

# GAS AND ELECTRIC NEWS

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No.1



Apple Blossoms Near Float Bridge

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*THE greatest riches are  
often found in the  
simplest things*



## How the Company's Steam Coal is Analyzed

HERMAN J. HALSTRICK

"COAL is Coal" was a saying much used a few years ago. If there was any distinction made when purchasing coal it was on the reputation of the dealer, or mining district. About ten years ago when the Federal Government began purchasing coal according to specifications worked out by the Bureau of Mines, this saying began to be recognized as a misconception. Users of large quantities of coal, such as power companies, soon followed this lead and the practice of buying coal on a heat unit basis spread continuously in spite of bitter opposition by many coal dealers. The first year that New York City bought its coal according to specifications a saving of \$200,000 was made. New York State effected a saving of \$250,000 in one year.

The chief advantages which this practice affords the buyer are; first, that the payment is in proportion to quality; second, constant inspection and analysis of the coal delivered furnish a practical check on the evaporation factor *i. e.*, the quantity of water evaporated by a given quantity of coal. This latter factor is determined every day in large steam power plants in order to determine the efficiency of the plant under actual working conditions.

The first step in the work of the

laboratory consists in securing a sample of coal which accurately represents the average composition of the shipment of coal in question. This is very important since the accuracy of all the determinations can be no better than the measure in which the sample is representative of the shipment. It is no easy matter to secure a sample no larger than a thimbleful which shall represent many carloads full of coal. Several shovel-fuls are chosen carefully by an experienced man from various points in each car so as to get the proper proportions of lump and fine coal. The process of reducing this large sample to the laboratory size of a thimbleful consists of systematic crushing, mixing and quartering in progressive stages. The large sample is run through a jaw crusher, and is then mixed thoroughly and heaped in a cone shaped pile. The pile is divided into quarters of which two diagonally opposite are rejected while the remaining two are crushed finer, mixed and quartered as before. After this process is repeated many times (fifteen to twenty times for a seventy-five pound original sample) it results finally in about a thimbleful of coal which is pulverized as fine as flour before it is dried in an oven.

A considerable part of the coal, from 25%-40%, is not carbon alone,

but carbon combined with hydrogen and other gases. This part is driven off when the coal becomes red hot. When it is burning under a boiler this volatile part burns but imperfectly and issues from the stack in the form of smoke and soot. Moreover there is the loss of heating value due to the imperfect combustion. In

the chief constituent of illuminating gas, and therefore in coal gas manufacture it is necessary to use a special grade of coal rich in volatile content.

In order to determine how much ash there is in the coal, the cover is taken off the platinum crucible after the volatile matter is driven off, and the residue which remains in the



Ambrose Street Storage Yards, where the Company's Reserve Steam Coal is Stored. The Company believes in Protecting It's Customers.

order to determine the percentage of this "undesirable" constituent of steam coal, one-gram of the sample is placed in a platinum crucible with a tight fitting cover and heated to about 950° C for seven minutes. A reddish flame from the edges of the cover is the visible indication of the expulsion of volatile matter. The percentage present is calculated from the difference in weight before and after heating. This volatile matter is

crucible is kept at a white heat for several hours. During that time all the combustible matter in the coal is burned and that which remains in the crucible is the mineral content, *i. e.*, ash, of the coal. Naturally a low ash content is very desirable, because the expense of haulage, together with that of shoveling it into the fire as part of the coal, and the expense of handling and carting it away after the coal is burned are

large items to be considered in any plant.

The most important of all the laboratory determinations is the heating value of the coal. This can be ascertained in a Parr calorimeter illustrated in figure 1. The principle employed is that a known weight of coal will cause a rise in the temperature of a measured quantity of water proportionate to its heating value as a fuel.

Figure 1 shows the relative position of the parts of the calorimeter. The bomb D is the receptacle for holding the charge consisting of the sample of coal mixed with Sodium Peroxide and Potassium Chlorate. The purpose of these two re-agents is to furnish the oxygen necessary for combustion and to absorb the resulting gases. The bomb being concentric, it is made to revolve upon a pivot F, and by means of the turbine wings attached it is made to serve as stirrer for the water (2 liters) contained in the can AA. Ignition of the sample is effected by a piece of iron fuse wire which extends into the charge and is heated white hot by an electric current. The exchange of heat between the cartridge and the water is complete in 4 to 5 minutes, and the rise in temperature is indicated by the reading of the thermometer which is graduated to 1/1000 of a degree Centigrade. The rise in temperature multiplied by a simple factor gives the heat in British thermal units; the heat unit (B.T.U.) is the amount of heat required to raise a pound of water from 39° to 40° Fahrenheit) per pound of coal.

After this determination has been

completed the cartridge is washed out with hot water which then contains in solution the sulphur in the coal. This is precipitated and weighed by

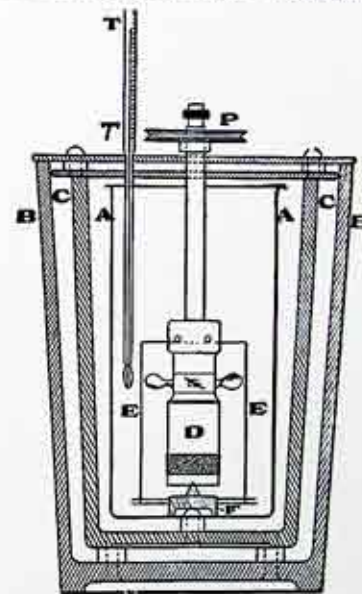


Fig. 1

Diagram showing parts of a Parr Calorimeter, a device used to determine the heating value of coal

comparatively simple chemical methods.

Since this Company has been compelled by the unstable conditions of the coal market to purchase its coal where best it can, an analysis is run each week on every shipment from the various companies. These determinations act as a check on the results obtained at Station 3 where some days as high as 500 tons of coal are used.

Success is based largely upon the degree of determination with which we tackle our daily problems.

## The Control of Fire As It Relates to Cookery

FRANCES E. MOORE

**T**HE history of fire and its control runs along parallel with the development of man from the stage of savagery to that of civilization. Fire being the source of heat both for body warmth and cookery, was the center of community, and later family life. All our knowledge of the early control is based on archaeology and very often we must draw upon our imagination. There have been found some remains of life where no traces of fire could be found, but in most cases fire appears to

them (clams and mussels) into the fire or hot ashes, and then dragged them out with a stick after they had been opened by the heat.

Later when man was able to kill animals for food with his rude bow and arrow or slingshot he roasted or broiled the meat. At first the meat was thrown directly on the fire or held on a pointed stick over the flame. Not wishing to watch the meat so closely, he later placed stones around the fire and on these lay the meat to be roasted and the seeds to be



Figs. 1 and 2. The Ancient Egyptians—from the tomb of Rameses III. at Thebes. Fig. 1. "Kneading bread with the hands." Fig. 2. "Carrying the cakes to the oven which has been lighted." Cakes were placed in grooves on the outside

have been present. Its first discovery was probably accidental—lightning or friction kindled it and then man kept it going by furnishing the fuel. Later he learned how to produce it by friction just as many savage tribes to-day produce it by rubbing sticks together or striking flint.

At first man's food was vegetarian in its nature, composed as it was of grain and fruit. After man had discovered fire he roasted the grain in the ashes or on a stone beside the fire. In Denmark and some parts of England there have been found refuse heaps left by what historians have called the Kitchen-middens. The indications show that they used fire to roast the shellfish they were able to gather on the shore, by throwing

parched, thus giving us our first hearth. Later the seed grains were ground between stones, mixed with water and baked in little cakes on this same stone hearth.

Fires in the open didn't burn well without a great deal of attention, so finally man hunted sheltered places in which to build it. He no doubt used the hollow or side of a rock for shelter, or perhaps he built his fire in a dug-out pit lined with stones, using as fuel the twigs and leaves which were easy to gather. Where caves existed the fire was built near the entrance which served as a smoke exit, thus giving us the beginning of the first permanent home. This may have been either a community or family home but it is easy to believe

that it was the center from which men went every day to find food and adventure. The shelter and fire were a means of keeping away savage animals, and everyone would look upon the cave as a haven in time of trouble.

At first man roasted his meat and grain but later he learned how to boil them. Holes in the rocks and those dug in the earth were lined with skins to form a crude vessel into which was placed the food and water to be cooked. The water was heated by the hot stones which were placed in it, and in a sense this was our first fireless cooker.

Pottery, which was the next great step in the advance, like the discovery of fire, was probably accidental. A basket daubed with clay to keep it from burning, hardened in the fire, or perhaps a fish with a coating of mud baking in the ashes gave man an idea which led to many things. To keep them from tipping, these clay pots were propped up over the fire on stones which later developed into the making of pottery with legs or supports. The brazier was a direct development of this idea, it being a pot or container standing on legs.

After man had come to appreciate the value of a shelter such as the cave afforded, he built permanent shelters to protect his fire and family, and here we have the beginning of the fireplace. Often it was just a hollow place built of stones with an opening in the roof thru which the smoke could escape; later on the chimney was developed. The methods of cookery were probably the same, roasting and broiling were done in front of the flame, boiling in the clay pots, and the baking, if it can be called such, on the stones in front of the fire. Abraham said to Sarah, his wife, "make ready quickly fine meal, knead it and make cakes upon the hearth."

A painting in the tent of Rameses

shows the interior of an Egyptian kitchen where cooks are roasting, boiling, basting, skimming the pot and blowing the fire—and this was 1500 years B. C. In one case the whole side of an Egyptian kitchen was raised about a foot to form a fireplace which was composed of mud and stone with a great slab of limestone in front for a hearth. Above this hung a long iron rod from which the meat was suspended. A brazier or cauldron in which charcoal and wood were burned to broil the meat was also used. The Egyptians were noted for their bread and had many large public bakeries. The shepherds baked their simple breads in the ashes or in cakes on the hot hearth, but in the houses of the wealthy and in the bakeries a clay stove was used. The stove was a tall cylinder shaped apparatus with the fire inside, and the bread or cakes to be baked were



Fig. 3. Movable oven used by the Ancient Greeks. Pots for cooking were placed on top

shaped and stuck in the grooves on the outside of this great clay pot.

The Greeks likewise used the open fireplace and braziers but they had a regularly constructed oven for baking. This was built of clay with a dome-shaped top; the fire was built inside and when the oven became thoroughly heated the ashes were raked off into an ashpit below, and the clay gave out its accumulated heat for a considerable length of time. We read that the Greeks had fifty

varieties of bread and when one calls to mind their great feasts one can imagine how large their fireplaces and ovens must have been. Great spits running the full length of the fireplace and turned by means of a tread mill by dog power were used to roast whole oxen. Many of us have read of Achilles being "strong enough to turn the spit."

The methods of Rome were almost identical with those of Greece and they probably added very little in the way of improvement. Dogs in treadmills turning huge spits were found in the ruins at Pompeii. A great clay oven with loaves of bread in it has also been unearthed. The Greeks and Romans held fire as sacred and we all know how the vestal virgins kept it burning day and night in the temples; often a bride took fire from her mother's hearth to kindle the fire in her new home. In a way their Lares and Penates were simply fireside gods.

It is interesting to note that the Chinese had regularly constructed ovens as early as 400 B. C. These ovens were a square box-like apparatus equipped with holes in the top in which were placed clay pots of various sizes. These stoves had no ovens, so it is safe to assume that the Chinese baked their rice cakes on the top of the stove. When we remember that clay and stones are very different from iron or steel in that they hold the heat for a long time, we know that this method was quite possible.

The Saxons and the old Germanic tribes were very crude in their fire control, using open fireplaces and baking flat cakes on the glowing ashes. Later they learned about bread and ovens from the Romans.

After the fall of Rome and during the Dark Ages little was done in the way of baking and only the crudest sort of cookery was practiced. The one exception to this was that of the monks in the monasteries. Here

were great ovens and fireplaces and we find them concocting wonderful new breads and cakes so that when France and England began to develop there was something with which to start.

Although cookery itself developed very rapidly after the 13th century,



Fig. 4. Syrian women baking bread in a type of oven well known to various peoples

there was little done in the way of controlling the fire. There were many reasons for this. In England the people lived almost entirely on roasted meat, and we must admit that even to-day the most satisfactory way of doing this roasting is in front of an open fire. Huge fireplaces were built in every kitchen and in some of the castles and inns there were as many as three fireplaces in a room with an opening in the roof for the smoke to escape. Whole oxen, pigs, etc. were roasted on spits which were turned by hand power or treadmills. Chunks or roasts of meat were hung in a metal box with an open side toward the fire. The meat itself was hung on a screwjack which was wound up and turned mechanically from side to side roasting the meat evenly. When they wanted to do baking they used an oven similar to the present day Dutch oven but

often the breads, etc., were taken to the public bakeries where they were baked in large brick ovens.

In France the methods were very much the same but since the French developed a more delicate type of cookery we find them using smaller braziers, meat screens and grills. It is also known that Soyer experimented with petroleum, woodspirit and gas. Savarin says "Any cook might become an expert in frying but to become a roaster one must be born a genius with an instinct for the spit." The French used a horizontal grill placed over a brazier for broiling and grilling small pieces of meat but the English used a perpendicular gridiron suspended in front of the fire.

There is very little more in the way of advancement until we come to what was the beginning of the modern range. Originally the word "range" meant firebrick or rest of parallel bars on the hearth on which the fire burns so as to admit air from below. The greatest development was in Germany and America, the English and French clinging to the older methods.

Most of us have heard of the famous "Nurembergs." These were beautifully ornamented with figures of Christ and the Apostles and were used principally for heating purposes. There are many of these stoves in existence to-day, which fill almost half of a room and are the pride and joy of many a German housewife's eye. There were also some Nuremberg cooking ranges and, knowing the pride every German housewife takes in her kitchen, we can well imagine how much one of those shining black monsters must have meant to her.

In 1490 the first stove was cast in Alsace and in 1509 others were cast in Islenburg. The first stove was cast in the U. S. in 1642 and then the industry lagged until 1735 when Christopher Sower of Germantown

made the first paint stove. This stove was characteristic of most of the stoves built into the old Colonial Kitchens. It consisted of a cast iron box built into the kitchen fireplace, and sometimes one end opened into an adjoining room, thus transmitting heat to other parts of the house. The first real cooking stove was the James stove, equipped with nine plates and an oven on one side. Many of these old built-in fireplace stoves may still be seen in the farmhouses of Eastern New York and in New England.

It is fitting at this time to speak of one of the main reasons for the



Fig. 5. "Loading for B'ar." Typical Colonial fireplace with oven at the side

development of the cast iron and steel range in this country, namely, the development of the coal industry. The discovery of the great heating power of coal made it necessary to find adequate means of burning it properly, and thus great strides were made in the improvement of heating and cooking stoves.

The part that gave the greatest trouble was the oven and it was not until 1850 that Mr. P. P. Stewart

gave us a system of flues and drafts that made the modern oven. Since then only minor changes have been made in its construction, i. e. only one oven door, the placing of the pipe on the side where the door formerly was placed, and the old tin oven linings have been replaced by aluminum.

Although coal ranges have been wonderfully successful modern science has given us something vastly more wonderful—the gas range. Again we see a fuel at the bottom of a great revolution which has caused millions to use gas where once wood and coal were used.

The first recorded suggestion of the use of artificial gas for cooking was in the patent taken out in England in 1805 by F. A. Windsor for a process of "Extracting Inflammable Air from Coal." In 1825 a magazine of that time described "a small oven having a circle of gas flames with a reflected cone enclosed in a cylinder of tin from the top of which a pipe carried off the burnt air."

The first known use of gas was in 1830 or 1832 when James Sharp of Northampton, England, demonstrated the advisability of cooking in his own home. A few years later John Barlow of Isington, London, had an apparatus for roasting, boiling and steaming in the kitchen of his house. This device was an oven made of tin, about four feet high and twenty inches square, around the four sides of which on the inside near the bottom, ran a gas pipe fitted with small burners about an inch apart. A joint of meat was suspended from a jack or spit and revolved while cooking. On a stand alongside the oven were two or three rings of piping with burners and over these were placed the boilers and saucepans. It was said that it worked admirably.

After this, inventions for cooking by gas became more numerous. In 1850 James Sharp, then of South-

ampton, delivered a lecture entitled "Gastronomy" in the course of which he roasted a quantity of meat and cooked a variety of vegetables, puddings and pies with an expenditure of 156 cubic feet of gas. In the same year the great chef Soyer roasted in a brick oven by means of 216 very small gas jets a joint of meat weighing 535 pounds.

The industry grew and in 1859 a letter from London states "Many of our large London shops cook by gas alone for from 150 to 200 individuals daily. Indeed every year gas is supplanting coal."

Gas cooking stoves were exhibited in 1859 at the Fair of the American Institute held in New York, and in 1860 Fred Krause of New York advertised a porous burner gas stove. It is interesting to note that the idea of the porous burner is again being revived and patents following this idea have been taken out in recent years.

Gas stoves were exhibited from time to time and demonstrated by various concerns, as for instance by "The Royal Baking Powder Company" in 1876, about which time they began to be sold for domestic purposes.

For some years, due to the high price of gas and to the high cost of the appliances themselves, their use was retarded, but since these objections have been overcome one now thinks of kitchens in terms of gas ranges. It is easy to account for the success of the gas oven when one remembers how well it produces heat in all its forms; namely (a) Radiating from open fire for roasting, grilling and toasting, (b) Conducted heat applied to the bottom of vessels for boiling, stewing and frying, (c) Radiating and Conducted heat simultaneously as we find it in the oven.

The last step from the first rude fire on the ground to cooking perfection is the electric stove.

## The Use of Gas for Vulcanizing Automobile Tires

LEO J. SULLIVAN

THE use of rubber tires on vehicles has become almost universal from the baby's carriage to enormous trucks, and a vast industry has been built up to supply this demand for high grade tires. No tire is made entirely of rubber, but must be strengthened by the addition of mineral substances, and on the successful use of these compounds depends much of the success of the tire. The tire is made on a "core" or design, and is built by filling a high grade of fabric

repairing of tires has developed during the past few years from makeshift temporary work to a scientific and dependable operation, requiring not only skill, but familiarity with the handling of rubber, its peculiarities, the relation of fabric to rubber, the means of uniting these materials by liquid rubber or cement, and the proper vulcanization of the whole.

Vulcanizing is the process by which the outside tire casing and inside tubes are repaired after having been cut, punctured or blown out. The

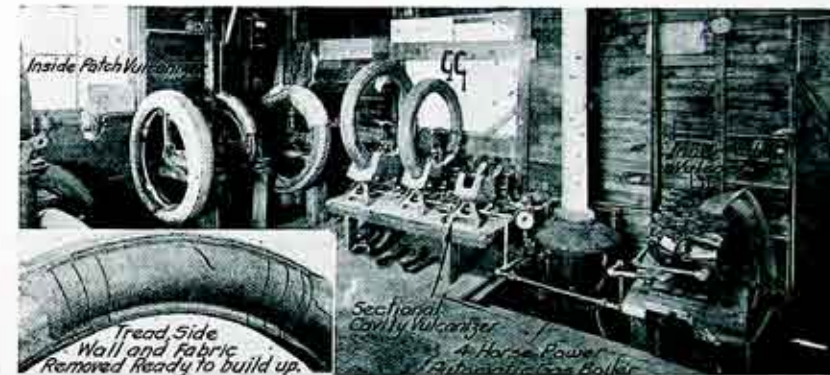


Fig. 1. Interior of the Union Vulcanizing Company's plant on North Union Street. Note various types of vulcanizing apparatus. Insert shows method of separating the layers of fabric which must be replaced by identical material prior to vulcanizing

(sea island cotton in the best tires) with rubber. This fabric must be completely and evenly filled in every pore and particle, thoroughly saturated so that not a bubble or weak spot is left anywhere in the material.

Notwithstanding the high quality of modern tires and the brains and energy which have been spent in improving them they are subject to constant wear and sometimes abuse. This has made necessary the proper development of the tire repair business to put the tires back in shape and to increase their life. The

rubber and fabric is cut away from around the affected part and this is replaced by specially prepared repair fabric and gum. The insert in figure 1 shows the method of removing fabric from around a blow out. The space is then built up with exactly the same kind and thickness of material which was removed. The new material must be made to adhere to the old material so that it becomes an integral part of the tire.

The fundamental basis of any type of tire vulcanizing is the application of the correct pressure and heat.

Figure 1 shows a type of mold into which the repaired tire is placed and figure 2 shows a cross section of the same apparatus. Steam is admitted to the steam cavity to supply the heat, and a properly shaped air bag is inserted in the tire and filled with air from 45 to 70 pounds per square inch. When this air becomes heated it expands and exerts an additional pressure on the repair part. The combination of the pressure and heat for a definite time causes the repair gum and fabric to be "cured" and then become a part of the tire itself. There are several kinds of moulds used for vulcanizing various parts of a tire but they all embody the principle of applying heat and pressure.

#### Constant Steam Pressure and Temperature Required

If too much heat is applied the tire will be "over cured" and the material "burned". This shortens the life of the tire by causing the affected part to crack. If too little heat is applied it will be "under cured" and the new and old parts will not adhere and withstand wear. To overcome this difficulty a constant steam pressure is very essential. With a gas fired boiler the steam pressure can be held constant by an automatic pressure



Fig. 2. Cross section of sectional cavity vulcanizer shown in Figure 1

controller. These regulators are indispensable and insure better vulcanizing because they maintain an even temperature and save gas by burning only as much as is actually needed to keep up steam. The device regulates the amount of gas admitted to the burners according to the required steam pressure. Set the regulator at say 60 pounds and when the burners are turned on they will receive a full flow of gas which will automatically cut down when the steam is raised to the desired pressure.

#### Complete Vulcanizing Shop Equipped with Automatic Gas Boiler

One of the recent installations in this City, the Union Vulcanizing Company of 202 North Union Street is shown in figure 1. The gas fired boiler was set in a pit so that the condensation can be returned to the boiler instead of throwing it away as was formerly done. This boiler displaced a coal boiler and the results have been very satisfactory. The installation of the gas boiler has eliminated the loss of time used in getting up steam in the morning. The former method took from one to one and one-half hours while with the gas boiler twenty minutes is sufficient. It has also saved the time formerly required to shovel coal and ashes. Dust from the ashes is objectionable because it settles on the fresh cement and prevents the repair gums and fabrics from sticking to each other. Loss of time in constantly watching the water level and steam pressure is also eliminated. In addition to this it has made available for use about 75% of the space required for the coal boiler and coal bin.

The gas fired boiler therefore saves labor, increases the quality and amount of work done, increases the floor space of the shop and insures the tire owner against defective tire repairs.

## The Liberty Loan

ERNEST C. SCOBELL

WE can be proud of ourselves, not only as individuals but as a Company, on our support of the Liberty Loan. It was a great campaign successfully carried through, in which each and everyone did his share to the best of his ability.

The following tabulations by departments is the final report:

	No. of Em- ployes	No. of Sub- scribers	Amount Sub- scribed
<b>ELECTRICAL DEPT.:</b>			
Station No. 3.....	149	100	\$ 5,100
All other Stations.....	65	52	3,000
Elec. Construction.....	42	35	2,200
Construction.....	40	2	100
Overhead Lines.....	45	28	1,500
Electric Meter.....	43	33	2,200
Arc Lamp.....	15	14	700
Subway.....	15	15	1,050
Underground.....	36	15	1,050
<b>GAS DEPT.:</b>			
Gas Manufacturing.....	143	85	5,650
Gas Distribution.....	160	112	5,900
<b>GENERAL:</b>			
General Office.....	53	42	2,650
Consumers' Ledger.....	189	55	3,000
Engineering & Drafting.....	58	36	2,650
Domestic Sales.....	29	29	1,700
Industrial Dept.....	16	11	600
Transportation.....	30	18	1,050
Purchase and Stores.....	22	12	800
U. G. I. Men & Others.....	.....	23	1,750
<b>Total.....</b>	<b>1,150</b>	<b>717</b>	<b>\$42,650</b>

The report shows 717 subscriptions from approximately eleven hundred and fifty employees, or sixty-two decimal thirty-five (62.35) per cent.

Now that the enthusiasm of the campaign is over, it may be well to explain why the letter "Who are You?" was sent to some who had already bought a bond and to some the writer knows of, who wanted to but simply could not. The payrolls were checked with the subscription list as closely as possible, but there were some who signed while or just immediately after the checking of the subscriptions and the sending out

of the letter was in progress and as a result some who subscribed received the letter by mistake.

Besides the feeling of satisfaction that always comes to those who do the duty they should do cheerfully and willingly, there is another great benefit we can get from our purchase of a bond. Let us make the amount we put into our bonds each week and each month represent a real saving; cut out the theatre occasionally, smoke less or refrain from purchasing those things which are really unnecessary. Each and everyone of us can deny ourselves in some way and be the better for it.

Many of us are for the first time starting a savings account. It is a mighty good thing, keep it up—continue the account after the bond is paid for. Get the habit.

There have been some inquiries regarding the way the weekly or monthly deductions are handled. The method is as follows:

Individual bank books have been issued to each subscriber. These books are in the custody of Mr. Tucker, Assistant Treasurer. Each month Mr. Tucker sends to the bank the amount withheld from weekly and monthly envelopes, and a statement showing how much is to be placed to the credit of each subscriber. If one desires to pay more on his bond than the regular weekly amount, Mr. Gosnell, Paymaster, will take the money and see that credit is given for it; or a written communication telling the Paymaster to take from the envelope the extra amount one wishes to pay, will accomplish the same thing. If for any reason one should leave the employ of this Company he can get his bank book and either go on with the account or withdraw the amount paid in.

## GAS AND ELECTRIC NEWS

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Vol. V JULY, 1917 No. 1

### The Demand of the Hour

How may a man attain to self-knowledge? By contemplation? Certainly not; but by action. Try to do your duty, and you will find what you are fit for. But what is your Duty? The demand of the hour.—Goethe.

THERE is an ancient maxim, "Do the next thing," which cries aloud for attention. In the literature of the day, one is almost overwhelmed with stories of successful men, and precepts for following their careers, with rules and regulations, with lists of do's and don't's, with advice on everything under the sun.

As one sails through this literal sea of knowledge, experience and advice, sailing figuratively by the stars so as to hold a course true to what the individual purpose in life may be, it is imperative not to become bewildered by the countless calls which come to us to influence our actions. As we hope to become successful, and

as we devote our attention to study and self development, it will not do to forget that however much we know about the topmost rounds of the ladder of success, it is by the round just ahead that we must move upward. Hence the motto, "Do the next thing," has been a compass for many an earnest mind. In all human probability the job of the man next ahead or one corresponding to it, will be the one to try out each individuals growing capabilities. Can you fill your own job successfully? Can you take the next step forward? If you fix your mind firmly upon what you hope for in the years to come, can you ever neglect to do the things which now stare you in the face? Stop once in a while and check-up—truthfully, searchingly and helpfully. How about the book you mean to read, the detail of your work you mean to study out more thoroughly, that problem upon which you know your boss is working, and in which you could help him?

Clean out your desk and the corners of your mind. "Do the next thing", the nearest one, and repeat the process. So, and so only will mastery of to-day's work be accomplished. So, and so only will mastery of bigger things be possible.



### Vacation Reminders

THE time for summer vacations and outings has arrived, and judging from the past, many accidents, both minor and serious, will loom up to mar our pleasures. These accidents are not new—they occur year after year; the trap is always set awaiting our thoughtless or careless actions to ensare us. Take heed of the following vacation reminders and your outings will more closely approach the perfect happiness and restfulness which you seek:

Be sure that you do not drink impure water. Many harmless looking springs and wells are filled with typhoid germs. Carry your drinking water with you if necessary.

When you chop wood for a fire handle the axe or hatchet with care. A glancing blow, or a chopped foot may prove serious.

Beware of burns from utensils, or from scalding liquids. Don't set pans or kettles on a carelessly built fireplace.

Don't be in a hurry when opening tin cans. Take a firm grip and be careful. Blood poisoning is a common result of cuts and lacerations from cans.

When canned goods are heated in the original container, holes should be punched in the can to allow the steam to escape. Cans have exploded.

Painful sprains and dislocations will occur to both the experienced and inexperienced mountain climber. Be sure that you are properly equipped.

A good antidote for bites and scratches from animals and insects is an excellent article to carry.

Poison-ivy often causes great suffering to those susceptible to it, and the inflammation that it produces spreads easily and rapidly. An alcoholic solution of lead acetate ("sugar of lead") will destroy the poisonous oil if applied to the affected region in the early stages of the attack. "Sugar of lead" is poisonous if swallowed. Sumac should be avoided with equal care. You should know how these plants look so that you can avoid them.

Cold cream will lessen the severity of sunburn if it is applied *before* exposure.

Wild mushrooms, berries and fruits always tempt our outdoor appetites. Better to be careful than sorry.

We are not as rugged physically as we sometimes think, and the damp ground might produce a serious cold.

The summer's toll of deaths, caused by carelessness in canoes, motor boats, sail boats, and when swimming, is always heavy. The "smart ones" generally "find out".

Carelessness with guns, axes and fishhooks is the cause of much human suffering. We can all cite many sad examples.

Automobile accidents are ever with us. Their causes are well known and it is up to you to help stamp out the mad recklessness.

A small first aid kit as described in Health Bulletin No. 17, together with a general knowledge of first aid treatment as described in Health Bulletin No. 33 is very valuable. Remember tho that "First Aid" in a great many cases is only a stepping stone until the proper medical attention can be obtained.

Make your vacations serve their purpose. Relax and rest.



### Enthusiasm

I CAN take a sapphire and a piece of plain blue glass, and I can rub the plain glass until it has a surface as hard as the sapphire; but when I put the two together and I look down into them, I find that the sapphire has a thousand little lights glittering out of it that you cannot get out of the blue glass if you rub it a thousand years.

What those little lights are to the sapphire, enthusiasm is to the man. I love to see enthusiasm. A man should be enthusiastic about that in which he is interested. I would not give two cents for a man who works for money alone. The man who doesn't get some comfort and some enthusiasm out of his daily work is in a bad way. Some men are almost irresistible—you know that. It is because enthusiasm radiates from their expression, beams from their eyes, and is evident in their actions.—HUGH CHALMERS.



### Were These Accidents Preventable?

Mr. Daniel Bresnahan, of Station 3, was swinging a sledge hammer while another man was holding the chisel bar. The man holding the chisel shifted while Mr. Bresnahan was swinging the hammer, thus moving the chisel and causing Mr. Bresnahan to hit his left foot.

While knocking small copper wedges out of a turbine wheel, one of the small pieces flew into Mr. Frank Miller's eye. It did not irritate the eye until the next day when he went to the doctor and had it removed.

Mr. John Williams of the East Gas Station fell on the concrete floor and bruised his right side near the hip. The employee worked two weeks before complaining or reporting any accident and was laid up for about ten days.

While unloading wooden poles from cars, Mr. Frank Sabin of the Underground Department jumped to avoid pole which started to roll. Mr. Sabin landed on a small stone and broke a bone in his left foot. Mr. Sabin was confined in the hospital for some time.

While Mr. Fred E. Miller, Station 3, was helping another man to bend and fit some pipe. The pipe held by the other man was let go and caught Mr. Miller on the back of the hand, bruising and cutting same.

Mr. William Mitmesser jumped on a wheelbarrow to place a brick in the gas generator door. He fell and struck his wrist on a clinker. It is not necessary to get on a wheelbarrow to place bricks.

While guiding cable into a man-hole, cable slipped and struck Mr. John D. Piper, of the Underground

Department, in the mouth, injuring his teeth.

Mr. Charles Morehouse, of the Motor Department, burned his eyes when a test lamp flashed, due to a short circuit while he was testing a 440-volt line.

While burning a battery Mr. William Lyons of the Garage had his right arm burned by hot lead which had spattered.

### Gardening Progress

The gardens are flourishing, and will raise abundant crops. It is gratifying to be able to make such a report, and to know that the gardening plots which are being cultivated by a number of far-sighted employees will be a success. Some are progressing better than others, and that is to be expected, because some of the men are devoting more of their time to the work than others. And the results in the end, will be in direct proportion to the care exercised by each individual. Vigilant elimination of weeds, and constant cultivation are the watchwords of gardening results.

### Proposed Amendments Adopted by E. B. A.

DUE to America's entry into the world war, the trustees of the E. B. A. considered it advisable to amend the by-laws of the organization for the benefit of its members. Accordingly an amendment to Section 3, Article 8, and Section 6, Article 6, was proposed, and read at the adjourned meeting in April. After being posted on the bulletin boards for the required 30 days, the following amendments were passed unanimously at the meeting held on June 21st.

#### Proposed Amendment to Section 3 of Article VIII

A member who has enlisted or shall enlist or be drafted in any military or naval company

### Red Cross Fund a Success

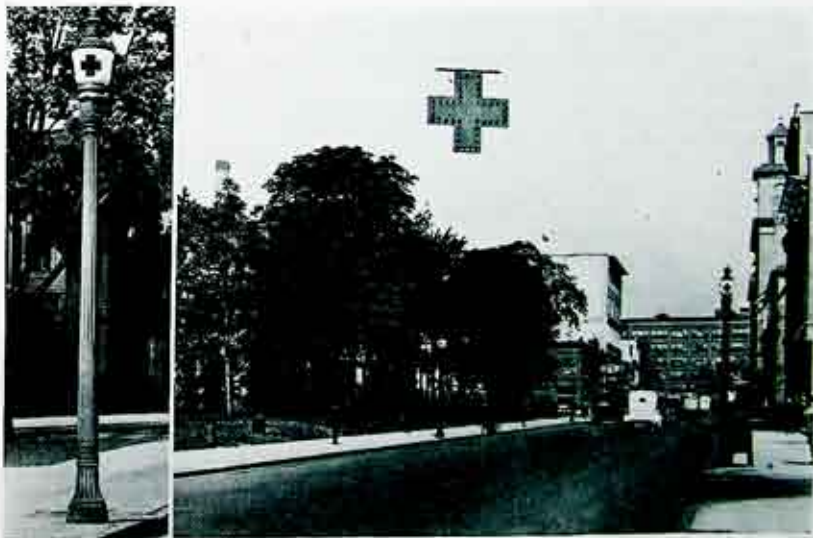
After willingly subscribing about \$43,000 to the Liberty Loan, the employees of the Company gladly gave over \$600 to the Red Cross Fund. No organization is doing a larger work in the present war than that of the Red Cross.

#### 590—RED CROSS SUBSCRIPTIONS Rochester Railway and Light Co.

DEPARTMENT	AMOUNT
Storehouse.....	\$ 10.50
Electric Distribution.....	19.00
Gas Shop.....	9.00
Gas Street.....	31.25
Domestic Sales.....	14.00
Consumer's Ledger—Service—etc.....	37.75
Second Floor—Office.....	17.25
Engineering and Drafting.....	108.00
Purchasing.....	6.00
Station 1 and 15.....	9.00
Station 3.....	104.00
Station 4.....	10.00
Station 5.....	8.50
Station 5—Construction.....	23.00
Station 6.....	6.50
Station 33.....	7.50
Station 35.....	4.50
East Station.....	60.50
West Station.....	100.75
Motor Department.....	33.25
Total.....	\$620.25

### Amendment to Section 6 of Article VI

If any member shall enlist or be drafted in any naval or military company or organization of this State or of the United States, and his duties therein shall prevent him from continuing his duties of employment with the Rochester Railway and Light Company during the progress of a war in which the United States of America is engaged, this Association shall out of the moneys in its treasury pay such member or members assessments for their insurance in the Group Plan of Life Insurance, whereby each member secures a Life Insurance Policy of \$600.00, as they become due. This payment, however, by the Association, shall cease after such war shall end or such member shall be discharged from active service in such naval or military company or organization.



Electric Street Lamps Played an Important Part in the Recent Red Cross Campaign in Rochester.

## Gas and Electricity in the Home

BY THE GAS DEMONSTRATORS

Miss Frances E. Moore, Miss Mona A. Pratt and Miss Irene Walsh

### Fruit Canning

THERE are two general methods of fruit canning that are very satisfactory—the cold pack and the open kettle. The latter method is the older and probably the one more generally used. The cold pack method is coming into favor because of its simplicity and because the fruit keeps its shape, color and flavor better than in the open kettle cooking. By cooking soft fruits, such as berries, cherries, etc. before putting them into the cans as is done in the open kettle method, more fruit can be packed into a can, thus conserving can space which in many cases is very desirable. Personally we are not in favor of putting up fruit without sugar because the flavor is never as good and there is no saving in sugar because it must be added at sometime in the future.

In the August 1916 issue of this Magazine the open kettle method was explained fully. In the May 1917 issue the principles of the other method were fully explained.

Because of the high price of sugar there has been some effort made to can fruits with as little sugar as possible, and for that reason we will give formulas for syrups of different densities. At present, however, it looks as if sugar were going to be less expensive than it has been all winter and one should be careful to have fruits palatable because economy in the wrong place is often the worst kind of extravagance.

Equal amounts of sugar and water boiled together for five minutes make a rather heavy syrup which is especially suitable for the more tart fruits. A thin syrup which is much used is, two cups of sugar and six cups of water boiled ten minutes. Then there is the syrup which is a

"happy medium" which is made with two cups of sugar and three cups of water boiled ten minutes. One would probably be wise to take into consideration the taste of the family and also the particular use for the product, whether for sauce, pies, puddings, etc.

It is the plan of this Department to encourage canning this summer and then next winter it will give recipes for using the canned vegetables and fruits in the best way.

When one is busy in the summer and cannot find time to make jellies, it is desirable to bottle the fruit juice for storage until time permits the making of the jelly. Fruit juices are also very useful for ices and beverages. After extracting the juice from the fruit by heating and pressing, it may be heated and poured into sterilized fruit jars, or into miscellaneous bottles; the use of bottles is probably a more desirable way. Bottles are often plentiful when jelly glasses are not.

Pour juice into the bottles, make a cotton stopper (absorbent cotton or ordinary cotton batting) and press into the neck of the bottle and leave during the sterilization period. Set bottles into boiling hot water up to the neck of the bottle and sterilize for forty minutes, keeping the water below boiling point. Remove the bottles from the water and press corks in top over cotton stopper immediately. If the cork fits well no paraffin need be used, but if it does not fit well it may be necessary to dip it in a melted solution of wax or paraffin. Fruit juices and apple cider when handled in this way will not "flatten" in taste and will keep fresh for future use.

"We eat what we can, and what we can't we can".

### CANNED CHERRIES (OPEN KETTLE METHOD)

Remove stems and wash, stone if desired. Make syrup, a medium syrup is best for sour cherries. Add cherries and cook until soft. Carefully skim the cherries into sterilized jars. Cook down the syrup and pour over the cherries before sealing.

### CHERRIES (COLD PACK METHOD)

Stone the cherries or not, as desired, remove the stems and wash the first thing. If the cherries are stoned, use the juice. Fill jars with cherries and juice; when the jars are heated and the fruit is soft, take one or more jars to fill the others, then pour in enough boiling water or syrup to fill the jars to overflow. Let cook or sterilize from five to ten minutes; then tighten the covers. Allow about a cup of sugar and one fourth a cup of water to each quart of cherries. The cherries may be cooked in the syrup and then sealed in the jars. For use in pies add no sugar.

### CHERRY AND PINEAPPLE PRESERVE

5 quarts sour cherries  
1 pineapple shredded fine  
1 lb. sugar to each pound of fruit.

Cook the cherries and pineapple separately until tender, then combine. Add the sugar and cook about twenty minutes. Turn into sterilized glasses, when cool cover with melted paraffin.

### MELON RIND PRESERVES

Use only the green portion of the melon, discarding the outer rind. Cut in cubes or squares. Cover the pieces of melon with cold water to which a little table salt has been added, a tablespoon to a quart, and let stand over night. The next day, drain and rinse repeatedly in cold water and cook in boiling water. When tender and transparent, drain in a colander saving the water.

Allow three-quarters of a pound of sugar, half an ounce of ginger root or stems and one lemon to each pound of prepared melon. Slice the lemons and discard the seeds. Slice the ginger root or stems and set to cook in the water drained from melon. Cook until tender and then skim out. Make syrup adding sugar to water, then add melon and cook until the pieces of melon look plump and full of syrup; skim the melon into jars. Add the pieces of lemon and sugar to the syrup and let cook until thick, then use to fill the jars. Glass cans, earthen jars or empty ginger jars may be used for storing this preserve.

### PINEAPPLE CONSERVE

1 pineapple Sugar  
1 Orange 1 Lemon

Take out eyes of pineapple, pare and shred. Put orange and lemon through food chopper. Weigh fruit and add an equal quantity of sugar. Cook until it hardens

slightly on cold plate. Put in sterilized glasses, and when cold cover with paraffin.

### PINEAPPLE AND RHUBARB CONSERVE

1 large pineapple Twice as much rhubarb  
Sugar as pineapple.  
Prepare pineapple and shred, cover with cold water and cook until tender, add rhubarb and sugar using a pound of sugar to each pound of fruit. Cook until it thickens. This conserve is especially good as a filling for a solid chocolate layer cake.

### SPICED CHERRIES

Cherries, currants or gooseberries are delicious when spiced.  
4 lbs. fruit 2 teaspoons cinnamon  
4 lbs. sugar Scant teaspoon cloves  
1 pt. vinegar ½ teaspoon mace or nutmeg  
¼ teaspoon salt

Make syrup of sugar, vinegar and spices. Add fruit and cook ten minutes. Skim out fruit and boil syrup until thick. Reheat fruit in syrup and put in sterilized jars.

### CHERRY SALAD

1 pt. canned cherries ¾ cup orange juice  
1¼ tablespoons gelatine 1 tablespoon lemon juice  
Soaked in  
¾ cup cold water Nuts if desired  
Heat fruit juice and in this dissolve soaked gelatine. Add orange and lemon juice. When it begins to thicken add cherries and pour into mould which has been rinsed in cold water. This is a delicious salad or it may be used as a dessert if served with sweetened whip cream.

### VEGETABLE LOAF

¾ cup bread crumbs 1 egg  
½ cup canned pea pulp ¾ teaspoon salt  
1 tablespoon sugar ½ teaspoon pepper  
¼ cup English walnut ¼ cup butter  
meats, finely chopped ¾ cup milk

Break stale bread in pieces, dry in oven, roll and put through a puree strainer; there should be three-fourths cup bread crumbs. Drain canned peas, rinse thoroughly with cold water, put in saucepan, cover with cold water, bring to the boiling point and let boil three minutes. Drain and force through a puree strainer; there should be one-half cup pulp. Mix bread crumbs, pea pulp, sugar, nut meats, egg slightly beaten, salt, pepper, butter and milk. Turn into a small bread pan lined with paraffine paper, and let stand fifteen minutes. Cover and bake in a slow oven forty minutes. Remove to hot serving dish.

### One of Our Society Girls

One of our society girls who has gone in for back yard gardening resolutely declares she'll not wear overalls, even if it is perfectly proper. "The potatoes have so many eyes," she explains.



## Sales



### Advertising the Liberty Loan at Night

In order to advertise the Liberty Loan Bonds which were on sale at the Alliance Bank, a large painted sign 15' x 30' was installed on the face of the Alliance Bank Building. This sign was illuminated by means

of four 500 watt General Electric flood light projectors and one 1000 watt flood light projector, located on the roof of the Eastwood Building. These lamps were controlled by a time switch and were lighted in accordance with the regular sign lighting schedule.



Advertising the Liberty Loan at night. Electric "flood lights" turn night into day

Owing to the pressing need of completing the Barge Canal in the near future, the Kerbaugh Construction Company has erected poles 200' distant, parallel to the Barge Canal, on which are placed fixtures carrying 500-watt lamps and angle type reflectors which are used for the night shift. The system is divided into two 1500-foot lengths parallel with the canal, each circuit carrying about 12 lights. A  $7\frac{1}{2}$  kilowatt transformer supplies energy for the one circuit and a 5 kilowatt transformer for the other. This type

of electric installation is attended by wiring difficulties which are not normally met in interior practice. It is necessary to use a much larger size wire because of the effect of inductance in addition to the ohmic drop in potential. If the inductance were not taken into account, lamps near the end of the line would have a voltage impressed on them such as would be inadequate for illumination purposes.

In the manufacture of lead pipe it is necessary to start heating the

dies about an hour and a half before the actual process of making the pipe is begun. Air blast gas burners are generally used for this purpose, the air being supplied by a small compressor. As all of the machinery at the Rochester Lead Works is driven from one main line shaft, it was necessary to either run this shaft to supply the small amount of power for the air compressor for some time previous to the opening of the factory, or else not make pipe the first part of the working day while the dies were being heated. The first of these methods entailed a large loss of power—the second resulted in a loss of output. Consequently the management decided to install a motor for driving this machine, thus saving power and increasing the daily output.

The Symington Machine Corporation has purchased one high speed steel furnace equipped with recuperator for use in its tool heat treating room at the Hofman plant. The recuperator on this furnace receives the exhaust gases from the furnace and the heat ordinarily wasted is transmitted to the air which supports combustion. This effects a considerable saving because it puts back into the furnace a portion of the heat which would otherwise go into the room. It also increases the rate of heating the work due to the increased flame temperature under the hearth. This furnace will improve the working conditions in the tool room and make a material reduction in the gas bill.

The Victor Milling Company is considering the installation of further motor equipment to take care of the additional load which was added some months ago. At present the entire mill is driven from a 150-horsepower, 25-cycle induction motor, running at 500 r. p. m. It is now carrying approximately 20 per cent overload

which will be relieved by the installation of a suitable motor on the third floor. This motor will operate in conjunction with the larger motor and will thereby secure greater production due to the increase in speed.

The Leary Construction Company, Barge Canal Contractors, are now replacing two steam engines on their concrete mixers with ten horsepower motors. A third ten horsepower motor was installed to drive a sand and gravel conveyor. A large motor driven centrifugal pump will be used to drain the excavation.

The Genesee Manufacturing Company of 129 Andrews St. has purchased one high speed steel furnace and one bench forge for heat treating its tools. The Genesee Company has a gas forge now but its increased business has necessitated the purchase of new equipment.

A twenty-five horsepower motor driven stone crushing plant has been installed by Whitmore, Rauber and Vicinus on Culver Road near the Wide Waters. The stone will be used for the new Culver Road pavement.

The D. Armstrong Company will soon install an eight horsepower gas heated steam boiler equipped with automatic control. The steam will be used on shoe machinery, for shoe drying, and for heating water.

The Rochester Button Company has "thrown over" its 250 KW electric load on this Company's lines for the summer months.

The Evans Coal Company is installing a motor driven belt conveyor at its Smith Street Plant.

Mr. O. Vetter of 229 Parsells Ave-

nue, has equipped his smoke house with gas equipment.

✦  
Kanes Hotel at Charlotte has installed a combination broiler and sausage cooker.

✦  
The Vacuum Oil Company has purchased five more Johnson Soldering Furnaces for its can shop.

✦  
The E. C. Brown Company has purchased two more bench forges.

✦  
Bastian Brothers have installed another enameling furnace.

#### Refrigerating Plants Recently Installed in Rochester:

Mr. A. W. Ehman of 1046 Clinton Ave. South, has installed a 1½ ton Automatic Refrigerating machine in his meat market.

The new Manhattan Lunch on East Ave. equipped its up-to-date establishment with a 1½ ton Automatic Refrigerating machine.

The Central Y. M. C. A., displaced its 2 ton refrigerating plant with an 8 ton machine which will be

adequate to supply its required needs. The Odenbach Company on South Ave. has replaced its 5 ton refrigerating machine with a 12 ton machine, in order to take care of its increased business.

The Rockaway Lunch is among the progressive restaurants which have installed refrigerating machines. Mr. W. A. Webber, of 69 Front Street, has equipped his modern market with a 4 ton refrigerating machine.

#### True Tale Tersely Told

Dull store,  
Dim light,  
Deserted floors,  
Day and night.  
Business bad,  
Debts oppress,  
Boss sad,  
Awful mess.  
New lights,  
Various names,  
Store bright,  
Business gains.  
Buyers come,  
Busy store,  
Things hum,  
More and more.  
Delighted boss,  
Success in sight,  
Lays it to  
Electric Light.

#### The Ten Commandments of Salesmanship

DR. FRANK CRANE  
(In the New York Globe)

<i>Be Agreeable</i>	<i>Be Dependable</i>
<i>Know Your Goods</i>	<i>Remember Names and Faces</i>
<i>Don't Argue</i>	<i>Don't Be Egotistic</i>
<i>Make Things Plain</i>	<i>Think Success</i>
<i>Tell the Truth</i>	<i>Be Human</i>

It is to be kept in mind that these commandments are supposed to come from the consumer.



## Electric Distribution



The load supplied by the 11,000 volt transmission line which parallels the Sodus Bay Railway, has been steadily increasing due to the fact that the territory served by this line has been considerably extended within the last few years. At the present time power is being delivered over this line at Red Creek in the territory of the Northern Wayne Electric Company, a distance of 55 miles from Station 6. Because of the increased load and the distance of transmission, voltage regulation has become somewhat poor at the eastern end of the line. In order to remedy the voltage conditions this Company has purchased a boosting transformer and an induction regulator which will be installed this Fall at the Float Bridge power house. The boosting transformer is a 3-phase, autotransformer which will boost the line voltage 1200 volts. The induction regulator is an automatic 3-phase regulator built for 11,000 volt service and capable of 800 volts boost or "buck". With this arrangement, boosting voltage from 3½ to 18% will be obtained, and the voltage at Sodus and in the territory of the Northern Wayne Company will be materially improved toward perfection.

✦  
During the electric storm of June 18th and 19th, considerable trouble was caused on the Company's 4100 volt lines by the lightning. A large number of primary transformer fuses were blown and 19 transformers were damaged. Last year about 30 sets of compression chamber lightning arresters were installed on the 4100 volt system as an experiment in lightning protection. A city map

was prepared showing location of these lightning arresters, and also the location of the damaged transformers. In no case was a damaged transformer found to be near one of the lightning arresters. This is not a conclusive proof to the effectiveness of the lightning arresters, as it is possible that there was no lightning at the places where these were installed. This is not at all probable, however, as the storm covered the entire city and the evidence is good that these arresters actually do protect the transformers in their vicinity. No trouble was experienced with any of the arresters themselves. This showing has been so satisfactory that 150 additional sets will be installed as soon as possible.

✦  
In order to carry the cables going west from the new Station 5, it is planned to build a subway across the river just above the old dam at the brink of the Lower Falls. A trench will be channelled in the river bed large enough to hold 48-4" fibre ducts, the ducts being laid in concrete. This subway will have a 55° curve, beginning 70 feet from the west bank, but as the radius of curvature is large—55 feet—there will be no difficulty in pulling in the cables. On the west side of the river this subway will connect with a subway to be built on Hastings Street. On the east side it will cross the old forebay and pass through the old station to the new building. The construction on Hastings St. is under way at the present time and the section crossing the river will be built as soon as low water makes the river bed accessible.



## Electric Generation



The Electric Generating Department is designing the transformer house and the allied electrical equipment for the Eastman Kodak Company's new pumping plant at the Lake. This installation which will consist of three 1000 KVA water-cooled transformers and four K 51 General Electric 11,000-volt oil switches equipped with an automatic overload trip, will furnish energy for operating the pumping plant and other machinery. For the present one 11,000-volt tie line from Station 5 will furnish the required electrical energy but provision has been made for an additional tie line when the load increases. The overhead line which runs from the 11,000-volt bus through an oil switch to the Eastman Kodak Company's pumping plant situated at Long Pond, is also being designed and installed under the supervision of the Electric Generating Department.

A new system of instrument wiring for station panels has been designed by Mr. Charles Miller of the Electric Construction Department. The customary practice of the past which was first originated and installed by Mr. Miller eight years ago, was to bring all instrument and control wiring through pipe conduits to the rear of the switchboard panel. The new installation will consist of 3" channel irons mounted vertically, forming a support for the switchboard panel. With the addition of a plate on the face of the channel this support can also be used as a receptacle for the instrument and control wiring. Four apertures are cut into the flange to permit bringing the leads to their respective connections.

The economy effected in using this type of construction is about \$30.00 per panel besides giving the panel a neat and compact appearance.

“A chain is no stronger than its weakest link”. This well known saying applies to a recent accident at Station 2A. It appears that a bearing of one of the gates around the turbine casing became worn so that the bearing opposite was broken off due to the resulting cantilever action. After the gate dropped the succeeding gates were apparently ripped off causing the station to be flooded. It is unfortunate that the accident happened during a time when the river was relatively high. Many weeks will elapse before the break is repaired, and in the meantime many extra hundreds of tons of coal will be burned at Station 3.

Electrical Terms Illustrated



Courtesy of Arthur Williams



## Gas Distribution



On June 16th at 11:45 A. M. gas was turned on in Fairport under the supervision of Superintendent Frank Hellen and Foremen James Fahy and Vincent Hoddick. At 12:05 P. M. the first gas was lighted. 250 services of  $\frac{3}{4}$ " black steel pipe all welded joints have been installed in Fairport since May 1st, under the direction of Foreman P. Kavanaugh. There has also been installed 4,000' of 6" Black steel pipe welded joints high pressure main, and approximately 20,000' of 2" Black steel pipe welded joints for distribution purposes under the direction of Foreman J. Cunneran.

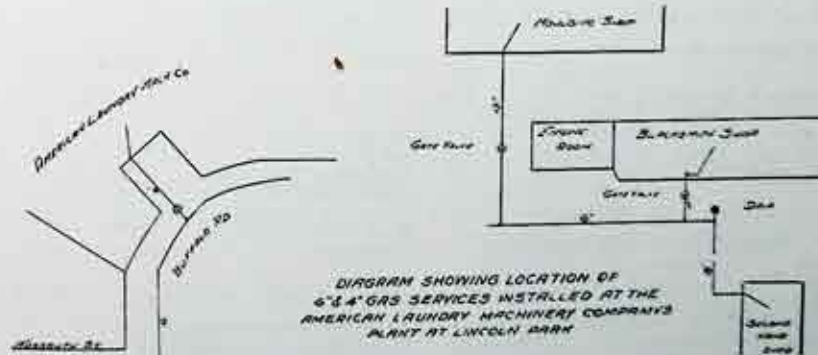
A 2" gas service has been installed for the Merkel Motor Wheel Company at East Rochester. A 3" service was installed for the Empire Weaving Company.

The process of taking out and replacing all "prepaid" meters with the regular type is progressing very rapidly. When it is considered that

in 1915 there were about 25,000 prepaid meters installed in Rochester, and that this number has been decreased to only a few hundred at the present time, it will be realized that the men at the Gas Shop have not been moving very slowly. It will only be a short time now when the last prepaid gas meter will have been replaced by a "regular". About 1600 prepaid meters were removed during the month of May.

Few of us realize the expense involved in the measurement of this Company's products. At the present time there are about 80,000 gas meters installed in Rochester representing an enormous investment.

The excavation work for the installation of a 5" steam main to supply the Shinola Company on Jay Street is near completion. This work was started at State Street near Brown and was extended north to Jay Street and thence west on Jay Street. Foreman Thos. Byrne was in charge of the work.



Before many of Rochester's factories can use gas for industrial purposes it is necessary for the men of the Distribution Department to install large service pipes



## Auditing



### Monthly Report on New Business

#### Net Increase in Consumers in Five Months of 1917

	Dec. 31, 1916	May 31, 1917	Increase
Gas.....	72,721	73,258	537
Electric.....	22,282	23,201	919
Steam.....	43	49	6
	95,046	96,508	1,462

#### Net Increase in Consumers in Twelve Months Ending May 31, 1917

	May 31, 1916	May 31, 1917	Increase
Gas.....	70,355	73,258	2,903
Electric.....	20,557	23,201	2,644
Steam.....	41	49	8
	90,953	96,508	5,555

#### Statement of Consumers by Departments as of May 31st

May 31st	Gas	Electric	Steam	Total	Increase Each Yr.
1908	38,225	5,445	....	43,670	.....
1909	41,876	5,874	....	47,750	4,080
1910	46,897	6,896	....	53,793	6,043
1911	52,041	8,247	15	60,303	6,510
1912	56,424	9,932	20	66,376	6,073
1913	61,394	12,688	22	74,104	7,728
1914	65,451	14,847	28	80,326	6,222
1915	68,146	17,824	37	86,007	5,681
1916	70,355	20,557	41	90,953	4,946
1917	73,258	23,201	49	96,508	5,555
Inc. in					
9 Yrs.	35,033	17,756	49	52,838	52,838

#### Net Increase in Consumers by Months

	1915	1916	1917
Increase in January.....	364	252	124
Increase in February.....	144	219 (Dec.)	24
Increase in March.....	247	317	333
Increase in April.....	460	652	552
Increase in May.....	306	716	477
	1,521	2,156	1,462

#### Company's Savings Depositors

STATEMENT TO JULY 1, 1917	
No. of depositors, July 1, 1917.....	76
Decrease during June 1917.....	4
Amount deposited during June, 1917.....	\$763.63
Total deposits to July, 1917.....	\$11,538.36

\*Eleven depositors have suspended their savings during the time that they are paying for their Liberty Bond. Fifteen depositors have

lowered their savings amount for the same reason.

#### Miscellaneous Data

	May 31, 1917	May 31, 1916	Increase
Miles of Gas Main.....	444	435	9
Miles of Overhead Line.....	1,840	1,778	62
Miles of Underground Cable.....	1,071	1,043	28
Miles of Subway Duct.....	954	919	35
No. of Street Arc Lamps.....	1,570	4,142 (Dec.)	2,572
No. of Street Incandescent Lamps.....	7,892	4,566	3,326
Total No. of St. Lamps.....	9,462	8,708	754
No. of Employees.....	1,201	1,180	21
Amt. of Payroll (Mo.).....	\$104,387.38	\$96,671.26	\$7,716.12

#### Employees' Benevolent Association for Month of June, 1917

Receipts	
Bal. on hand 1st of month.....	\$3,059.47
Dues—Members.....	\$512.96
Dues—Company.....	512.96
Fees—Members.....	11.00
Fees—Company.....	11.00
Assessment No. 6—Mem.....	186.50
Assessment No. 7—Mem.....	25.75
Assessment No. 6—Com.....	186.50
Assessment No. 7—Com.....	25.75
Int. on Bk. Bal. and Investments.....	27.60
Total.....	\$4,559.49

#### Disbursements

Sick Benefits.....	\$334.48
Accidents on Duty Ben.....	7.14
Death Benefit No. 7.....	125.00
Group Life Insurance.....	39.08
Mem. Additional Life Ins.....	5.15
Liberty Bond.....	1000.00
	\$1,510.85

Bal. on hand July 1, 1917.....	\$3,048.64
Members in good standing June 1st 1917.....	774
Terminations and Cancellations, June.....	19
Applications accepted and reinstated, June 24.....	779
Members in good standing June 30, 1917.....	779

## Athletics

### Baseball

The rain managed by Brother Pluvius is ever conspiring against the baseball team which has only been able to play two games out of four scheduled up to July 1st. Although the team is in third place at the present writing, it is the strongest aggregation in the City League. A few good sunny playing days will see the boys at the top of the list, and from then on we believe they will never be headed.

The strong National Team was put to rout by a score of ten to three. Everybody hit the ball, and when the game ended the National Pitcher had received the "soundest lacing" he had received anywhere in two seasons. Connell pitched a strong game, and Durbin scintillated around second base.

The boys were not so fortunate in the game with the Kodak Park Nine. The final count was eight to seven, and the final run was scored after two were out in the ninth. The strike-out king, Forstbauer, was taken from the mound, and the sensational young Gallagher who replaced him had more trouble than in all his previous games. The Railway and Light boys apparently had the game clinched in their half of the half of the ninth, but Kodak scored the winning run after two were out in the last of the ninth. Mannie Freidman got three hits out of four times at bat.

Get out and boost for the team—it deserves your support.



### Tennis

The Industrial Tennis League composed of teams representing the Eastman Kodak Company, Bausch and Lomb, Arts in Buttons, Inc., and this Company is also having its

troubles with the rain. Continued rain does not give the teams adequate opportunity for practicing. In spite of these difficulties the scheduled games were started about the end of June. This Company's team composed of Messrs. H. Kiefer, Arthur Wagner, George Bailey, Don Crawford, W. Van Riper, and George Allesworth lost the first game of the series to the Bausch and Lomb team on June 30th. Several of the sets were lost by forfeit, and the defeat only served to spur the boys on. It is a high caliber team composed of men who always fight true to their colors. Don't fail to get out and cheer them on.

## Personals

With this issue the magazine is starting on its fifth yearly journey. The magazine has found its place due to the active and interested co-operation of everyone in the Company. It will continue to prosper and grow as it should under the watchful guidance of each and everyone of us. It is your magazine—keep up the good work.

As is customary, the regular Friday morning meetings will not be held during the summer months. The next meeting will be held September 7th.



Miss Lela Rogers is now working in the Billing Department.

Miss Gladys M. LaRue has been engaged in the Pay Roll Department.

Mr. Ray Stephany reports the arrival of a bouncing baby boy.

Mr. F. Colvin has returned to work after an extended illness.

Miss Therese Murphy has recently been very active in "Red Cross Work."

Miss Vivian Murphy has joined

the Telephone Staff, working on the Information Board.

Mr. and Mrs. Sydney Alling announce the birth of a baby girl, Janet Ruth, on Sunday, June 10th.

Miss W. McDonald has been transferred from the Relief to the Collection Group.

Mr. W. Cirkelbach, of Station 6, reports a very pleasant two weeks vacation during June and July.

Mr. M. R. Slee, of the Electric Construction Department, is now acting as relief operator at Station 1.

Mr. A. Newman, operator at Station 1, returned on June 28th from a very pleasant vacation.

Mr. A. Appel of the Domestic Sales Department resigned recently to do his bit for Uncle Sam in the Navy.

Mr. Edward Gardiner, of Station 1, has just returned from a delightful two week vacation.

Mr. A. Ehrstein, Fireman at Station 35, spent his vacation moving into his new home on Campbell Street.

Mr. Arthur Kuhls, of Station 35, spent a week in Pennsylvania on a farm.

Mr. O. Durgan, of Station 2A, has been promoted to switchboard operator. Congratulations!

Mr. F. S. McGinnis, of Station 2A, looks as though his two weeks vacation had agreed with him.

Miss Ida Cook is spending two weeks vacation with relatives at Pittsburgh.

Miss Charlotte Baker has been transferred from the Relief Department to the Collection Department.

Miss Pauline Fishbach is now employed as Debit Poster in Billing Department.

Miss Elizabeth Gorst spent a very pleasant week's vacation in and around Rochester.

Mr. George A. Donie, of the Service Improvement Department, is confined to his home with a nervous breakdown.

We have learned that Mr. Clarence Clark of the Service Improvement Department has joined the "Home Defense Contingent."

Mr. H. Davis, of the Electric Construction Department, has left for a two week's vacation at Glens Falls, New York.

Mr. Daniel Patterson has been transferred from the Telephone Department to the Electric Meter Department.

Mr. P. McDonald spent his vacation planting potatoes on his garden plots. He is looking forward to a bumper crop in the fall.

Mr. George Banks, of Station 4, spent his vacation fishing at Conesus Lake. It is said that George made "some haul."

Mr. C. F. Schake, of the Domestic Sales Department went on his vacation July 2nd. We expect to hear some good fish stories.

Miss Frances Kennedy and Miss Alice Baker are each operating a Debit posting machine in the Billing Department.

Mr. Henry Fitzenberger, of Station 5, has been promoted from the position of night switchboard operator to that of day operator.

Miss Mary M. McCleery has been transferred from the Cashiers Department back to her former position as assistant to Mr. Tucker.

Mr. Harry Cullifon left recently for a two weeks' trip to Kitchener, Ontario, the place of his birth. We know that "Cully" will have a good time renewing old friendships.

Mr. W. J. K. Sutherland, of the Electric Construction Department, has returned from a three day's trip to Binghamton, New York, with the Knight Templars.

Mr. J. A. F. McDermott, of the Transportation Department, has joined Troop H. "Mac" will not leave until the troop is called to the Colors.

Captain F. B. Baldwin, M.O.R.C.,

## MR. WILLIAM JULIAN



Mr. William Julian, Foreman of No. 5 Station, who at his death on Friday June 8th, completed his thirty-sixth year of long and faithful service in the employ of the Company, was born in Killeen, Ireland, November 21, 1860. At the age of eleven years, he was apprenticed to an electrical firm in London, England, working there for three years, when he emigrated to this country, coming direct to Rochester where he had some relatives.

He then entered the employ of the N. Y. C. R. R. Co. and worked in the capacity of

engineer until an opportunity was offered for again entering the electrical field and he was placed in charge of the first Brush electrical generator in this city, which was operated in the Mumford Bldg. on N. Water St. This plant, of course, very soon became entirely inadequate and a new plant was installed on the west side of the river, directly opposite the New No. 5 Station. At this point several water wheels and generators were installed, but they soon became of insufficient capacity and a new plant was built on the east side of the river, now known as No. 5.

Mr. Julian followed the installation and operation of these various plants with a great deal of enthusiasm and ardor, and through his energy, a great many economies were worked out, one of which was the winding of the armature coils of the Brush arc machines. He also invented and patented a water wheel governor with a new principle, somewhat similar to that of the well known Lombard governor of to-day. Mr. Julian, knowing the dangerous nature of the occupation, early realized the necessity for safeguards and precautions necessary for the men under him, and although the phrase "Safety First" was not coined in those days, nevertheless, many of our present methods of safety are merely extensions of the ideas which Mr. Julian early brought out.

Mr. Julian was married to Josephine Widman, February 8, 1887, and is survived by his wife and four children, John, George, Marie and Geraldine. He was very popular with his associates and was beloved by his many friends.

has arrived safely in Honolulu. On a recent postal he describes the conditions as being, "Most delightful here."

Mr. Frank Woock has joined the operating force at Station 5 taking the place of Mr. George Newman who has been promoted to switchboard operator.

Mr. Linus Knapp left for Fort Slocum in Long Island Sound on Saturday, June 30th. Mr. Knapp took the required examination several months ago, and will enter the service as Corporal Clerk in the Quartermasters Reserve Corps.

Mr. Hiram F. Smith enlisted in the U. S. Navy, June 18th, 1917. He left at once for Norfolk, Virginia, having enlisted as a musician to play with the band on the U. S. Ship Richmond.

Mr. F. W. Fisher was suddenly taken ill (stomach poisoning) at the main Office on June 9th, and was confined in the hospital for about three weeks. On July 1st the Editor said he expected to "get back on the job" real soon.

Mr. Joseph Putnam has returned for the summer, and will have charge of the Company's perpetual inventory

work under Mr. E. C. Scobell. Mr. Graydon Curtis is assisting Mr. Putnam.

Mr. William O'Brien called on us while on furlough from the Quartermasters Reserve Corps training camp at Oswego. "Bill" had the typical soldier's tan coat, and said that he liked the service immensely.

Mr. Charles Maloney of the Gas Shop and Miss Anna Hayes were married at St. Mary's Church, Rev. Father FitzSimons officiating. Mr. and Mrs. Maloney are residing at 11 Bond Street.

Mr. F. M. Chapin of the Accounting Department, and Miss Lillian E. Kehr were married on June 19th, 1917, by Rev. A. W. Beaven, at the bride's home. After an Eastern trip, Mr. and Mrs. Chapin will reside at 114 Fillmore Street.

Mr. Charles Jennejohn of the Gas Shop and Miss Mary Cowen were married by Rev. Rader of Christs Church on June 4th. Mr. and Mrs. Jennejohn took a short Western trip and are now at home at 1060 Main Street East.

Mr. Frank C. Turkey, of Station 6, who joined the Navy as an electrician, writes that he is stationed on one of the interned German vessels at Brooklyn. All mail should be addressed to the Navy Y. M. C. A. at Brooklyn.

The boys at Station 4 are some farmers. During their spare time they can be found working on their farm on Roslyn Street. We expect record results. Mr. Charles Sheldon spent a big share of his recent vacation on the farm.

A smiling and happy eight pound visitor arrived at the home of Mr. and Mrs. Leo J. Sullivan on Wednesday, June 20th. Donald James immediately took possession of the home where he is now the supreme ruler.

Mr. James Harrison, of the Relief

Group, resigned recently to move to Seattle, Washington, with his mother. He says that he likes the climate and the country. He is now working in the Bookkeeping Department of the Seattle Lighting Company.

Miss Margaret Belknap, of the Auditing Department, is spending her vacation at Nantucket, Massachusetts. According to postals we have seen Miss Belknap is having a very delightful time. Mrs. John Gilgunn has been doing Miss Belknap's work during her absence.

Uncle John Almstead, of the Domestic Sales Department, has a steady caller in the shape of a black Spaniel who comes in quite regular, crawls under Uncle John's desk, takes a nap and then departs. Uncle John sez, says he, "That dog knows a good thing."

Mr. Charles G. Binder, of the Industrial Sales Department, resigned to accept a position as heating and ventilating engineer in the office of the State Architect at Albany. Mr. Binder specialized in the steam heating work while with this Company, and ought to make a valuable addition to the State's heating and ventilating staff.

We are pleased to announce the promotion of Mr. George Howell to his new position as Foreman at Station 5. Mr. Howell started his career with this Company in May, 1901, at old No. 2 Station. After working there for several years he was transferred to Station 5 where he has been in touch with every part of the plant. Mr. Howell has many friends throughout the organization, who can testify to those strong personal qualities which have earned him his recent advancement.

Mr. Thomas J. Rees, a brother of Mr. A. D. Rees, was buried at his home in Bay City, Michigan, June 26th. Mr. Rees was a Chief Engineer on the Great Lakes.

## "What Did You Do?"

Did you give him a lift? He's a brother of man,

And bearing about all the burden he can.

Did you give him a smile? He was downcast and blue

And the smile would have helped him to battle it through.

Did you give him your hand? He was slipping down hill,

And the world, so I fancied, was using him ill.

Did you give him a word? Did you show him the road,

Or did you just let him go on with his load

Did you help him along? He's a sinner like you,

But the grasp of your hand might have carried him through.

Did you bid him good cheer? Just a word and a smile

Were what he most needed that last weary mile.

Did you know what he bore in the burden of cares,

That is every man's load and that sympathy shares?

Did you try to find out what he needed from you,

Or did you just leave him to battle it through?

Do you know what it means to be losing the fight.

When a lift just in time might set everything right?

Do you know what it means—just the clasp of a hand,

When a man's borne about all a man ought to stand?

Did you ask what it was—why the quivering lip,

And the glistening tears down the pale cheek that slip?

Were you brother of his when the time came to be?

Did you offer to help him, or didn't you see?

Don't you know it's the part of a brother of man

To find what the grief is and help when you can?

Did you stop when he asked you to give him a lift,

Or were you so busy you left him to shift?

Oh, I know what you meant—what you say may be true—

But the test of your manhood is, WHAT DID YOU DO?

Did you reach out a hand? Did you show him the road?

Or did you just let him go by with this load?

—Ex.



## GIVE US MEN!

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Give us Men!

Men—from every rank,  
Fresh and free and frank;  
Men of thought and reading,  
Men of light and leading,  
Men of loyal breeding,  
The Nation's welfare speeding:  
Men of faith and not of fiction,  
Men of lofty aim in action:  
Give us Men—I say again,  
Give us Men!

Give us Men!

Strong and stalwart ones:  
Men whom highest hope inspires,  
Men whom purest honor fires,  
Men who trample Self beneath them,  
Men who make their country wreath them  
As her noble sons,  
Worthy of their sires,  
Men who never shame their mothers,  
Men who never fail their brothers,  
True, however false are others:  
Give us Men—I say again,  
Give us Men!

Give us Men!

Men who, when the tempest gathers,  
Grasp the Standard of their fathers  
In the thickest fight:  
Men who strike for home and altar,  
(Let the coward cringe and falter)  
God defend the right!  
True as truth though lorn and lonely,  
Tender, as the brave are only;  
Men who tread where saints have trod,  
Men for Country—Home—and God:  
Give us Men! I say again—again—  
Give us such Men!

—*Bishop of Exeter*