some experimenters were killed and fires started that it was found necessary as the art of generation and distribution of electricity progressed to follow this development with certain safeguards and protective equipment together with a wider understanding of such principles.

It is therefore the duty of all of us who are in any way connected with the art to give of our knowledge and experience and to see that all apparatus of whatever nature is correctly installed, properly operated and safeguarded so that the possibility of any hazard from electricity may be eliminated.

Electrical hazards are of a nature somewhat different from other hazards in that they are unseen, and until actual contact is made there is no warning. Our natural instinctive dread of fire, water and moving forces which are manifested to our senses act as a safeguard which is absent as far as electricity is concerned. Volumes of rules and regulations have been compiled by numerous authoritative bodies for the proper installation and operation of electric generating and distribution systems for the protection of both individuals and property, but unfortunately like all rules and regulations, ignorance of such rules together with wrong interpretation and indifferent observation are the principal causes of injuries. There is, however, great danger to lives and property whenever these rules are violated and it is to this

violation that we must direct our attention. Therefore we place "safety first" and danger signs to draw our attention to the places where danger exists, safeguard others where accidental contact might take place and protect our persons when necessity obliges us to come in direct contact. A great many of us, I fear, are inclined to look upon this safety first and accident prevention as something new or as a passing fad but it is needless to state that unless this same idea had not been unconsciously worked out during the early years of developing the art we would not now be in position to enjoy all the benefits of this gift of nature.

To illustrate, at first the bare fuse wire on wood insulation was used to protect defective insulation. We now use an enclosed fuse mounted on a non-inflammable base. Wires were run in slots cut in wood joist and supported by wood cleats. Now all wires are placed in iron conduit which protects them from mechanical injury and eliminates the fire hazard.

Our greatest attention has been and should continue to be in the direction of preventing the loss of lives or injury to the individual. We, therefore, should insist that all devices known to afford protection should be in good shape, accessible and that they be used. The lineman's life belt, a thirty or forty year old device, has saved many a life. Rubber gloves have been in use for about the same length of time with an equally good record. Goggles for eye protection of not so long a record have saved many serious eye burns. Insulated handles for tools, rubber mats around switchboards and other devices intelligently used certainly remove the workmen from electrical hazards.

Those of us who have been connected with this art have undoubtedly received our initial shock or burn and ever after the respect due to this force is not forgotten. But it is the uninformed person who is most liable

to electric hazards. For example a fuse blows and rather than call on an experienced person to replace it they think, having seen this simple operation performed, they can repeat same without trouble, forgetting that if they stand on a damp place or are in contact otherwise with the ground they will receive a more or less severe shock or burn. A wire falls in the street from the force of a storm or a broken limb from a tree. Do not touch it under any circumstances but stand guard to warn children and others until assistance arrives from the Company. A life in this city would have been saved recently if the well intentioned person had heeded the warning given to him by a number of bystanders.

"Fresh paint"—Who of us have not had the impulse to verify the warning with the result of soiled fingers or clothes. The danger sign "High voltage" if the same attempt is made, does not let the individual off so lightly and it is just this point we should instill into all minds. Just putting up the danger sign is not enough. We should in all possible cases make contact impossible by protective inclosures, locks on doors, etc., so as to make it practically impossible for unauthorized persons to subject themselves to such hazards.

Before the Company will make the connections necessary to introduce electricity into a residence or place of business very rigid inspections are made by both the Company's own inspectors and by the Board of Fire Underwriters, which is authorized by and acts for the City. We can positively state that these inspections are so thorough that all hazard, as far as electricity is concerned, is removed from the normal course of our lives.

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The scientific man knows why; the practical man knows how; the expert knows why and how.—Henry R. Towne.

## GAS AND ELECTRIC NEWS

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### The Value of Time

TIME, a part of eternity and the measure of continuity, of which an indefinite portion is allotted to every one, is, next to life itself, the most priceless possession we can have. It is a fairy's gift in that we can do with any part of it practically as we choose, but, once used, that fraction of it is beyond recall and forms part of our eternal record. Some mistakes may at some later period be rectified but the time involved is gone forever and comes out of what balance may be left to us.

Time, in spite of its vastness and its continuity, is measured by the ticks of a second hand. Seconds beat one by one to make the minutes, the minutes amount to hours, hours to days and days to years.

How prodigal we are in wasting the time allotted to us, in spite of the fact that seconds wasted can never be recalled or gone over! The hours wasted in unprofitable or useless actions, with little or no thought of what bearing they may have on the future, are like a mortgage on those remaining at our disposal and the interest on the time wasted is a handicap that few men can overcome and then only by almost superhuman exertions.

On the other hand, the hours spent in thoughtful study and useful work are like bonds, the interest on which mounts up year by year, the principle untouched and increasing in value as time goes on. There are oceans of time for us to deal with as we may see fit, but all the wealth of the world cannot purchase one second that has passed.

Thoughtlessness and carelessness, the great thieves of time, rob men of a priceless possession. As far as the individual is concerned, time stops when life ceases. It is of value only so long as he lives and learns and makes use of it. The seconds necessary to avoid an accident may apparently be wasted, but in the last analysis, the value of that fraction of time is measured by the days remaining of the life saved, or the days of suffering avoided.

*The value of time rests in the use made of it.* At our disposal to do with practically as we may choose, it can be made an asset or a liability to ourselves and to humanity in general. Money can buy time to come, but it can do nothing to restore what has passed. Time is worth whatever value

we place on it. It may be cheap because we rate it so—it is priceless if we choose to make it so.—*Safety News.*



### "Keep Well Beats get Well"

HAVE you ever thought what is the most valuable thing you possess—the one thing which makes all other things you have of any use to you? It is that thing which we take for granted as long as we have it, and the thing for which we will spend our last dollar to recover, when if we would take a little heed we would never lose it.

Come to think it over health is more than money or any and all the things we can spend our money for—because we get no comfort or pleasure from anything when sick, while if well we can always increase our earning capacity as well as enjoy those pleasures and comforts which the earning of money makes possible.

And keeping well means living in well ventilated rooms both night and day so that we will not lower our resistance and become susceptible to colds and influenza. It means that we should all have the right kind of food properly prepared—especially is this the case of children who are building their bodies and require the right material so to do, just as the builder must have the proper materials with which to build a good house.

Cleanliness of our surroundings and bodies is equally as important as good air and good food. Germs and flies breed in decaying rags and filth. Mosquitoes breed in the water which stands in empty cans, and the whole

combination adds to our misery and unhappiness.

Bathing opens the pores of the skin and helps us get rid of the poisons the body cannot use and makes us less liable to suffer from kidney troubles.

Then too, we must have sufficient rest. Children need more sleep than grown people because they use more energy in building their bodies, but unless we all have sufficient rest, we cannot keep well.

If we are to keep the most valuable thing in the world, then we must have good air, always live in clean surroundings, have clean bodies and take sufficient rest to repair the wear and tear of the day.

Keep well beats get well.

—*Health Hints.*



RECENT issues of the *Red Cross Magazine* contain interesting articles on rehabilitation work. It is specially impressive to note what a totally blind person, who is intelligent and patient and possessed of an iron determination to succeed, can accomplish by training his remaining senses to a higher degree of efficiency. Similarly with mutilations. Most of us can do but little with our third and fourth fingers, yet they can be trained to be nearly as useful as the first and second ones. It is almost impossible, for example, for a normal person to remove a safety match from its box, and light it, by using only one hand; but a person who has trained these inefficient fingers so that they will give the full service of which they are capable, can do it easily.

—*The Travelers Standard.*

## The Victory Loan

ERNEST C. SCOBELL

THE individual who comes around after the smoke has cleared away and makes such remarks as—"I told you so," "I knew it," etc., you know the kind that knows all about it *after* it has happened, (emphasis on the "after") and sort of rubs it in—that individual is in danger of a free ride to the hospital. And that is what I'm asked to do—tell you all about the Company's subscriptions to the Victory Liberty Loan. However, all that can be said is commendatory,

and I do not hesitate to say: "I knew you would do it."

We are giving below the tabulations of the subscriptions by departments. The employees at Station 3 purchased the largest amount of bonds, an average of \$75.50 per person. Of those departments with twenty-five employees or over the banner goes to the employees of East Station, Gas Manufacturing Department, who purchased an average of \$90.80 per person.

	Employees	Subscribers	Amounts
Executives.....	5	3	\$ 2,100
Auditing Dept.....	23	13	1,050
Consumers Ledger.....	128	48	3,000
Tabulating.....	10	6	350
Purchasing & Stores Records.....	13	8	450
Employment & Claim.....	8	3	200
Engineering.....	4	2	150
Industrial.....	15	5	350
Domestic Sales.....	20	17	950
Payroll.....	11	5	250
Mailing.....	6	1	50
Stenographic.....	4	3	200
Telephone.....	13	5	250
Coke.....	23	20	1,050
Transportation.....	47	37	2,050
Drafting.....	18	13	1,300
Laboratory.....	13	9	600
General Construction.....	160	51	3,150
Storehouse.....	10	4	250
West Station.....	142	69	4,950
East Station.....	54	54	4,900
Motor.....	33	28	2,100
Electrical Dept.—Office.....	8	3	400
Elec. Distribution Office.....	19	10	700
Station No. 1.....	5	4	250
2.....	8	3	150
3.....	168	115	8,450
4.....	15	13	700
5.....	22	22	1,750
6.....	10	7	600
26.....	3	2	300
33.....	3	3	150
34.....	3	3	150
35.....	8	8	600
Electric Meter & Arc Lamp.....	47	34	2,250
Subway.....	25	5	350
Line Department.....	58	29	1,950
Gas Street.....	45	25	1,450
Gas Shop.....	51	29	1,500
Janitors & Painters.....	12	4	200
Treasury Dept.....	9	7	850
East Rochester Office.....	1	1	50
	1,280	731	\$52,500

Naturally the great incentive that caused us to purchase Liberty Bonds was a patriotic duty and there is always a great satisfaction in a duty well performed. In addition we have had the opportunity of learning self-denial, because in 99 cases out of 100 it has meant absolute self-denial on our part and on the part of our families. We can all remember, back in our school days when we were taught that the hardest word to say was that little word of two letters—No—and during the past three years we have had ample opportunity to realize that fact. The third great advantage to us individually in participating in these popular government loans has been cultivating a habit of saving a definite amount each week. This is a habit that once formed is as easy to maintain as any other of our regular outlays of money.

Payments on subscriptions to the Third Liberty Loan have just been completed. The Fourth will be completed some time in November for the weekly payrolls and July 31 for the monthly payroll. Now that you have become accustomed to having the amount of your subscriptions to the Liberty Loans deducted from your envelopes why not give the Paymaster an order to continue these deductions and either deposit them in a savings account in your name or apply them on the purchase of the Company's 7% Preferred Stock. The subject of savings is so far reaching that it is worthy of an article entirely devoted to it in a later issue of the G and E News.

It is rather interesting to note that approximately 1200 employees in practically two and one-half years have saved out of their wages, providing they have kept their bonds, \$273,300.00 in addition to what has been put into savings accounts. Thrift Stamps, Company Stock and in a great many cases payments on mortgages on homes. There is much food for thought in a study of this great question of saving.

In conclusion, I want to thank through the magazine everyone who has worked so faithfully on the Liberty Loan Campaigns. If everyone has had as much real satisfaction out of it as the writer has had, you will need no further thanks, and from talks with different ones I know that that is the way you feel. In the name of the Committees that worked on the campaigns let me say that if any employee in the Company feels that undue pressure was brought to bear at any time to get his subscription for anyone of these government loans, it was done with the feeling that the need was great and although the payments might have entailed some hardships, in the long run a real kindness has been done to each individual subscriber. The fact that 95% of the employees purchased Liberty Bonds in some issue and some individuals purchased in all issues, shows that the employees of this Company are good loyal citizens and wide awake to their obligations in the time of stress and to the advantages of the Liberty Loans.

### A RESUME OF THE FIVE LIBERTY LOANS IS AS FOLLOWS:

	No. Employees	No. Subscriptions	Amt. Subscribed	Ave.
First Loan.....	1150	717	\$ 42,650	\$59.50
Second Loan.....	1300	437	29,400	67.28
Third Loan.....	1331	982	64,200	65.37
Fourth Loan.....	1142	1097	84,550	77.08
Fifth Loan.....	1280	731	52,500	71.82
			\$273,300	
Average per employee.....			220	

## The Use of Gas and Electricity in the Home

MISS FRANCES E. MOORE

### Milk

DR. SALEEBY, in his book "Health, Strength and Happiness" says—"Search earth and sky, the inorganic and the organic world alike, you will find that only once has nature set out to make a food—something which exists in order to be a food and for no other purpose. You cannot say this of the sheep, the egg or the cauliflower.

"Having made only one effort in this direction Nature has turned out a masterpiece. Milk is the characteristic food of the mammalia of whom we are the last and first. The last shall be first in the principle of evolution you know—. No mammal ever reached maturity without milk. No milk, no man."

The agitation which has been raised on the milk situation as to whether it should be under municipal control or not has done much good and at the same time a considerable amount of harm. It has brought before the people the necessity of giving some attention to a matter so vital but, sad to say, it has also curtailed its consumption by giving the impression that milk is a very expensive food. The fact is that even at its present price it is cheaper than almost any other food when food value is used as a basis of comparison.

For example: a pint of oysters and a pint of milk have about the same food value and yet we will pay thirty cents for the oysters and feel that seven or eight cents is a large price for the milk. We measure the value by flavor instead of nourishment. Again, a pint of milk is equal in food value to from four to six eggs, depending upon their size and here also the difference in price is very much in favor of the milk.

Comparison with meat is more

difficult because its composition is a trifle different but it is generally conceded by dietary authorities that more milk and less meat would be better for our physical well being and at the same time less expensive.

Of course for children, milk is the natural food and nothing can take its place. It contains two extremely important minerals—lime and phosphorus—both essential to growth, one in bone building, the other in the forming of nerve tissues. In addition to these and the protein and fat necessary to growth, milk possesses the virtue of containing vitamins which, although not very well understood, are known to be necessary to growing animals. Many cases of rickets and other bone troubles with which our hospitals are filled, are found to be a result of mal-nutrition generally due to a lack of milk in the diet. This lack of milk in children's diet is also directly responsible for much of our dental trouble. Too little lime makes soft teeth which are much more susceptible to injury and decay. Lack of proper nutrition is at the bottom of more of our doctors' bills than most people suspect.

Skim milk is seldom sufficiently appreciated as it is very valuable for its protein content. Cottage cheese made from skim milk is a valuable protein food and at the same time much less expensive than meat.

At this time it might be advisable to mention the fact that butter substitutes are truly not a substitute for butter. They may serve their purpose for adults but for children they lack the vitamins or growth giving qualities necessary for proper nourishment.

Milk, even at its present price, is cheaper than any other food and its use should be encouraged.

### Deep Fat Frying

FRYING is cooking by means of immersion in deep fat raised to a temperature of 350° to 400° F. A combination of two-thirds lard and one-third beef suet (tried out and clarified) is better than lard alone. Crisco also is very satisfactory.

In frying great care should be taken that the proper temperature be maintained, otherwise food so cooked will absorb fat.

Nearly all foods which do not contain eggs are dipped in flour or crumbs, egg and then more crumbs before frying. The intense heat of the fat hardens the albumen in egg white, thus forming a coating which prevents food from "soaking fat."

When meat or fish is to be fried, it should be kept in a warm room for some time previous to cooking and wiped as dry as possible. If cold, it decreases the temperature to such an extent that a coating is not formed quickly enough to prevent the fat from penetrating the food. The boiling and sputtering of fat in frying is due to water found in the food to be cooked.

Great care must be taken that too much is not put into the fat at one time not only because it lowers the temperature, but because it causes it to bubble and go over the sides of the kettle. It is not fat that boils but water which fat has received from food. All fried food on removal from fat should be drained on brown paper.

Rules for testing fat for frying:

1—When the fat begins to smoke, drop in an inch cube of bread from soft part of loaf and if in forty seconds it is golden brown, the fat is then of right temperature for frying any cooked mixture.

2—Use same test for uncooked mixtures allowing one minute for bread to brown.

Many kinds of food may be fried in the same fat; new fat should be used for batter and dough mixtures,

potatoes and fish balls; after these fish, meat and croquettes.

Fat should be frequently clarified. To clarify, melt, add raw potato cut in quarter inch slices and allow it to heat gradually. When it ceases to bubble and potatoes are well browned, strain through double cheese-cloth placed over wire strain into a pan. The potato absorbs any odors or gases and collects to itself some of the sediment, the remainder settling to bottom of kettle.

When a small amount is to be clarified, add to cold fat, boiling water, stir vigorously and set aside to cool; the fat will form a cake on top which may be easily removed, on bottom of the cake will be formed sediment which may be readily scraped off with a knife.

### Recipes

#### FRIED CAKES

1 cup sugar	¼ teaspoon soda
1 egg	2½ tsp. baking powder
1 cup milk	Dash of nutmeg
2 tblsps. cream	Flour

Beat together the sugar, egg, milk and cream. To 1 cup flour add soda, baking powder and nutmeg then add to first mixture. Enough flour is added to make a very soft dough. Place this on a floured board, being careful to use just enough flour to make it possible to handle the dough. Cut into rings with a floured cutter and fry in deep fat until brown. This recipe makes 18 fried cakes.

#### FISH CHOWDER

4 slices salt pork	1½ lbs. fresh cod
3 large potatoes	1½ qts. milk
2 large onions	1 qt. water

Cut pork in small pieces and try out. Cut potatoes into cubes, onions into small pieces, add water and strained fat and cook until vegetables are soft. Add fish cut into small pieces and cook gently about fifteen minutes. Add milk, bring to boiling point and serve. Each person add butter before eating; crackers are served with it. In New England where it is a popular dish it is always accompanied by small sour pickles or pickled onions.

#### FRENCH FRIED POTATOES

Wash and pare small potatoes, cut in eighths lengthwise and soak one hour in cold water. Take from water, dry between towels and fry in deep fat.



## Gas Manufacture

Under stress of a peculiar chain of circumstances, the locomotive crane at West Station rolled over one day in March and toppled off the track against the coke pile. The operator was not hurt and the machine suffered no particular damage.

Under the able supervision of Mr. A. H. Lamey, it was righted and re-assembled and is now in regular operation again.

Coke sales demands were rather heavy at the time and some anxiety was felt, at first, lest we should be unable to recover coke from the yard rapidly enough to meet requirements. But this problem was very easily and successfully met by using the small gasoline crane and one of the Company's dumping trucks. The coke was reclaimed from the pile into the truck by means of the crane. The truck was then backed around and dumped upon the coke wharf whence it fed in the ordinary manner into the conveying system and thence to the screens and bins.

By this scheme, instead of falling behind, coke was reclaimed at the rate of 100 tons per hour or twice as fast as the conveying system could carry it away.

## Industrial Sales

Messrs. Ziegler and Gaebler, 352 Plymouth Avenue, have purchased a candy furnace.

The Whittle Company has purchased one additional candy furnace.

The Bausch and Lomb Optical Company, 637 St. Paul Street, has ordered a Maxon-Premix Burner for

its large Schaller bake oven, displacing coal.

Mr. J. T. Kenealey, 237 Main St. East, has purchased two sections of Garland Hotel Range for his new restaurant.

The Wilmot Castle Company, 1115 University Avenue, has purchased two furnaces and a blower which will be used for special tinning work.

The Parker-Rishor Sales Company, Inc., 50 South Water Street, has ordered special burners to heat two 200 gal. Cauldron Kettles, used in making a special soap.

The Seneca Hotel has ordered a Maxon-Premix Burner for its bake oven, converting it from coal to gas.

The Rockaway Lunch Company has purchased a 3/4 H. P. Gas Steam Boiler which will supply steam to its bake oven.

The Rochester Co-Operative Baking Company, has purchased a 2 H. P. Gas Steam Boiler to supply steam to its bake oven.

## Electric Generation

The new gallery at Station 35 has been completed, and the work of installing the distribution circuit regulating equipment on it is well under way.

The work of installing an office and wash room at Station 34 is nearing completion and when finished will add much to the convenience and comfort of the operators there.

On Saturday, April 4th, the new 4150 volt, 60 cycle distribution circuit No. 345 was cut in at Station 34 to be

used for supplying power to the General Construction Department Shops at East Station.

Water flow in the Genesee for the past spring has been unusually constant and entirely sufficient for electric generation. On Sunday, May 25th, the river reached its maximum, the crest at the Elmwood Avenue dam measuring 521.2 ft. at 2 A. M. or .84 feet lower than the crest of March 31st, 1916 which measured 522.04.

The list on the accompanying page shows the location and number of the Company's electric stations and substations together with their generating, transforming and converting capacity; also consumers' stations (where located inside of buildings) of 200 kilowatt transforming capacity or over. The object in numbering the larger consumers is for the purpose of more economic handling of their construction and repair accounts by the several departments concerned.

		Generating		Converting		Transforming		D.C.Gen.
		60 cy. 25	60 cy. 25	60 cy. 25	60 cy. 25	60 cy. 25	60 cy. 25	
<u>Company's Urban Stations</u>								
No.	1	Station - Leighton Avenue						
	2	" - Brown's Base & Commercial St.		4500	2000		10000	
	3	" - Foot of Mill St.	30500	15000	7000	5200	5000	
	4	" - East End Central Ave. Bridge			500	3200		3060
	5	" - " " Driving Pk. Ave."	29800		2000	2000	10000	500
	6	" - South end of So. Water St.			7500	4500		100
	26	" - Cor. Aqueduct & Graves St.						145
	33	" - Elmwood Ave. at Lehigh Valley Crossing					10500	
	34	" - Freeman St.	1000		2000			
	35	" - Litchfield St.			3500		3000	225
<u>Company's Suburban Stations</u>								
	51	" - Littleville, N. Y.	180					
	52	" - East Rochester Sub-Station - East Rochester, N. Y.					1500	
<u>Consumers' Urban Stations - Inside</u>								
	101	- Koerbach Brewery - Emerson St. at R.R.					225 K.W.	
	102	- Art-in-Buttons - Champney Ter.					510 "	
	103	- Northeast Electric Co. - Whitney St. at R.R.					600 "	
	104	- Stecher Litho. Co. - No. Goodman & Anderson					412.5"	
	105	- Bensch & Lomb Co. - St. Paul & Smith Sts.					3000 "	
	106	- Kodak Park Sub-Station					3000 "	
	107	- Symington Forge Corp. - University Ave. & E. Blvd.					8004.5"	
	109	- Symington-Anderson Co. - " " opp. Grainger Pl.					2400 "	
	R-109	- Charlotte Sub-Station					300 "	
	110	- Brighton Cold Storage Co. - 1980 East Ave.					25 "	
	299	- T. H. Symington Co. - Lincoln Pk.					612.5"	
<u>Consumers' Suburban Stations - Inside</u>								
	501	- Kodak Pumping Plant - Round Pond					600 K.W.	
	R-502	- Canandaigua Power House - Canandaigua, N. Y.					1500 "	
	R-692	- Pittsford Sub-Station - Pittsford, N. Y.					1200 "	
	R-693	- Victor " - Victor, N. Y.					560 "	
	R-694	- Gates " - Gates, N. Y.					600 "	
	695	- R. & L. O. Pump Station - End of Beach Ave.					1200 "	
	R-696	- Float Bridge Sub-Station					600 "	
	R-697	- Williamson Automatic Sub-Station					300 "	
	R-698	- Ontario Sub-Station					450 "	
	R-699	- Sodus Sub-Station					300 "	
<u>Consumers' Suburban Stations - Outside</u>								
	701	- Hilton					300 "	

## Report of Subway Department for the Year 1918

The Subway Department did little in the way of new construction during the year 1918. As a War Measure, no extensions other than those absolutely necessary were made.

On account of the increase in price of both labor and material, the cost of repair work was greater than in previous years.

The new construction consisted of the installation of 7000 feet of 6 way and 1300 feet of 4 way tile for subway in street. Also 31 iron lamp posts, 14 of which were to replace broken ones and 46 concrete lamp poles, 9 of which were to replace broken ones.

1200 concrete lamp poles, 100 concrete handhole collars, 200 street manholes and about 40 manhole frames were repaired; after which every manhole in the city was cleaned and pumped.

## Telephone Talks

The telephone has part in practically every transaction of our Company whether it be the sale of some domestic appliance or complaint of one of our customers as to service rendered.

Now telephone efficiency means the greatest number of calls handled satisfactorily over a given number of lines. It would not be considered good business to equip our telephone department with sufficient lines, both intercommunicating and central to provide for emergencies which it is impossible to foresee.

Our central and inside calls average about 5,000 calls every 24 hours. The combined central lines of both switchboards number 15 and over these we handle each day approximately 3,000 calls.

To do this it is necessary that all calls are handled promptly by the

operator and also that our organization in general help us to speed up the service by making conversations short and to the point, thus releasing lines for other calls. Departments should wherever possible assign a particular person to handle the phone business of the department. Much valuable time is lost by the indiscriminate or unorganized answering of phones.

We ask you to answer phones promptly giving name or department. Too much cannot be said along this line as it is here the speeding up process spoken of breaks down or is greatly reduced by unnecessary talk.

## Care of the Teeth

The first step in digestion of food is chewing. By this means the food is ground up to a fine pulp and thoroughly mixed with the saliva. In order to properly prepare the food for digestion good teeth are necessary. The importance of the care and preservation of the teeth can not be too strongly emphasized. Defective teeth are a menace to health as they cause the food to be improperly masticated. And the constant absorption of material from decaying teeth may affect both digestion and the general health.

Every person should visit a dentist at least twice each year. This will enable the dentist to keep the teeth in good condition and afford an opportunity to treat any decayed or diseased teeth before much harm is done.

The teeth should be brushed at least once each day, preferably at night. Children should be taught to brush their teeth regularly. Defective teeth in children often cause serious impairment of the health and impede progress in school.

—Health Hints.

## Baseball and Tennis

The Baseball season is now in progress. The Railway and Light Company has eleven more games to play. Each Saturday's game will be posted on the Bulletin Boards three or four days ahead of the game. Get on the job and make use of your season ticket which will admit you to all of the eleven games. Help your team win. Extra tickets can be obtained through the head of your Department.

❖

The tennis court at Station 33 has recently been put in first class condition. Employees wishing to use the court should arrange their dates for playing with Mr. George A. Bailey at least two days in advance, if possible.

The court at Searle Park is also in condition and reservations can be made by telephoning to the Blossom Road Holder.

Mr. Bailey would like to have the tennis players in the Company consult with him concerning the forming of a league, from which teams could be selected to play in an inter-departmental tournament.

## "Smile"

IT was a trivial incident and yet I seemed to me to point so good a lesson that I'm going to relate it.

The elevator, nearly filled, had just started to rise. Through the glass doors we could see a tenant who had entered too late to catch the car. As the tenant entered, the starter signaled for the car to stop and take the belated passenger. But the tenant waved the car on and through the doors we could hear him say to the starter, "Let her go. I can wait for the next one."

"Must be some important guy, said a man in the back of the elevator, "to

have the starter hold up a crowded car to convenience him."

"Not important at all," said a man standing next. "That's the secret of it. He gets what he gives. He gets favors because of his genial nature—because he's long on smiles and short on grouches. Every traffic cop on Fifth Avenue turns to say "Hello" when he passes. He's a busy man, a successful man, but I never knew the time when he hadn't a few minutes to do a good turn for friend or stranger."

"Bunk," said the first speaker, as he left the elevator.

"There's the difference," said the second speaker, as he turned to me. "That chap's a notable grouch. Nobody seems to like him and everything seems to go wrong with him. I wonder if his mental attitude hasn't something to do with the results."

"I don't know much about those things," I replied, "but in my judgment the smile-habit so thoroughly cultivated before you're thirty that it can't be discarded, is worth much money and much satisfaction in after years."

THE AMBASSADOR.

When quite a youth, Franklin went to London, entered a printing office, and inquired if he could get employment as a printer. "Where are you from?" inquired the foreman. "America," was the reply. "Ah," said the foreman. "from America! A lad from America seeking employment as a printer! Well, do you really understand the art of printing? Can you set type?" Franklin stepped to one of the cases, and in a brief space set up the following passage from the first chapter of the Gospel of St. John: "Nathaniel saith unto him, Can any good thing come out of Nazareth? Philip saith unto him, Come and see." This was done so quickly, so accurately, and contained a delicate reproof so appropriate and powerful, that it at once gave him a character and standing with all in the office.

—Old Colony Magazine.

A loafer must feel funny when a holiday comes around. —Kin Hubbard



## Auditing



### New Business

#### Net Increase in Consumers in First Three Months of 1919

	Dec. 31, Mar. 31,		Increase
	1918	1919	
Gas.....	79,037	77,997 (Dec.)	1,040
Electric.....	28,907	29,136	229
Steam.....	88	90	2
	108,032	107,223 (Dec.)	809

#### Net Increase in Consumers in Twelve Months Ending March 31, 1919

	Mar. 31, Mar. 31,		Increase
	1918	1919	
Gas.....	78,618	77,997 (Dec.)	621
Electric.....	28,106	29,136	1,030
Steam.....	51	90	39
	106,775	107,223	448

#### Statement of Consumers by Departments as of March 31

Mar. 31	Gas	Elec.	Steam	Total	Increase
1908	38,123	6,039	—	44,162	—
1909	41,865	6,533	—	48,398	4,236
1910	46,848	7,416	—	54,264	5,866
1911	52,515	9,238	16	61,769	7,505
1912	57,404	11,231	19	68,654	6,885
1913	62,199	14,081	23	76,303	7,649
1914	67,135	16,518	30	83,683	7,380
1915	70,120	19,823	37	89,980	6,297
1916	71,858	22,839	41	94,738	4,758
1917	75,768	25,906	49	101,723	6,985
1918	78,618	28,106	51	106,775	5,052
1919	77,997	29,136	90	107,223	448
Inc. in 11 Yrs.	39,874	23,097	90	63,061	63,061

#### Net Increase in Consumers by Months

	1917	1918	1919
Increase in Jan.....	194	54 (Dec.)	69
Increase in Feb.... (Dec.)	19	56 (Dec.)	463
Increase in March	386	183 (Dec.)	277
	561	293 (Dec.)	809

#### Subscribers to 7% Preferred Stock

Number of Subscribers, April 1.....	1,526
Number of Subscribers, May 1.....	1,669
Number of Shares, April 1.....	10,079
Number of Shares, May 1.....	11,008

### Miscellaneous Data

	Mar. 31, 1919	Mar. 31, 1918	Increase
Miles of Gas Main.....	489	487	2
Miles of Overhead Line.....	1,903	1,906 (Dec.)	3
Miles of Underground Cable.....	1,127	1,121	6
Miles of Subway Duct.....	998	991	7
No. of Street Arc Lamps.....	1,638	1,712 (Dec.)	74
No. of St. Inc. Lamps.....	8,800	8,630	170
Total No. of St. Lamps.....	10,438	10,342	96
No. of Employees.....	1,320	1,329 (Dec.)	9
Amt. of payroll (Mo.)	\$143,629.75	\$126,198.10	\$17,431.64

### E.B.A. for Month of May, 1919

Receipts	
Balance April 1st, 1919.....	\$1,250.01
Dues—Members.....	\$603.24
Dues—Company.....	603.24
Fees—Members.....	29.00
Fees—Company.....	29.00
Assessment No. 22—Members.....	.25
Assessment No. 23—Members.....	185.75
Assessment No. 22—Company.....	.25
Group Life Insurance.....	24.67
Members' Additional Life Insurance.....	22.33
<b>Total.....</b>	<b>\$2,747.74</b>
Disbursements	
Sick Benefits.....	\$580.02
Accident off Duty Benefits.....	76.41
Accident on Duty Benefits.....	70.85
Death Benefit No. 22.....	400.00
Additional Insurance.....	17.98
Group Life Insurance.....	61.52
Medical Examiner's Expense.....	33.00
Members' Military and Naval Expense.....	41.49
<b>Bal. on hand April 30, 1919.....</b>	<b>\$1,466.47</b>

Members March 31.....	771
Affiliated April.....	28
Terminated April.....	11
<b>Members April 30th.....</b>	<b>788</b>

### The Plague of Tongues

One tongue for the builders of America. Once a king had a dream. He said he would make his dream come true. He would build a tower to heaven, where the gods lived.

Quickly he called his builders. Smartly they set to work. Higher and higher rose the tower. Soon it would reach heaven.

Then the gods looked out and said, "No, no; you shall never reach heaven."

They sent the plague of tongues. And the builders could work no more, for they could not understand each other. They quarreled bitterly. The gods laughed. The tower never reached heaven.

One tongue for the builders of America.

Learn English.—Americanization.

### Personals

Including those published in this issue of GAS AND ELECTRIC NEWS, one hundred and six Company men who have been in the Service, have returned and are again employed in the various departments of the Company.

GEORGE C. BROWN	THOMAS McCALL
GEORGE BUSHNELL	FRANK MITO
FRANK CARDONE	FLOYD H. OWEN
RAYMOND CONNELL	E. R. SHAPLAND
DOMINIC COSTENO	JOHN J. SHEEHAN
DEWAIN FELLER	SIDNEY A. SWANSON
FRANK GUNTHER	GERALD WILKIN
ELMER P. HUTTER	GEORGE ZORSCH

Mr. B. B. Yeomans of the Industrial Department spent a short vacation visiting relatives in Grand Rapids, Michigan.

Messrs. Walter S. Burch of the Engineering Department and James E. Cooper of the Gas Manufacturing Department spent a week in Sherman, Vt., assisting in tests on electric furnaces.

Phyllis Jane is the name of the little girl who came to brighten the home of Assistant Cashier Charles L. and Mrs. Briggs.

After six weeks leave of absence, Miss Ruby Bagney has again resumed her duties at the Laboratory at East Station.

Miss Lucille Wallace of the Telephone Department and Mr. Charles Feeley of the Electric Distribution Department were married at St. Patrick's Cathedral, May 21st, 1919. They are at home at 345 Lake Avenue.

The young ladies of the Payroll Department gave a Welsh Rarebit Luncheon in the Assembly Hall in honor of the birthdays of Miss Gladys M. LaRue and Miss Bertha I. Faulkner. Miss Helen Cain entertained the party with an exhibition of aesthetic dancing.

Mr. A. C. Rissberger, Miss Elizabeth N. Connor and Miss Olga S. Schaffer of the Employment and Claim Department, attended a convention of the National Association of Employment Managers held in Cleveland May 21st-23rd. Mr. Rissberger was one of the speakers, his subject being Safety.

Pleasant greetings have been received by Superintendent J. P. Hattenkamp from Vice-President and General Manager F. C. Armbruster of the Port Arthur Gas and Power Company, Port Arthur, Texas. Mr. Armbruster was formerly an employee of the Rochester Railway and Light Company in the Gas Street Department and later in the Drafting Department.

Mr. Philip F. Stephens formerly of the Engineering Department, passing through Rochester not long since called on his many friends in the Company, who were very pleased to see him. Mr. Stephens is now Equipment Engineer with the Austin Company of Cleveland, Ohio.

Lieutenant Linus G. Knapp has returned to civil life after twenty-two months service in the army. He is now in charge of the Auditing Department of the Genesee Light and Power Company of Batavia. Before going into the service Mr. Knapp was connected with the Consumers' Book-keeping Department of this Company as Statistician.

Mr. Edward L. Wilder, Assistant Manager of the Industrial Department, attended a meeting of the Western New York Chapter of the American Society of Heating & Ventilating Engineers held at the plant of the Taylor Instrument Companies on June 2nd. An inspection of the plant was made in the afternoon, followed by a technical session in the evening.

Superintendent and Mrs. Thomas H. Yawger have had a very pleasant motor trip. The journey out was made by way of Binghamton and the Catskills to New York, thence through central New Jersey by way of Lakewood to Atlantic City. After a pleasant stay at the City by the sea, they returned by way of Asbury Park, Long Branch and Spring Lake up the Hudson to Albany and then to Rochester. They experienced no difficulties on the way which may possibly be accounted for by the fact that they left Rochester with a tank filled with Bengas.

Miss Frances E. Moore left the employ of the Company June 1st to become Director of the Bureau of Home Economics at the Rochester Chamber of Commerce.

GAS AND ELECTRIC NEWS takes this opportunity of acknowledging Miss Moore's very valuable and much appreciated services in connection with the preparation and editing of articles and recipes as used in the Household Section of our magazine. We have received many comments as to the practicability and usefulness of the work for which Miss Moore was responsible in this connection.

Messrs. Ivar Lundgaard and Frank C. Taylor of the Industrial Department attended the N. E. L. A. Convention held at Atlantic City May 20-22.

Fourteen girls from the various departments on the main floor had a picnic one evening last week. They left the office at 5.30 and went to Maplewood Park where ample justice was done to the lunch provided. Afterward they enjoyed a concert by the Park Band. The outing was so pleasant that it was decided to repeat it every week through the season.

Mr. Clarence D. Bills of the Educational Department of the New York Office of the Underwood Typewriter Company gave a demonstration of typewriting speed in the Assembly Hall, before a very much interested audience composed of the stenographers and typists of the Main Office and a few others. At the end of the test the audience was not only interested but enthusiastic as well.

In the first test his speed was 144 words per minute and in the second 150 words. As he wrote he answered any questions asked without apparent inconvenience. As a special test he was blindfolded, and wrote without error a sentence with which he was familiar, attaining a speed of 206 words per minute. After this he wrote at a speed of 60 words per minute, the average speed of a typist just completing her course, which in comparison with what had preceded seemed very slow.

Mr. Bills was very quiet in manner, and made no unnecessary motions, in fact his hands did not move at all, but every finger worked with wonderful regularity. He impressed upon those present the fact that the ability to write accurately at a high rate of speed depends upon two factors—first, evenness of stroke, and second, accuracy of stroke. If the typist will keep these two points in mind speed will naturally follow.

A DAY will come when the only battlefield will be the market open to commerce and the mind opening to new ideas. A day will come when bullets and bombshells will be replaced by votes, by the universal suffrage of nations, by the venerable arbitration of a great sovereign senate, which will be to Europe what the parliament is to England, what the diet is to Germany, what the legislative assembly is to France. A day will come when a cannon will be exhibited in public museums, just as an instrument of torture is now, and people will be astonished how such a thing could have been. A day will come when these two immense groups, the United States of America and the United States of Europe, shall be seen placed in the presence of each other, extending the hand of fellowship across the ocean.

—VICTOR HUGO.  
[Written in 1880]



# BUILD NOW!

*"More Americans Should Own Their Own Homes"*

**S**OMEWHERE in the heart of every man is the desire to be **INDEPENDENT**. Independence is the measure of one's standing in the community.

The first step along the road to independence is to own one's home. The man who owns his own home is the respected, the trusted man in every community.

One of the largest employers of labor in the country ordered a canvass of his factories to determine what percentage of his employees owned their own homes. At the same time he urged all employees in the establishment to become home owners or home buyers.

Sound logic prompted this action. The responsible man is the valuable employee. The **HOME OWNER** has a deeper sense of civic pride. He is established; he is responsible; he is interested in everything that tends toward the peace and security and upbuilding of the community.

The example set by one manufacturer will be followed by others. It will daily become more requisite to a man's securing responsible employment that he **Owens His Own Home**.

There is little excuse for a man not owning his own home. The great Liberty Loans have instilled into the American people lessons of thrift that will endure through the coming days of peace. Every man can and should own his own home.

There is no appeal from the man who seeks a position that is treated so lightly, by private and public employer alike, as the appeal which comes from the man who has everything to gain and nothing to lose.

The **INDEPENDENT MAN** always **Owens his own Home—  
BUILD YOURS NOW.**

—U. S. Dept. of Labor.