GAS AND ELECTRIC NEWS

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VOL. 7 JULY and AUGUST, 1919 Nos. 1 & 2

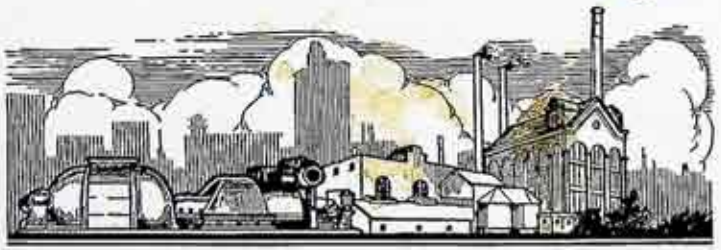
Rochester Series—Scenes in Genesee Valley Park

Photo by Lodder

Character and Fame

Fame is what you have taken,
Character is what you give;
When to this truth you awaken,
Then you begin to live.

—Bayard Taylor.



Gas and Electric News

Vol. 7 JULY and AUGUST, 1919 Nos. 1 and 2

Distribution of High Pressure Gas East of Rochester

ALEXANDER M. BEEBEE

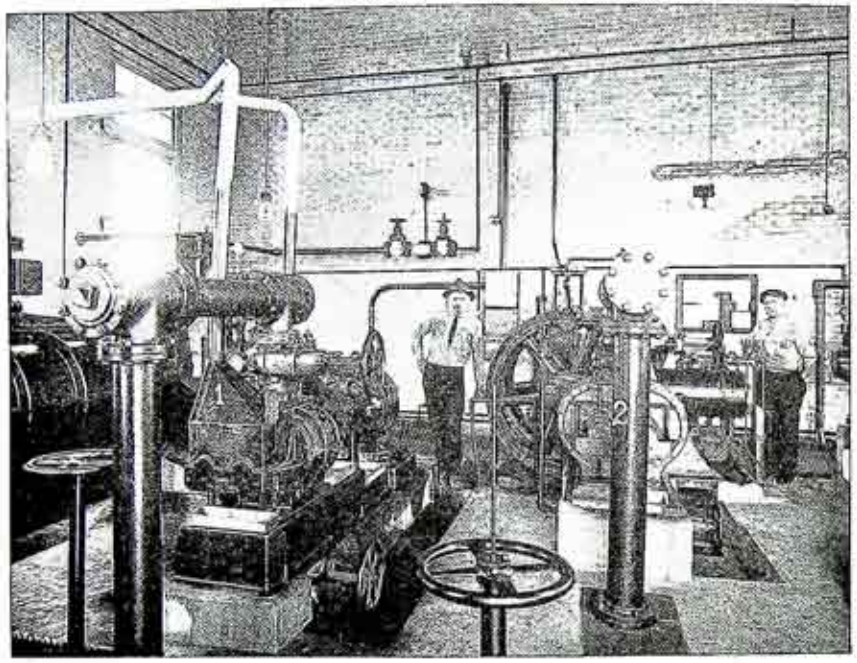
Of the several new fields of endeavor, so to speak, that the Company has undertaken in recent years, one of the perhaps less important lines of progress has been in the distribution of gas under high pressure to the eastern sections, principally East Rochester, Pittsford and Fairport.

Gas distribution to far districts closely assimilates itself to long distance electrical transmission in that high pressures are used for the same reason that high voltages are used in order to transmit the load with a minimum size of conductor, which in the case of gas means smaller pipes. The analogue just given is not quite true in every respect for in electrical transmission the high voltage really is a function of the power transmitted, and hence reduces the current, thereby permitting a smaller conductor and a smaller line loss, while in gas distribution the line loss is not reduced by the use of higher pressures. However, for practical reasoning the analogue is close and draws an interesting comparison.

In 1916 the Company undertook to supply gas to the neighboring towns east of Rochester and a 6" pipe line was laid from the large gas holder at Blossom Road to the nearby towns and villages. When undertaking this new branch of work it became necessary for the Company to adopt various devices and methods in order to insure proper service to the consumers at all times. Following is a brief outline of the problems as they came up and the method in which they were handled.

In order to transmit the gas through this line a pump was necessary and after carefully estimating the probable future load, it was decided that a compressor with a capacityof 25,000 cu. ft. per hour would be sufficient. In order to send this amount of gas through the line, a pressure of about five pounds at the holder would be required and hence a pump capable of compressing 25;000 cu. ft. of gas at 5 pounds pressure was installed. This pump was a small rotary positive pressure blower of the Connersville type driven by an electric motor, as is shown in Figure 1.

As the load on the line changes considerably at various times of the day it is also necessary that the pressure at the Holder Station vary with the load, as the capacity of the line is a direct function of the pressure. Also as the power lines to the Holder Station are A. C. it necessitated the use of an alternating current motor, which must necessarily be of constant speed. From a practical standpoint the ideal situation would be a variable speed motor, so that the discharge and hence pressure from the pump could be varied as the load on the line increased or decreased. However, with the constant speed motor that it



No. 1—Connersville Type of Pump Driven by Electric Motor
No. 2—Showing same Type of Pump Driven by Gas Engine

was necessary to use this was not possible and other means had to be employed in order to control the gas volume sent out so as to correspond with the load. This was accomplished by what is known as by-pass regulation. In other words, the pump is running at maximum capacity at all times and the gas not needed to build up the pressure in order to supply the load is by-passed by opening a valve and letting the excess gas go back into the holder. It will be seen by opening and closing this valve the operator has direct control of the pressure and volume of gas sent out.

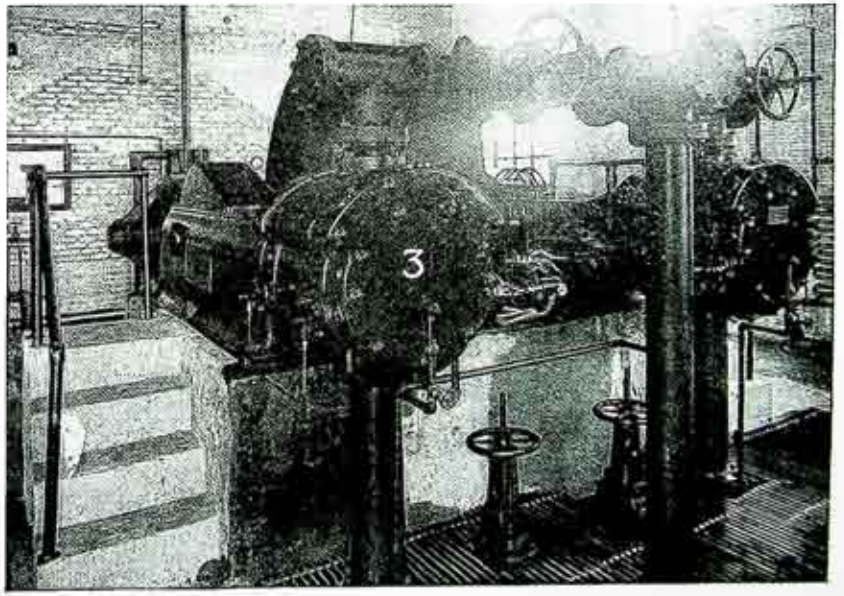
Shortly after the starting of the operation of this small electric pump it was realized that some other means must be provided in order to supply gas under pressure in case of shut downs on our electric power to the Holder Station, and consequently another pump of the same type was purchased and installed, driven by a gasoline engine that was converted so as to run on illuminating gas, as shown in Figure 2. This gave an ideal standby reserve unit as, operating on gas it could be run at all times even though all source of power were cut off from the station. This unit of course would be useless in case of a shut off in the gas supply, but if this should happen there would not be much use for the pump.

A long pipe line such as the one in question, when under a few pounds pressure, will contain enormous volumes due to gas being compressed. This fact is a very decided asset for continuous operation, for by installing a check valve in the line at the outlet of the pump, in case of power interruptions or stopping of the pump for any reason, the check valve closes and the people at the other end of the line can continue to use gas due to the volumes stored under pressure in the line, as it is some few minutes before the pressure drops appreciably. These few minutes can be used in starting the gas engine driven pump and hence things can go on without any interruption in the gas delivery to the towns.

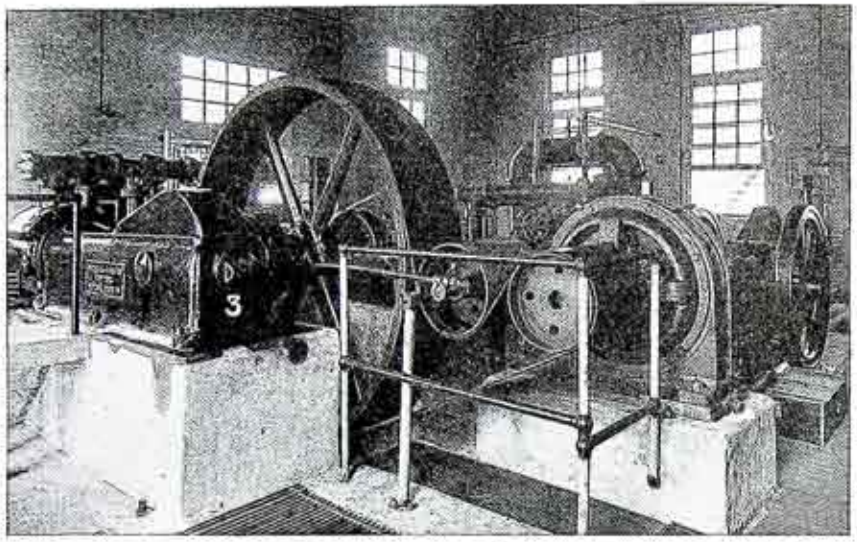
In gas distribution it is very important that the pressure never cease entirely for two very good reasons. A gas light or flame when once out will not relight itself when the gas supply returns again, as is the case with electric distribution, and very serious results might follow from asphyxiation or from explosive mixtures being formed at points where the gas was being used. This is very important especially with Ruud heaters or other similar types of equipment in use at consumers' houses. The other serious danger from a shortage is to our own equipment and pipe lines. In case of a complete gas shut down, contraction might take place in the pipe lines and air be sucked in through lights or other pieces of apparatus that had been left burning and an explosive mixture in the pipe mains or meter equipment might easily result, with the possibility of very serious consequences.

In order to eliminate these dangers another by-pass around the pump was installed with a check valve, so that in case the compressor should shut down and the pressure in the line drop till the holder pressure was reached this check valve would then open and thus holder pressure at least would always be maintained. By holder pressure is meant the pressure due to the weight of the holder shell resting on the gas which gives it a little less than a half pound pressure, which is sufficient to prevent the above mentioned dangers, though not sufficient for satisfactory operation at the usual loads.

Operation in general was very satisfactory with the above equipment till the gas consumption in these districts grew by leaps and bounds until it was very evident early in the spring that our old compressing equipment would be too small to handle the load.



No. 3—Showing Ingersoll-Rand Reciprocating Electric-driven Compressor



Showing rear of Ingersoll-Rand Compressor, also Gas Engine Operating Pump No. 2

Consequently a considerably larger Ingersoll-Rand reciprocating electric driven compressor which is hoped will be large enough for some few years to come, was purchased and immediately installed. This outfit was installed in record time. Agreements had been made to take on an additional large load on May 1st at Fairport. On April 1st only the very first of plans had been made. The compressor had been ordered and that was all. Through the able assistance of Mr. Crofts' department, Mr. C. W. Miller's department and the Electric Distribution Department the radical changes necessary to install the new compressor were made and the pump first started up on the 29th of April. This compressor is shown in Figure 3.

Also at the same time a multiport variable popping pressure valve was installed in another by-pass line around the compressor, which automatically controls the pressure at the discharge of the pumps and seems to give considerably better operation. The old system required a man practically at all times to operate the by-pass valve with fluctuations in the load, which gave none too good results at best. The new automatic valve eliminates this trouble and gives decidedly more satisfactory operation, besides requiring very little of the operator's attention. Both control systems are in place, however, and one can be used in case of failure of the other.

In order to eliminate electrical shut downs on this new piece of apparatus another circuit is now being laid to the Holder Station, complete with switches so that in case of electrical tie up on one circuit the operator can merely change over to the other circuit and continue operation.

The big new booster is operated during the day when the loads are large and the old, smaller pumps are used at night and on Sundays. The pressure required varies anywhere from a minimum of two pounds after midnight to the seventeen pounds that is now required at the noon load. The compressor is designed for a maximum capacity of sixty pounds so we sincerely hope that there is still considerable reserve capacity for which more business can be supplied.

A MODERN HOME LAUNDRY

BERTHA S. B. HOWES

THIS IS not an advertisement, but an account of a war experience which I am carrying on in peace time.

A year and a half ago my faithful laundress announced one morning that she was going to make munitions. She was the one steady dependable unit in the more or less changing domestic situation, and I foresaw all sorts of laundry trouble ahead. Some time before I had tried an Electric Washer and discarded it because it did not remove spots, tho in truth it was asking a good deal of any machine to get the mud stains out of the bloomers and stockings of small children who revel in the making of mud pies.

I spent a good deal of time hunting up a laundress, wondering if she would turn up and superintending her work after she came. Finally in desperation I again decided to try a washing machine and to do the trying myself. It would be of no use to me unless it could remove fruit stains, mud stains, etc., at least as well as a good laundress could and I proposed to find out if it could.

An article on washing machines in "Good Housekeeping" gave me a few hints and I began to see why the former trial had not been successful. The soap should not be simply shaved and added to the water but should be boiled thoroughly into a solution beforehand. One-half glass of soda water (made by dissolving one pound of washing soda in one gallon of boiling water) should be added to each tubful of water for either white or colored clothes. And lastly, the water should be very hot,—nearly boiling. This led to the purchase of my second piece of equipment. The Vulcan heater did not heat the water to the temperature desired so a Ruud heater which is adjustable as to temperature was installed. A hose attached to the hot water faucet fills the tub quickly with very hot water while the clothes are being sorted,—they are not soaked the night before. After using the washing machine three or four times I could run it quite expertly with the following results:

1. The time was reduced from about 5 hours to 2½ hours.
2. The clothes were cleaner.
3. The amount of soap was reduced one half.
4. Altho it cannot be said that it is *no* work, it is very easy and agreeable work.

This accounted for the washing which I continued to do myself, along with numerous other things, in the course of one morning. The laundress hung out the clothes so that they were ready for her to iron in the afternoon, thus giving her the morning for cleaning.

One day the electric iron, blew a fuse or did something mysterious so that the ironing was held up. I suggested using the old flatirons heated on the gas stove but the laundress said there was no going back to these old things,—she'd rather come another day when it was repaired. And the next morning when I tried the old flat irons myself I could hardly blame her. This led to my next piece of equipment,—an extra iron, so that if one does get out of repair, it won't hold up the whole laundry day.

My last electric tool is a more uncommon one, but one that I should hate to be without. It is an electric driven, gas heated mangle. On this are done the handkerchiefs, towels, napkins, pillow cases and flat pieces. I have not yet gotten over liking to run it myself, for the pieces peel off looking more like new things than old ones just ironed. The ironer that I have is not wide enough for sheets or tablecloths but takes all other flat pieces.

so that in one-half day now my laundress has time for all the ironing.

What formerly took two days can with these helps be done in one, with much greater ease and pleasantness,—and there are many minor savings such as soap, meals, etc. After the equipment was in smooth running order, I hardly cared whether the laundress came or not, but now for a year and a half she has always come.

Steam Automobiles

WHAT kind of autos did they have in 1821? Hear the ready answer—"There were no autos in 1821!" But, as it happens, there were automobiles as early as 1786; in fact, men began to experiment with motor-carriages almost as soon as the locomotive-engine became known. Between 1821 and 1840 a number of motor road-carriages were built by private individuals, mostly clumsy affairs, of course, but practicable as far as they went. All, of course, ran by steam. The actual development of the automobile as we know it waited on the invention of the explosion-motor, and as the first explosion-motors were gas-engines, there was still another wait, until we had learned to store our fuel in liquid form, as gasoline, and turn it into gas in the engine itself. With the invention of the gasoline-engine, the spread of good roads, the development of the rubber tire, and a few other things, the automobile had a clear field before it. But it was no new thing. Says a writer of a leading article in *The Universal Engineer* (New York, May):

"Steam being practically the only known power aside from air, which drove windmills, etc., that very naturally was first used for the automobile, being applied to wheel carriages in 1769 by one Nicholas Joseph Cugnot, a French military engineer. The Ministry of War, at that time having become interested in the invention, the carriage was built with public funds, but was unsuccessful owing to the difficulty of furnishing water to the boiler, or because of the small size of the same, as it could not run for more than a short distance without stopping to get up steam. It had considerable power, and was credited with breaking down a stone wall in one of its journeys.

"The second machine was a three-wheeled car, the boiler being placed in front and the fore wheel driven by a double-cylinder engine. This car is now preserved in the Conservatoire des Arts, at Paris, and Cugnot may thus be credited with having made the first successful horseless carriage.

"Watt in England was too busy with other work to pay much attention to passenger-cars, but applied for a patent for one in 1781, tho there is no record of his having followed the matter up. He is said, however, in later years to have been opposed to steam-carriages, and would not permit them to pass his residence.

"In 1772 Oliver Evans in America started his investigation of a steam-engine, petitioning the legislature of Pennsylvania in 1776 for the exclusive right to use his invention for steam-carriages and flourmills. This was granted in 1787, but the carriage part of it was entirely ignored. The legislature of Maryland granted a similar petition in 1787.

"Evans is said to have made for the Board of Health of Philadelphia a steam dredging-machine, which, when finished, was mounted on wheels, and ran by steam from the shop where it was built to the water, a distance of one mile and a half, where the wheels were removed and the boat launched and steam used to turn the paddle-wheels. .. ..

"William Symington, also an Englishman, who is supposed to have built the first practical steamboat, also built a carriage in 1786 which gave fair results. No really successful steam motor-car was made in England until 1801, when Richard Trevithick produced a crude but practical locomotive which was first tested on December 25, in 1801, and ran for several trips.

"Much is due to his experiment, he being the first to introduce exhaust steam into the smoke-stack. .. ..

"From 1821 until 1840 carriages were built for operation on common roads, mostly by private individuals, all being heavy and clumsy, not running more than seven miles without stopping to take on fuel or water, tho continuing for a short distance at a speed ranging as high as twenty miles an hour. The designer of the celebrated steamship *Great Eastern*, J. Scott Russell, also built several steam-coaches, which were run successfully between Glasgow and Paisley until legislation prevented their further operation.

"Gurney's steam-vehicles, built between 1825 and 1832, were fitted with a patent water-tube boiler designed by him, and slide-valve engines, a feature of the boiler being a series of chambers or separators to prevent priming.

"In 1831 Sir Charles Dance started a steam-coach line between Gloucester and Cheltenham, using Gurney's coaches. Determined opposition, however, led to the line being discontinued at the end of four months. Records show that the line made 396 trips, covering 3,644 miles in all, carrying 400 passengers at an expense of $390 for coke, or about ten cents a mile."—*The Literary Digest.*

Safeguard Resolutions

I RESOLVE:

To use all safety devices provided and remind every fellow workman of his failure to do so at any time.

Not to neglect to wear goggles while operating machinery in which I am in danger to eye injury from flying chips, leakage, spatterings, sharp light rays or other causes.

To wear only close fitting clothes and good shoes and not wear a flowing necktie.

To turn down or remove all projecting nails or spikes.

Never to use stretched or otherwise defective chains, hooks, rickety scaffolds, weak or broken ladders or those with dull spikes, or bad wrenches.

Never to fool with electrical apparatus or air hose or to play practical jokes on my brother workmen.

Not to use a defective tool or machine and to call the foreman's attention immediately to unsafe conditions I discover.

To be careful in handling material and to see it is kept out of aisles or passageways.

To make sure that no material is moved unless the chain is properly attached or it is properly loaded on trucks.

To report all trivial or serious injuries to the foreman and to the Claim Department and have them dressed at once.

To do everything possible to further the safety movement as I and my family are numbered among its chief beneficiaries.

To assist in every way to bring about the lowest accident record in the history of the Company for the year 1919.

—*Rochester Safety Council.*

Long Distance Telephone Calls

The Information Board, of the Telephone Department, takes care of all long distance calls. When you call the operator it will facilitate matters if you will say, "I wish to place a long distance call." Connection will then be made with the Information Board. In this way the record of all calls can be accurately kept. Such record is necessary for the proper checking of telephone bills.

Cable Tester

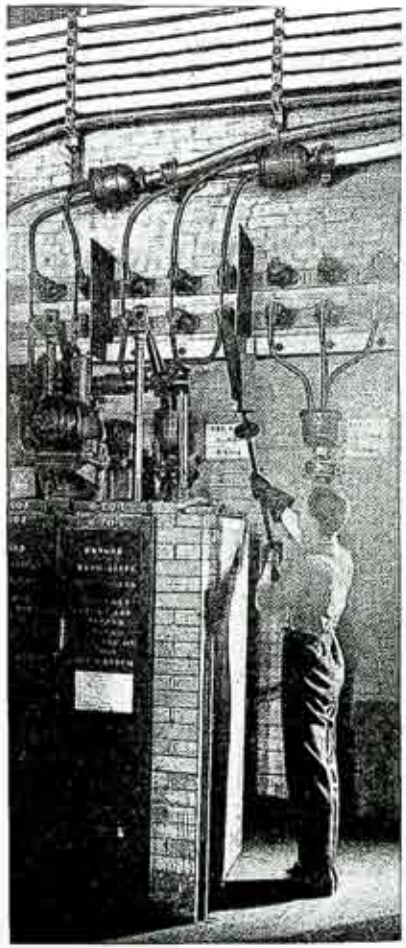
CARROL G. BROWN

LATE in 1915 it was noticed that the General Electric Company of Buffalo was using a rather unique method of testing cables to ascertain whether they were alive. This was investigated and found to be working satisfactorily for them, so it was suggested that one be made up in our own Laboratory. This was done by Mr. J. F. Putnam and has been at Station 6 most of the time since, where it is proving both useful and reliable.

The accompanying picture shows a man using it to test a cable, and the diagram shows the internal connections, and, to a certain extent, the construction of the instrument. "A" represents a metallic terminal which is placed on the outside of the cable or terminal to be tested. It may either be in contact with a bare conductor or on the outside of insulation. It also works satisfactorily when connected to the outside of a lead covered cable, providing it is a single phase cable and the cable sheath is not grounded. If, however, it is a three phase cable, the potential that exists on the lead covering will be that which is produced by the joint effect of all three of the conductors, and since that usually would be ground potential, the Geisler tube will not light up.

As the diagram shows, this terminal "A" is connected to one side of the condenser which is inside of the large cylindrical part of the tester. This condenser consists of two cylinders of sheet metal which are separated by linotape insulation. This insulation is shown at "F" in the diagram. The cylinders which are the terminals of the condenser are shown at "B".

As the area of the cylinders is small and the distance between the two cylinders is not so small, the capacity of the condensers is quite limited, in fact it is very limited. This means that when an alternating current is going through the condenser, the impedence to the flow of the current is very high. This alone would prevent any very heavy flow of current and would perhaps be sufficient to prevent a fatal accident in case a man were actually to take hold of the terminal shown at "D". The operator's hand is prevented from coming in contact with the terminal "D" by an insulating disc "E". On the other hand this high impedence does not use up a very large part of the total voltage, providing the current flowing is small enough.



Operator Testing Cables

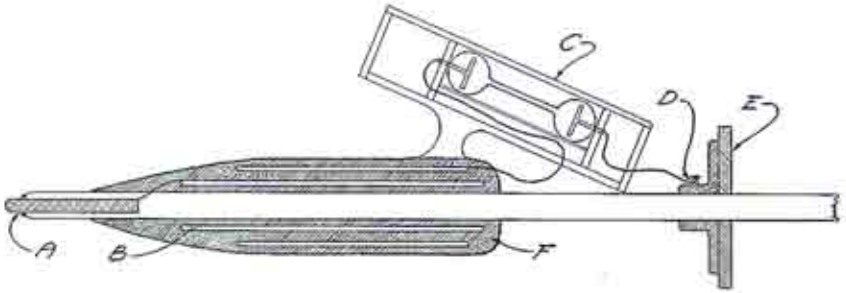


Diagram of Cable Tester

Current flows from the condenser to the Geisler tube which is shown in the box at "C". A Geisler tube is especially suitable for this purpose as it produces a very distinct glow with an extremely small current. Further than that, this particular tube is one that is filled with neon gas, and being very sensitive, operates on a small fraction of the current required for an ordinary Geisler tube.

From the other end of the Geisler tube the path leads to the binding post "D". It was originally intended that a wire should be connected from this post to some substantial ground whenever the instrument was used. However, it was found this was not necessary. While the tube will light up brighter with such connection, yet the light can easily be seen without it.

As was mentioned above, the theory of a condenser shows us that the larger the area of the two sides of the condenser, and the shorter the distances between these two sides, the more easily the alternating current will flow. Now considering the combination of the binding post "D" and the operator's hand as a condenser, the binding post is not a small point, but connects to a metal ring which surrounds the handle at that point. The hand of the operator on the stick (it may be from one half inch to eighteen inches away from the ring) has considerable surface and forms the other side of the condenser. So, although a break in the wire between the Geisler Tube and the binding post "D" would be quite effective in causing the lamp to fail to light up, yet, with no wire from binding post to ground, there is no such difficulty as there is a larger surface in this case. Similarly, if the operator wear rubber gloves, or rubber soles on his shoes, there is practically no hindrance to the very slight amount of alternating current which is flowing, as the area of the condenser which is thus formed is large.

From the above it will be assumed that the current which flows through the Geisler tube also flows through the operator. To a very large extent this is no doubt the case, although he cannot feel any such current.

Inasmuch as the Geisler tube, or the wire connecting to it might be broken, it should not be assumed that any particular circuit is dead merely because this apparatus fails to light up, unless one checks the apparatus by testing it on a circuit which is alive after testing it on one which seems to be dead. In fact, it is safer still to test first on a circuit that is known to be alive then on a circuit supposed to be dead, and then again on a live one.

Protection Afforded by Army Gas Masks Against Various Industrial Gases

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IN considering the use of gas masks for protection against various gases it must be emphasized that they should never be used in atmospheres containing less than 12 per cent oxygen by volume. In such atmospheres an air helmet or a self-contained breathing apparatus containing an oxygen supply must be used. Neither does the army gas mask afford protection against very high concentration of toxic or irritating gases such as may be found in closed tanks or towers containing volatile liquids or in small closed rooms where a considerable quantity of gas has been suddenly released. In general, the gas mask is limited to concentrations not exceeding 1 to 5 per cent, depending on the kind of gas, the absorbent used, and the size of the canister.

The chemical filling of the standard army canister, Type H, consists of 42 cu. in. of an intimate mixture of 60 per cent charcoal and 40 per cent "purple" soda lime (by volume). The size of granules is between 8 and 14 mesh. This mixture combines protection as nearly as possible against both acid gases and those removed by physical absorption only. For special gases the filling may be all charcoal, all soda lime, or some other specific absorbent. When protection against irritating or toxic smokes is also required two cotton wadding pads are placed in the canister at 1/3 and 2/3 distance from the bottom, respectively.

The standard army filling containing a mixture of charcoal and soda lime combines protection against almost all toxic gases; the chief exceptions among the common toxic gases are ammonia and carbon monoxide.

It is of course obvious that the standard mixture does not furnish the maximum protection against such gases as are absorbed by one component only, as for example, carbon tetrachloride or benzol which is absorbed by the charcoal only or sulfur dioxide which is taken up principally by the soda lime. Hence, when masks are required for specific gases or when high concentrations of a gas absorbable by one component only is to be encountered, it becomes advisable to fill the entire canister with either charcoal or soda lime.

The standard 60 to 40 per cent mixture is recommended for:

- Chlorine
- Phosgene
- Tetrachlorides of tin, sillicon and titanium*
- Arsenic tin chloride*
- Xylyl and benzyl bromides
- Chlor- and brom-acetone
- Chlorpicrin
- Dimethyl sulfate
- Perchlormethylchloroformate
- Nitrogen peroxide

* Cotton filter pads are also required to remove the hydrated oxides.

The all-charcoal filling is recommended for:

- Gasoline vapor
- Benzol
- Carbon bisulfide
- Carbon tetrachloride
- Cyanogen bromide
- Similar vapors which are not acted on by soda lime

The all-soda lime filling is recommended for:

- Sulfur dioxide
- Carbon dioxide
- Hydrocyanic acid gas
- Hydrogen sulfide
- Hydrogen chloride
- Other acid gases

When smoke particles, such as the hydrolysis products of stannic chloride, or solid particles, as arsenic trioxide, are encountered, the canister should contain at least two cotton wadding pads or other filter material.

Ammonia is not completely absorbed by the standard filling. For this purpose copper sulfate on pumice is recommended.

Carbon monoxide, natural gas, artificial illuminating gas, coke oven gas, blast furnace gas, and the difficultly condensable gases, such as oxygen, hydrogen, nitrogen, methane, etc., are not removed by the canister.

The standard canister containing filter pads gives good protection against smoke from wood, rags, tar, sulfur, and other combustibles. Tests have been made in which men wearing standard army masks remained in dense smoke from burning wood and wet straw for a period of 20 minutes without discomfort. Care, however, must be observed that such combustion smoke contains no appreciable quantities of carbon monoxide, for which the mask provides no protection, and which would not be detected by the wearer before being overcome. For this reason the standard army mask with charcoal and soda lime canister containing filter pads should be used with some caution by firemen in entering burning buildings; in exceptional cases, dangerous quantities of carbon monoxide may be present.

The army mask, however, has been used successfully in fighting forest fires. It can probably be used safely in similar smoke occurring in the open air, or for a very short period of time in buildings where the smoke is diluted by circulation of air.

A New Bulb for Lighting

A new type of Mazda lamp has been received by the Company which is expected to revolutionize the lighting of both house and street. The composition of the bulb is a white glass which resembles porcelain but is thoroughly pervious to light, and has a diffusing quality which entirely does away with the glare of the plain bulb, while giving an equal amount of light. The new bulb lacks the point found at the lower extremity of those of the old style, offering a smooth surface for light diffusion.

The use of the new bulb will do away with the necessity of extra shades over the light. These extra shades or globes are a large item of expense in the upkeep of the street lighting system. The white bulb in street lighting size will act as its own shade, or globe, and will result in a large saving.

Why Don't You Say "Hello" First?

Somebody said to you today:

"How are you Jim?"—or whatever your name may be.

And you replied:

"Pretty well, thank you"—

And you thought you had fulfilled all the requirements of polite society.

But—Why didn't YOU ask about the health of your friend and neighbor who greeted you?

Like this "Pretty well, thank you—how are you?"

Sometimes you've gone through the day perfectly miserably because somebody didn't say "Hello" to you.

Of course your friend's mind may have been troubled or his eyes fastened upon something which required all his attention, or there may have been a dozen perfectly good reasons why he didn't say "Hello!"

But—why didn't YOU say "Hello" to him?

Perhaps somebody does not say "Hello" to you out of pure cussedness—they simply don't want to. They are just built that way.

But you can't imagine how unhappy such people are. In most cases they'd give anything to be different.

Now YOU can help them. It may be hard for you to do so—but try it! Say "Hello" anyway, if it chokes you!

When you've thought about your friend's failure to greet you—perhaps you've thought, a bit scornfully:

"I'm as good as he is."

Well—why didn't you prove it—and not wait for him to make the first polite advance?

Anyway—why should your friends inquire about your health—and why should they greet you with a hearty "hello"—when you usually wait for them to do it FIRST?

Suppose you try the OTHER way—just for a day—forget about yourself—become really INTERESTED in your neighbors and friends—and don't give them the chance to say "Hello" FIRST.

What a day you'll have!

I'd like to hear about it.

The Company's Fourteenth Annual Picnic

August seventh, picnic day, was bright and clear and warm. The heat, however, was tempered by a comfortable breeze which kept working all day. Zeitler's 54th Regiment Band was in attendance. By 8:30 A. M. a large number of employees and their families had assembled at the Main Office on Clinton Ave., the band played lively airs, so that the time passed rapidly until shortly after 9 o'clock the special cars came, eleven in number. These were soon filled and in due time reached Charlotte without mishap. The change to the other car line was quickly made and by 10:30 the first of the picnicers were unloaded at Manitou. The booths for serving hot dogs, soft drinks and ice cream were in readiness and from that time until 5'clock or later the servers had no idle moments, and apparently neither had the consumers.

The hot-dog man said he had two hundred pounds ready for the first assault, and later another hundred pounds came. How many more after that no one was heard to say. No mention was made, at least in gallons, of Ship Ahoy, Orangeade and other soft drinks. Some one was heard to say something about one hundred gallons of ice cream but no one confirmed it.

The usual schedule of sports had been arranged and was started as soon as a sufficient number of people had had a hot dog, a soft drink and an ice cream cone.

A game of indoor ball with married men on one side and single men on the other was the first event on the program of sports. It was a spirited contest, at least on the part of the married men as the score shows.

The ladies' game, Main Office vs. Andrews Street, followed and drew a large crowd of interested spectators. All the players had true baseball spirit and played the game for all it was worth. The fact that one lady in her enthusiasm carried the bat to first base with her, and that another ran to third base when it was already occupied, in no way interferred with the smoothness nor the rapidity with which the game was played.

This was the line-up:

Married Men—vs—Single Men

Married Men		Single Men
Alling	1st Base	Haines
J. Cahill	2nd Base	Phillips, *Capt.*
Allington	3rd Base	Hilliard
Kiefer	Short	Newman
Gould	Right Field	Wood
Kling	Left Field	Gardner
Spears	Center Field	Hartson
B. Cahill, *Capt.*	Pitcher	Winterroth
Rissberger	Catcher	Lipschutz

Umpire—Mr. W. J. Marks

Score—Married men 11,—Single Men 2.

Main Office—vs—Andrews Street

Main Office		Andrews Street
Misses		Misses
Julian, *Capt.*	1st Base	Young
Cozzalino	2nd Base	Kramer
Winans	3rd Base	Daggs
Cain	Short	Connor
McIntyre	Pitcher	Howe
Lauth	Catcher	Mills, *Capt.*
Nicolay	Center Field	Cook
Horner	Left Field	Schaffer
Mrs. Tucker	Right Field	Nolan

Umpire—Mr. E. C. Scobell

Score—Andrews 14,—Main Office 5.

For a week before there had been a statement on the bulletin board urging everyone to watch for the "Mystery" at the picnic, so everyone watched more or less and when they were not watching they stopped someone else with—"Say what is this Mystery?" No one knew but the Committee and they would not tell.

At 3 o'clock came the announcer with his megaphone saying—"Everybody go to the grove and the 'Mystery' will be revealed." Everybody went. There they found a raised platform with padded posts. Light commenced to penetrate the "Mystery" and then the ever genial "Pop" Dowd took up the megaphone with a flourish and announced that there would be a boxing bout of four two minute rounds between P. Conti and F. Smith and one of four two minute rounds between Tony Adams and Tony Snyder. Mike Donovan was referee.

Immediately there was nothing mysterious about the "Mystery" and everybody was interested from the oldest down to a small boy who sat on his father's shoulder and yelled "Give it to 'im." The Mystery Committee certainly knew what would hold the crowd.

That baseball holds the interest of picnic people will be understood by the fact that a third game was scheduled for 3:30 P. M. It was played by the Regulars against the All Stars. The Regulars of course means the regular Company team, while the All Stars were men picked from the Transportation, Coke, Line and Underground Departments. Each team had its own boosters, who kept things lively along the lines. The men were all on their mettle and the game moved fast.

Regulars		All Stars
Quetchenbach	1st Base	Woodhead
Eggert	2nd Base	Martin, *Capt.*
Fiske	3rd Base	J. Cahill
Winterroth, *Capt.*	Short	Meyer
Weaver	Right Field	Kling
Gardner	Left Field	Tompkins
Cooper	Center Field	Motzel
Hilliard	Pitcher	B. Cahill
Newman	Catcher	Landschoot

Umpire—Mr. J. J. Logan

Score—Regulars 10—All Stars 0.

The other events and the winners are as follows:

Relay Race for Men—Messrs. C. W. Hartson, G. W. A. Haines, C. B. Heisler and L. Wood.

Fifty-yard Dash for Ladies—First, Miss Marie Julian; Second, Miss Nora E. Young.

Pie Eating Contest for Boys and Girls under 12 years of Age—First for boys, Francis Masterson; Second, Richard Cross; First for girls, Mary McHugh; Second, Madeline Manion.

Leap Frog—Team of five for Men—Messrs. B. L. Cahill, R. E. Comins, A. C. Rissberger, J. E. Cooper and R. T. Riley.

Marshmallow Race for Ladies—First, Mrs. J. J. Keeler; Second, Miss Florence Nicolay.

Children's Running Race for Boys and Girls—First for boys, O. Kehoe; Second, F. Masterson; First for girls, Phyllis Tanner; Second, Betty Proctor.

Dress-up Race—Combination—Mr. L. H. Kelly and Miss Corinne McIntyre.

Cracker Race for Ladies—Miss Mildred Buckman.

Doughnut Race for Boys and Girls under 12 years of age—First, for boys—Dominic Bruno; Second, Lawrence Tranella; First for girls, Lillian Townsend; Second, Mary Perno.

Pillow Fight for Men—Won by Mr. B. L. Cahill.

Shoe Race for Boys and Girls—First, for boys, E. Andrews; Second, W. Wright; First for girls, Lillian Sall; Second, Betty Proctor.

Tug-of-War for Men—Won by Line Department.

Quoits for Men—Won by Messrs. H. P. Gould and H. T. Clement.

Swimming Contest for Ladies—First, Miss Marie Julian; Second, Miss Celia Legler.

Announcer—Mr. J. J. Logan. Starter—Mr. W. E. Drew.

Judges: President J. T. Hutchings, Messrs. T. H. Yawger and J. P. Haftenkamp.

A special quoit match was on the schedule of events. Messrs. Richard Tanner and George Tuety of the Line Department offered to test their ability to pitch against that of President James T. Hutchings and General Manager Herman Russell. The challengers won the match by one point.

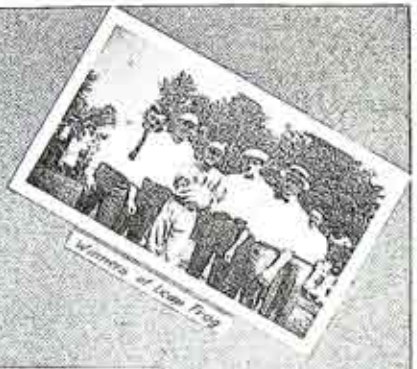
Messrs. R. C. Booth and C. W. Hartson challenged Messrs. G. A. Bailey and W. H. Kiefer to play three sets of tennis. The court at Manitou was found to be out of condition, so the match was played one week later at Station 33. The challengers won in this event also with a score of 9-7, 1-6, and 6-3.

Later in the afternoon when the dining hall had been cleared, dancing commenced and was kept up until about 10 o'clock, and so ended the day.

Altogether it was conceded to be as fine a picnic as one could wish for. The fact that over one thousand tickets were sold shows that Com-

Fourteenth Annual Picnic


Winners of Relay Race


Winners of Long Frog


Go to it!


Winner of Girls Race


Winner of the Eating Contest


Picker for Andrews Team


Tug of War


Two of the Committee

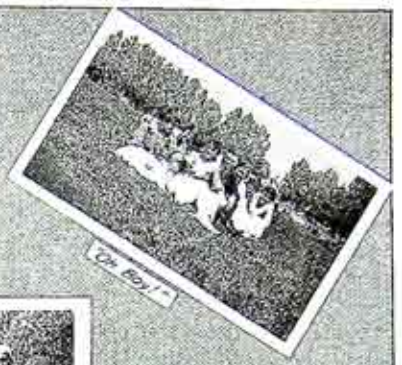

Pillow Fight


Champion Runners


Two other Champion Runners


Winners Special Quoit Match


There are Saints that make us laugh!


"Oh Boy!"


The Management at play


Arguments.


"On Your Mark!"


"Sweets"


Guests


"Sri-i-ka!"


Awaiting the "Fill"


Caught in the act!


Get 'em while they're hot


"Fill. Aboard!"

pany employees and their families and friends were sure the Committee would make the day worth while.

Among the invited guests were Messrs. R. Andrew Hamilton, Commissioner of Public Safety, Ruden W. Post, Superintendent of the City Laboratory and Street Lighting, and Frank A. Jaynes, Assistant Chief of the Fire Department.

To the various committees are due the thanks of all who attended the picnic. By reason of their careful planning beforehand everything moved smoothly on the picnic ground, and not until the last event was over did they think of resting. Thank you ladies and gentlemen of the committees.

General Committee: Messrs. V. C. Hoddick, Chairman; T. H. Christie, Vice-Chairman; W. C. Gosnell, Treasurer; Mrs. A. H. Kohl, Secretary.

Sub-Committees: Picnic Grounds and Meals—Messrs. E. C. Scobell, F. H. Klein, V. C. Hoddick. Transportation—Messrs. T. H. Christie, E. H. Hoagland.

Sports—Messrs. G. A. Bailey, A. M. Beebe, W. J. Consler, W. E. Drew, E. C. Scobell, F. H. Owen, Miss N. E. Marriott, Mrs. A. H. Kohl.

Refreshment—Mrs. G. E. Hough, Messrs. E. C. Scobell, F. E. Herring, V. A. Miller, R. F. Close. Music—Messrs. L. E. Sanderson, C. J. Geimer. Publicity and invitations—Messrs. T. H. Yawger, J. P. MacSweeney. First Aid—Miss E. N. Connor. Mystery Committee—Messrs. C. E. Scobell, C. W. Miller, F. W. Fisher, E. R. Crofts.

SOME MISTAKE

The office telephone in a well-known surgeon's office rang. The doctor himself answered the telephone. A childish voice inquired, "Who is this?" The doctor readily recognized the voice of his seven-year-old boy. Although an exceedingly busy man, he is ever ready for a bit of fun, if the opportunity permits, and anticipating such at this time, replied, "This is the smartest man in the city." The child mumbled for a moment and replied, "I beg your pardon, sir, it's the wrong number," and hung up.—*Rochester Times-Union.*

TOO BIG A TARGET

Two Irishmen arranged to fight a duel with pistols. One of them was distinctly stout, and raised an objection.

"Bedad!" he said, "I'm twice as big a target as he is, so I ought to stand twice as far away from him as he is from me."

"Be aisy now," replied his second. "I'll soon put that right." Taking a piece of chalk from his pocket, he drew lines down the stout man's coat, leaving a space between them. "Now," he said, turning to the other man, "fire away, ye spalpeen, and remember that any hits outside the chalk line don't count." —*Lippincott's.*

❖

COMPONENTS

Life has its little troubles,
And they never all relax.
The drink is mostly bubbles
And the price is mostly tax.
—*Washington Star.*

❖

CANDIDATE FOR THE REFORM LEAGUE

My parents forbid me to smoke.
I don't!
Nor listen to a naughty joke.
I don't!
They made it clear I must not wink
At pretty girls, nor even think
About intoxicating drink.
I don't!
To dance or flirt is very wrong.
I don't!
Wild youths chase women, wine and song.
I don't!
I kiss no girls—not even one;
I do not know how it is done.
You wouldn't think I have much fun—
I don't!
—Anon.

❖

TO A PIPE

Good-By, old dear. You too, must go,
Since cruel laws ordain it so.
No more shall we together stray
Through drowsy dreams of yesterday,
Nor cozy twilight musings know.

No more may I coax, sure and slow,
Your fragrant amber bowl to glow
With charm that never lost its sway—
Good-by, old dear.

Boon comrade of all joy and woe,
Who helped me bear hard luck's worst blow,
And made my happy hours more gay,
Now they have banished you away,
Each hour more lonely I shall grow—
Good-by, old dear.
—C. B. in "*Life*".

Amount Accumulated by Saving $1.00 a Week (or $13.00 a Quarter)

If Invested at 4% Interest Compounded Quarterly

1 year $53.05	10 years.....$ 638.68	35 years.....$3,954.81
2 years.....108.25	15 years.....1,066.99	40 years..... 5,113.29
3 years.....165.69	20 years.....1,589.60	50 years..... 8,251.67
4 years.....225.47	25 years.....2,227.28	75 years.....24,546.45
5 years.....287.67	30 years.....3,005.38	100 years.....68,620.89

$2.00 a week (or $26.00 a quarter) for 15 years amounts to $2,133.98, a sum which would go far toward securing a modest home, or putting a boy or girl through college, or furnishing a fund to take advantage of some other opportunity. $1.00 a week (or $13.00 a quarter) would provide the same amount in less than 25 years.

Your invested savings work for you even if your other income stops. They always form a reserve to meet emergencies and also enable one to take advantage of unexpected opportunities. War Savings Stamps are the Government's best security.

DOUBLE YOUR RESOURCES BY INVESTING SAVINGS REGULARLY

Did you ever stop to consider how easily and rapidly you can accumulate a considerable sum by investing small amounts regularly at compound interest? If not, examine the table above.

You can begin at once by investing all or part of your savings in War Savings Stamps of the 1919 issue which you can buy in any amount up to $1,000. They bear 4% interest, compounded quarterly.

If you should have an unexpected call for ready cash before your stamps mature, January 1, 1924, you can redeem all or any number of them at any time, for the full purchase price, plus interest.

No other investment offers such an attractive combination of safety, income, redeemability, and convenience.

BUY W. S. S.

—*Savings Division, United States Treasury Department.*

Athletics

Tennis

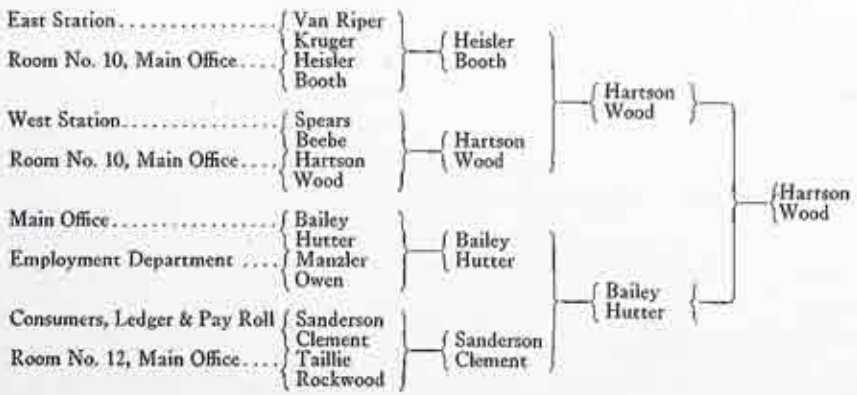
Considerable tennis interest has manifested itself this year throughout the Company to the extent that 33 Station tennis court was kept running every night for about four straight weeks. Two leagues of eight girls each, and carrying the names Army and Navy Leagues, have been slashing the rubber sphere across the net in real professional style. It is expected that the two leagues will finish their schedules this week. Miss Kaplan and Miss Swarthout of the Stores Record Department are in the lead for the championship in the Navy League, while Miss Neff of the Auditing Department and Miss Faulkner of the Payroll Department are "runners up" in the Army League. Miss Julian and Miss McIntyre for the main floor have put across some good playing and have second place "cinched" in their league. Much credit is due to Miss Mills, Miss Young, Miss Cain, Miss Place, Miss Klinzing, Miss Buckman, Miss Daggs, Miss Schaffer, Miss Rotmans, and Miss Albert, who, although they are somewhat new at the game, showed their interest and willingness by entering the league.

Quoit League

The quoit league of the Industrial Athletic and Recreation Association is now in full sway. This Company is well represented in the persons of Harry Clement and Harry Gould from the Payroll Department. The first match was played at Brown's Square on Saturday, August 9th, against the Rochester Stamping Co.

	1st	2nd	3rd
Roch. Railway and Light Co.			
Clement—Gould	14	21	21
Rochester Stamping Co.			
Dean—Holty	21	11	10

Diagram of Men's Tennis Tournament



Baseball

The double-header against the Stromberg-Carlson team, ended the baseball season of 1919 so far as the Railway and Light team is concerned. The "jinx" of former years has been on the job again this season and held us down to few victories and many defeats. However, anyone who has a knowledge of the type of baseball put up by the Selden team and Todd Protectograph team will see by the two following scores that our boys are playing the old game for all there is in it.

	1	2	3	4	5	6	7	8	9	R.	H.	E.
Roch. R. & L. Co.	0	0	0	2	0	1	1	0	0	4	7	4
Selden M. T. Co.	0	0	0	0	3	0	0	0	2	5	6	5

	1	2	3	4	5	6	7	8	9	R.	H.	E.
Roch. R. & L. Co.	0	0	0	1	0	0	0	1	0	2	8	5
Todd Pro. Co.	1	0	0	1	0	0	0	1	0	3	5	5

It is with a great deal of regret that we see the end of the baseball season coming on, for, organized as we are now, the best teams in the Industrial League cannot phase us. This we know, however, that when Mr. Bodine, who is now Secretary of the Industrial Association says "play ball" in 1920, the "Lighters" from Clinton Avenue will make some of them sit up and take notice. It is hoped also that more employees will attend the games next year. Owing to vacations, extra work and numerous things, it has been necessary to change our line-up from time to time. Cooper, Woodhead and Newman have done good work behind the bat, but it was decided to use Newman and Cooper in the outfield and Beebe, who is not only a wizard back-stopper but a hitter as well, in the position of catcher. Rathbun is sure to be our first string pitcher next year, having so ably held down the mound all season. McCaffery will always be an able substitute for Rathbun on the mound when the occasion arises. In the meantime "Dutch" is right at home on the initial sack. Eggert's work on second speaks for itself while many good things can be said about his stick work. Winterroth eats 'em alive on short and the faster they come the prettier he handles them. The team has never felt at home unless "Kelly" is in his place at short. Hilliard, who is a veteran from the 27th Division, shows past experience in his playing on third base. Gardner, Fiske and Newman don't need any bushel basket to bag the pill in the garden. No errors are checked up against them for the entire season and any clout that gets by them is sure to be a homer anyway. Spears has played the initial sack on several occasions during the past, adding "pep" and lustre to the team. Van Riper is a large man at East Station now, which keeps him away from his berth on third base. "Jake" Mury, who has alternately played First and Right Field, is accounting for one, two or three good hits each game. Great things were hoped for in the last game of the season. To bag a double-header against one of the best teams in the league would prove to a lot of "Lighters" that we were playing baseball—not marbles.

Checkers and Chess Club

There are those in the Company who enjoy playing an occasional game of checkers or chess. It is planned, if there are enough to make it interesting, to form the above club to meet in one of the rooms at the main office one night per week and have a combination smoker and checker and chess matches. If you are interested in forming such a club, notify F. Owen, Employment Department immediately.

Has Another Think Coming

Pickpocket (visiting friend in jail)—"I hired a lawyer for you this morning, Slim, but I had to hand him my watch as a retainer."

Pal—"And did he keep it?"

Pickpocket—"He thinks he did."

—Buffalo Express.

The Use of Gas and Electricity in the Home.

MISS FRANCES E. MOORE

What Shall I Have for Lunch?

TOO OFTEN the housewife who is home alone at lunch time goes without eating or is satisfied with just a "snatch." From a health and efficiency viewpoint this is bad. It is many times done because she feels that it is time wasted to prepare and eat a lunch in the usual way, but the rest and change one gets by sitting down and eating a daintily prepared meal is more than worth the trouble. If you are one whom this description fits try some of these suggestions and notice how much better you feel.

The foundation for so many dishes is a good white sauce. This may be made and kept for a couple of days if put in a cool place. It is a good idea to make a thick one which may be left as it is or thinned as the dish demands. One that is very satisfactory is made as follows:

White Sauce

2 tbsps butter or substitute
3 tablespoons flour
1 cup milk

Melt fat, add flour, cook until it bubbles, add milk and cook in a double boiler, stirring at first to prevent lumping.

This sauce may be used as the foundation for a cream soup which may be made from any of the vegetables left over from the dinner the night before. If you have no leftovers, cook some vegetables or open a fresh can. What you do not use may be utilized for your dinner menu for that day or the following one. All that is necessary is to heat the vegetables, press thru a strainer, add to the white sauce and thin with milk or stock if necessary. Toast is delicious with the soup or you may make croutons from the bits of bread you may have. Brush these over with melted butter and place in the oven until brown. A soup of this kind together with a simple salad or dessert makes a nourishing and satisfying meal.

To your foundation white sauce may be added cheese, heating the whole over hot water and when this is melted it is delicious served on toast. Or you may add the cheese, an egg and a little tomato soup or sauce and you have a delicious rarebit. The cheese sauce may be poured over some cooked spaghetti, macaroni or rice or even a few slices of potato and heated in the oven or in a double boiler.

A white sauce of this sort is used as the foundation of the Cheese Souffle. This makes a dish that serves four nicely and is always liked. Try it for your dinner some night when you don't want a heavy meal and of course for a supper dish it is just right.

Corn fritters or waffles make a satisfying main dish for lunch. If you get the fat ready for deep fat frying, leave it in the kettle and have French Fried Potatoes or some similar dish for dinner. It will save you work and make a pleasant change.

Luncheon Suggestions

SPAGHETTI WITH TOMATO SAUCE

1 cup spaghetti
2 qts. boiling water salted
1 small onion
1½ cups tomato sauce
Few slices of bacon

Try out bacon which has been cut in tiny pieces, add onion cut in small pieces and then add tomato sauce. The spaghetti should be cooked about twenty minutes in boiling salted water, then drained and rinsed in cold water. Place spaghetti in buttered baking dish, pour sauce over and bake twenty minutes.

TOMATO SAUCE

1 can tomatoes
1 small onion
1 bay leaf
2 cloves
Sprig of parsley
Salt and pepper
1 tablespoon sugar

Place all together in a saucepan, simmer slowly about one-half hour and strain.

CHICKEN SOUFFLE

2 cups scalded milk
½ cup butter
⅛ cup flour
1 teaspoon salt
¼ teaspoon pepper
½ cup stale soft bread crumbs
2 cups cold cooked chicken finely chopped
Yolks 3 eggs, well beaten
1 tablespoon finely chopped parsley
Whites 3 eggs, beaten stiff

Make a sauce of first five ingredients, add bread crumbs, and cook two minutes; remove from fire, add chicken, yolks of eggs, and parsley, then fold in whites of eggs. Turn into a buttered pudding-dish, and bake thirty-five minutes in a slow oven. Veal may be used in place of chicken.

VEGETABLE SOUFFLE

¼ cup butter
¼ cup flour
½ cup cream or milk
½ cup water in which vegetables were cooked
1 cup cooked vegetables rubbed through a sieve,—carrots, turnips, or onions
Yolks 3 eggs
Whites 3 eggs
Salt and pepper

Melt butter, add flour, and pour on gradually cream and water; add vegetable, yolks of eggs beaten until thick and lemon colored, and fold in whites of eggs beaten until stiff; then add seasonings. Turn into a buttered baking dish and bake in a slow oven.

WAFFLES

1¾ cups flour
3 teaspoons baking powder
½ teaspoon salt
1 cup milk
Yolks 2 eggs
Whites 2 eggs
1 tablespoon melted butter

Mix and sift dry ingredients, add milk gradually, yolks of eggs well beaten, butter and whites of eggs beaten stiff; cook on a greased hot waffle iron. Serve with maple sugar.

A waffle iron should fit closely on range, be well heated on one side, turned, heated on other side and thoroughly greased before iron is filled. In filling put a tablespoon of mixture in each compartment near center of iron, cover and mixture will spread to just fill iron. If sufficiently heated it should be turned almost as soon as filled and covered. In using a new iron special care must be taken in greasing or waffles will stick.

VEGETABLE LOAF

1 cup cold boiled beans
1 cup mashed potatoes
1 cup cooked tomatoes
1 cup uncooked sausage meat
1 teaspoon salt
Pepper
1 cup uncooked rolled oats soaked 15 minutes in cup boiling water
1 egg
1 teaspoon sage
1 tbspoon cooking oil

Mix all together and bake in a moderate oven about 45 minutes.

SPINACH

Left over spinach may be made into a satisfactory luncheon dish and in combination may be made sufficiently substantial.

BEAN RAREBIT

2 tablespoons butter
2 tablespoons flour
¾ cup milk
¾ cup stewed and strained tomatoes
Mustard
½ teaspoon soda
2 cups left over baked or boiled beans
2 eggs slightly beaten
Salt
Cayenne

Put butter in chafing dish or double boiler; when melted add flour. Pour on gradually milk, and as soon as mixture thickens add tomatoes mixed with soda; then add beans, eggs and seasoning to taste. Serve as soon as well heated, on toast or crackers.

CORN FRITTERS

1 can corn
1 cup flour
1 tspn baking powder
2 teaspoons salt
¼ teaspoon paprika
2 eggs

Chop corn, and add dry ingredients mixed and sifted, then add yolks of eggs beaten until thick, and fold in whites of eggs beaten stiff. Cook in a frying-pan in fresh hot lard. Drain on paper.

CORN TOAST

¼ tblsp finely chopped onion
1½ tablespoons butter
1 cup canned corn
1 pint milk or cream
½ teaspoon salt
¼ teaspoon paprika
6 slices toasted bread

Cook onion with butter two minutes, stirring constantly. Add corn, cream, and seasonings, bring to the boiling point and let simmer five minutes. Pour over toast and serve at once.

At this season vegetables should play an important part in luncheon and dinner menus.

ASPARAGUS A LA VINAIGRETTE

Boil asparagus, leaving stalks long. Cut off lower part of stalks until they snap, wash and tie into bunches. Cook in boiling salted water fifteen minutes or until soft, leaving tips out of water first ten minutes, drain, remove string and then proceed according to dish desired. It may simply be spread with butter or it may be served with a rich white sauce. For the dish a la vinaigrettes, chill the asparagus and serve with a Vinaigrette sauce.

VINAIGRETTE SAUCE

Mix one teaspoon salt, one-fourth teaspoon paprika, a few grains pepper, one tablespoon tarragon vinegar, two tablespoons cider vinegar, six tablespoons olive oil, one tablespoon, each, chopped green pepper and cucumber pickle and one teaspoon each finely chopped parsley and chives.

SPINACH BECHEMEL

Prepare one-half peck Boiled Spinach. Put three tablespoons butter in hot omelet pan; when melted, add chopped spinach, cook three minutes. Sprinkle with two tablespoons flour, stir thoroughly, and add gradually three-fourths cup milk; cook five minutes.

Industrial Sales

Victor Hendee, 196 Monroe Avenue, has purchased 3 Vulcan Bake Ovens.

❖

The Cyclemotor Corporation, 149 Cady Street, has purchased 6 Eclipse Cyanide Furnaces for case hardening small machine parts.

❖

Fromm Bros., the Rochester Packing Company, F. M. Goff and Benjamin Lapides have all installed gas fired smoke-house equipment.

❖

The Lineatime Company, 924 St. Paul St., has purchased an Enamel Oven 5 x 5 x 6 feet for baking enamel on Lineatime copy holders.

❖

The Precise Manufacturing Company, 160 Court Street, has purchased a number 3 Eclipse Oven Furnace and blower for heat treating dies, etc.

❖

The Hawkeye Works, Eastman Kodak Company, St. Paul St., has purchased 3 double deck glass pressing and annealing furnaces for making lenses for Kodaks.

❖

The Ritter Dental Manufacturing Company, West Avenue, has recently installed an additional 35 horsepower motor.

❖

The Erie Foundry is now installing a 35 horsepower motor driven air compressor to take care of its increasing compressed air requirements.

❖

The Reed Glass Works is installing an additional 25 horsepower motor driven fan and a 10 horsepower motor driven coal conveyor.

❖

The Vogt Manufacturing Company, St. Paul Street, has installed an additional 15 horsepower motor to drive a new machine which they recently purchased.

❖

The D. E. Clair Ice Company, Driving Park Avenue, has recently installed a 50 horsepower motor to drive a 35 ton ammonia compressor used in the manufacture of ice. This compressor was formerly operated by steam.

❖

The Ferdinand Buedingen Company, Incorporated, formerly of 39 North Water Street, has leased one of the floors of the Woodworth Building for the manufacture of paper boxes. This company expects to increase its business materially and also its use of electricity.

❖

The Beechnut Packing Company, East Main Street, has almost completed its new five story warehouse and factory building, and has also increased materially the number of motors in its catsup building. The increase in connected load will be approximately 50 kilowatts.

❖

The Menihan Shoe Company has leased one-half of two floors in the Woodworth Building on State Street and will use this space for the manufacture of ladies' shoes. All the shoe machines requiring heat will be heated by electricity. Electrically heated shoe dryers will be installed and motors will be used for the power. The total connected load will be approximately 35 kilowatts.

❖

The G. H. Moore Heel Company has leased the major part of a large building on North Water Street and is now installing machinery for the manufacture of wooden heels. Each machine is to be driven by a separate motor which is to be either direct connected or connected with a short belt. The initial installation will consist of approximately 25 motors. Alternating current has been selected on account of the lower cost of electricity and motors as well as the very low maintenance expense incurred with alternating current motors. Another point favorably considered was that the alternating current motor has no brushes or cummutator and there is practically no chance of this motor starting a fire in the wood waste.

❖

The Ellwanger and Barry Building, the Monroe County Savings Bank Building and the Union Trust Company Building have just finished one month's trial of central station service. The total electric load of these buildings is forty-three kilowatts. The experiment proved so satisfactory that they have decided to continue the use of Company service for the summer months when they would have no use for the exhaust steam from the private plant located in the E. & B. Building which furnishes all three buildings with heat and power.

Electric Distribution

Pat O'Neill's Emerald Isle, at Station 3, otherwise known as Number 6 Turbine, has received a shining new coat of green paint and a golden crown surmounted by Old Glory.

❖

A 220 volt line has been installed recently at Station 1, to be used as a low voltage test for the series street lighting circuits. The use of this current facilitates the locating of grounds, crosses and opens on the lighting circuits.

❖

A meeting of the Electric Operating Department was held on August 27th at 11 o'clock A. M. at the Company's General Assembly Room. Mr. T. H. Yawger who presided, led a very interesting and instructive discussion on operating troubles peculiar to our several systems and pointed out the necessity for intelligent and co-operative action on the part of all operators at times of accidental interruptions. These meetings are to be held monthly and will be of great value to both those attending and the service generally.

Electric Generation

The new compression chamber lightning arresters recently installed by the Line Department for the protection of overhead distribution transformers have proved very effective. Formerly aluminum cell lightning arresters were depended upon for protection of overhead lines and transformers.

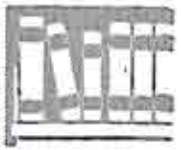
These are large bulky tanks, requiring special fixtures for installing and daily attention. On account of their construction it is not possible to mount them close to transformers and much of their protective value is lost because the inductance of the line between a transformer and the nearest aluminum arrester may be sufficient to cause a lightning discharge to be choked back and go to ground through the transformer.

The compression chamber lightning arrester is small and compact and may be mounted on the same cross-arm as the transformer and has been found to give excellent results.

The greatest trouble on the 4100 volt lines has been caused by limbs being blown against the wires during severe wind storms or occasionally a limb breaking off and falling across the wires.

It has been a hard summer to keep growing trees out of the wires. Scarcity of men for the last two years has resulted in a minimum of attention and the present season has brought a very heavy growth of limbs and foliage. The Electric Distribution Department is, however, grappling with this problem with its usual aggressiveness and is confident that trouble from this source is at a minimum and shortly will be a thing of the past.

Auditing



New Business

Net Increase in Consumers in First Five Months of 1919

	Dec. 31, 1918	May 31, 1919	Increase
Gas	79,037	78,409	(Dec.) 628
Electric	28,907	29,448	541
Steam	88	90	2
	108,032	107,947	(Dec.) 85

Net Increase in Consumers in Twelve Months Ending May 31, 1919

	May 31, 1918	May 31, 1919	Increase
Gas	79,114	78,409	(Dec.) 705
Electric	28,436	29,448	1,012
Steam	55	90	35
	107,605	107,947	342

Statement of Consumers by Departments as of May 31st

May 31	Gas	Elec.	Steam	Total	Increase
1908	38,905	6,155	..	45,060	.....
1909	42,728	6,715	..	49,443	4,383
1910	48,042	7,938	..	55,980	6,537
1911	53,650	9,583	15	63,248	7,268
1912	58,316	11,617	20	69,953	6,705
1913	63,494	14,647	22	78,163	8,210
1914	67,711	17,062	28	84,801	6,638
1915	70,446	20,301	37	90,784	5,983
1916	72,759	23,387	41	96,187	5,403
1917	76,442	26,408	49	102,899	6,712
1918	79,114	28,436	55	107,605	4,706
1919	78,409	29,448	90	107,947	342
Inc. in 11 Yrs.	39,504	23,293	90	62,887	62,887

Net Increase in Consumers by Months

	1917	1918	1919
Increase in Jan.	194	54	(Dec.) 69
Increase in Feb.	(Dec.) 19	56	" 463
Increase in March	386	183	" 277
Increase in April	608	322	307
Increase in May	568	508	417
Increase in 5 months	1,737	1,123	(Dec.) 85

Subscribers to 7% Preferred Stock

Number of Subscribers, June 1	1,750
Number of Subscribers, July 1	1,862
Number of Shares, June 1	11,846
Number of Shares, July 1	12,440

Miscellaneous Data

	May 31, 1919	May 31, 1918	Increase
Miles o Gas Main	490	488	2
Miles of Overhead Line	1,908	1,899	9
Miles of Underground Cable	1,130	1,127	3
Miles of Subway Duct	998	993	5
No. of Street Arc Lamps	1,639	1,716	(Dec.) 77
No. of St. Inc. Lamps	8,833	8,664	169
Total No. of St. Lamps	10,472	10,380	92
No. of Employees	1,312	1,347	(Dec.) 35
Amt. of payroll(Mo.)	$149,724.25	$134,697.19	$15,027.06

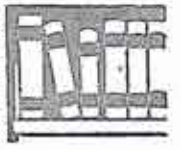
E.B.A. for Month of June 1919

Receipts		
Balance on hand June 1, 1919		1,480.90
Dues—Members	$664.05	
Dues—Company	664.05	
Fees—Members	73.00	
Fees—Company	73.00	
Assessments No. 23 and 25—Members	206.00	
Assessments No. 23 and 25—Company	206.00	
Interest on Bank Balance and Investments	55.09	
Members' Additional Life Insurance	.05	1,941.24
Total		$3,422.14
Disbursements		
Sick Benefits	$451.80	
Accidents off Duty Benefits	12.84	
Accidents on Duty Benefits	4.29	
Dues—Members	1.09	
Dues—Company	1.82	
Medical Examiner's Expense	96.00	
Members' Military and Naval Expense	48.48	616.32
Bal. on hand June 30, 1919		$2,805.82

Membership

Members May 31		793
Affiliated May	129	
Terminated	9	120
Members June 30		913

Auditing



New Business

Net Increase in Consumers in First Six Months of 1919

	Dec. 31, 1918	June 30, 1919	Increase
Gas	79,037	78,669	(Dec.) 368
Electric	28,907	29,628	721
Steam	88	91	3
	108,032	108,388	356

Net Increase in Consumers in Twelve Months Ending June 30, 1919

	June 30, 1918	June 30, 1919	Increase
Gas	79,307	78,669	(Dec.) 638
Electric	28,535	29,628	1,093
Steam	55	91	36
	107,897	108,388	491

Statement of Consumers by Departments as of June 30th

June 30	Gas	Elec.	Steam	Total	Increase
1908	39,265	6,190	..	45,455	.....
1909	43,282	6,817	..	50,099	4,644
1910	48,572	8,045	..	56,617	6,518
1911	54,286	9,674	16	63,976	7,359
1912	58,763	11,838	19	70,620	6,644
1913	64,138	14,811	21	78,970	8,350
1914	68,071	17,200	28	85,299	6,329
1915	70,749	20,585	35	91,369	6,070
1916	73,108	23,683	41	96,832	5,463
1917	76,936	26,640	49	103,625	6,793
1918	79,307	28,535	55	107,897	4,272
1919	78,669	29,628	91	108,388	491
Inc. in 11 Yrs.	39,404	23,438	91	62,933	62,933

Net Increase in Consumers by Months

	1917	1918	1919
Increase in Jan.	194	54	(Dec.)69
Increase in Feb.	(Dec.)19	56	" 463
Increase in March	386	183	" 277
Increase in April	608	322	307
Increase in May	568	508	417
Increase in June	726	292	441
	2,463	1,415	356

Subscribers to 7% Preferred Stock

Number of Subscribers, July 1	1,826
Number of Subscribers, August 1	1,869
Number of Shares, July 1	12,440
Number of Shares, August 1	12,792

Miscellaneous Data

	June 30, 1919	June 30, 1918	Increase
Miles of Gas Main	490	488	2
Miles of Overhead Line	1,913	1,895	18
Miles of Underground Cable	1,131	1,132	(Dec.) 1
Miles of Subway Duct	998	994	4
No. of Street Arc Lamps	1,638	1,723	" 85
No. of St. Inc. Lamps	8,835	8,674	161
Total No. of St. Lamps	10,473	10,397	76
No. of Employees	1,352	1,238	114
Amt. of payroll(Mo.)	$147,745.83	$127,837.45	$19,908.38

E.B.A. for Month of July 1919

Receipts		
Balance on hand July 1st, 1919		$2,805.82
Dues—Members	$711.66	
Dues—Company	711.66	
Fees—Members	67.00	
Fees—Company	67.00	
Assessment No. 23, 25 and 26—Members	231.75	
Assessment No. 25 Company	1.50	
Group Life Insurance	29.18	
Members' Additional Life Insurance	247.37	2,067.12
Total		$4,872.94
Disbursements		
Sick Benefits	$188.87	
Accident off Duty Benefits	30.86	
Accidents on Duty Benefits	119.65	
Death Benefits No. 23 and 25	625.00	
Dues—Members	.93	
Dues—Company	4.93	
Group Life Insurance	129.07	
Medical Examiner's Expense	181.50	
Members' Additional Life Insurance	3.55	
Members' Military and Naval Expense	20.17	1,304.53
Bal. on hand July 31, 1919		$3,568.41

Members June 30		913
Affiliated July	72	
Terminated July	25	47
Membership July 31		960

Attention E. B. A. Members

Upon the death last month of one of our members it was found that when he joined the old association a number of years ago he had named his two children, then quite young, as his beneficiaries. At the time of his death these two children had practically reached the self-supporting age. The circumstances of the case indicated pretty forcefully that, while it may have been wise to name the children beneficiaries at the time he made out his application, the intervening years had altered conditions to such an extent as to have made a change in beneficiary—from his children to his wife—a wise precaution.

ARE *YOU* SURE THAT THE PERSON YOU NAMED AS *YOUR* BENEFICIARY WHEN YOU FILLED OUT YOUR APPLICATION IS THE PERSON WHO, UNDER *PRESENT* CONDITIONS, SHOULD BE YOUR BENEFICIARY? If not, ask the Secretary of the Association, Mr. H. P. Gould, for the proper blank to make the change.

Personals

Company Men Who Have Returned from Service.

Royal F. Bauer	Herbert J. Nenno
Edward H. Bell	John O'Keefe
Walter Chambers	Ralph J. Peartree
Walter Egan	Francesco Petricone
Agostino E. Farese	Gerald L. Streb
John Foley	Sidney L. Tirrell
Joseph M. Harkins	Roy J. Williams

Mr. Emil Augenstein, of the Appliance Department, spent a week at Clifton Springs.

Miss Katharine Golding, of the Billing Department, went to Detroit for her vacation.

Miss Bertha Sauer, of the Telephone Department, has given up her work to take an extended rest.

Miss Essie Levy, of the Appliance Department, has returned from a vacation spent at Grand View Beach.

Miss Florence Nicolay, of the Appliance Department, enjoyed a trip to Cleveland and Detroit.

Mrs. Violet Patrick Gilgunn, of the Auditing Department, spent a week at Belleville, Canada.

Mr. Harry Goodland, of Station 1, spent his vacation time at Buffalo and Silver Lake.

Mr. Julius J. Schenck, of Station 3, has returned from a trip through the Adirondacks.

Mr. Frank C. Taylor is spending the last two weeks in August at Camp Fulton, Old Forge, N. Y.

Mr. Joseph J. Furlong spent a very enjoyable vacation at Lancaster and Buffalo.

Messrs. Harold O. Stewart, John B. Allington and Leon C. Kimpal of the Industrial Sales Department spent their vacation at Conesus Lake.

Mr. Homer C. Deffenbaugh of the Empire Gas and Electric Company spent a few days recently with friends in the Company.

Mr. Ivar Lundgaard attended a meeting of the Executive Committee, Commercial Section, National Electric Light Association, held at Camp Claverack, Association Island, on August 7, 8 and 9.

On July 21st a son, John Raymond by name, was born to Mr. and Mrs. J. E. Fiske. Mr. Fiske is connected with the General Construction Department.

Mr. Cornelius Wiser, of the Appliance Department, spent a very pleasant vacation visiting Penn Yan, Keuka Lake and Elmira.

Miss Frances Katsky, of the Duplicate Billing Department, says her vacation spent in and around Rochester was very pleasant.

Chief Clerk L. E. Sanderson had a week's fishing at Canandaigua Lake. He reports a good time but no "fish stories."

Miss Charlotte Baker, of the Collection Department, passed her vacation in and around Mt. Morris and, according to report, passed it very pleasantly.

Mr. W. H. Spears, of West Station, spent his vacation at Sodus Point.

Mr. and Mrs. Harry Donovan motored to Canada for their vacation to fish and rest.

Mr. Harry Sugden, of East Station, is in Halifax, N. S. visiting his daughter, Mrs. Gillis, formerly Miss Eunice Sugden of the Main Office.

Miss Marjorie Daggs has returned from her vacation spent at the Girls' Friendly Holiday House on Canandaigua Lake.

Mr. Charles E. Hague, of Station 3, spent two weeks at Auburn, Ind., which place was formerly his home.

Mr. Arthur Newman, of Station 1, spent four days of his vacation at Churchville, threshing. Someone says what's the use of threshing barley these days.

Miss Eva Whyley, of the Billing Department, took the very attractive trip to Montreal and Quebec. Both cities are interesting places to visit, Quebec particularly.

Miss Anna Waltuck and Miss Marie E. Vogler, of the General Construction office, both report fine vacation trips. Miss Waltuck went to New York and Miss Vogler to Cobalt and Toronto, Canada.

Mr. C. A. Royce, of the Employment Department, had a very pleasant automobile trip to Asbury Park, N. J., where he enjoyed the bathing and sea air for several days, also spending some time in New York.

Mr. Robert F. Close, of Station 3, drove his automobile eighteen hundred miles during his vacation trip to Ohio, visiting on the way at Cleveland, Ashtabula, Lima and Findlay, traveling a part of the time over the Dixie Highway.

Mr. James Fahy, of the Gas Distribution, expresses himself as more than pleased with his vacation trip through the Adirondack Mountains by automobile. He visited amongst other places, Old Forge, Camp Fulton on Second Lake and Eagle Bay.

Mr. Harold C. Nichols, formerly of the Domestic Sales Department, and lately returned from overseas, is now connected with the Rochester Electrical Supply Company, 240 St. Paul Street.

Mr. Hyman Greenberg visited friends in the Telephone Department recently. He was home on furlough from Fox Hill, Staten Island, having lately returned from France but not as yet having received his discharge from the Army.

Mr. C. H. Stone, Laboratory Director, and his family took a motor trip over July 4th, including a visit to Watkins Glen. They carried their tent and camping equipment with them, choosing their own resting points along lake shores for meals and nights.

Mr. and Mrs. Wm. H. Earle motored through New England in June, going as far east as Providence, R. I. They were in Syracuse, N. Y. and Northampton, Mass. for the tenth reunions of their respective college classes at the University of Syracuse and Smith College.

On Monday evening, July 14, the Gas House Terriers engaged in dancing and eating at the Windsor Hotel, Windsor Beach. The party included Messrs. Haftenkamp, Earle, Baker, Whitney, Cooper, the Henry Brothers, Van Riper and Donovan, with their respective wives and otherwise. Enough cars were commandered to convey the party there and back, led by Judge Donovan of Irondequoit. The chief feature of the evening was the promenade by Bride and Bridegroom Whitney accompanied by the orchestra to the tune of the old familiar Wedding March. In the words of the society column, a good time was had by all.

The Coke Department had a fine outing at Windsor Beach, Monday

evening, July 14th. In the party were Mr. and Mrs. V. A. Miller and son, Mrs. Mildred S. George, Mr. and Mrs. R. H. Evans, Mr. and Mrs. W. E. Jackson, Mr. and Mrs. W. F. O'Brien, Mr. and Mrs. G. H. Wallace, Mr. and Mrs. E. L. Williams, the Misses Sadie Clark, Marie Cozzalino, Mildred Galvin, Alma McIntyre and Marguerite Moran, Messrs. James Casey, C. F. Coyle, Kenneth Dodd, H. S. Fitzhugh, T. A. Mahon, W. J. Marks, D. W. Moody, Francis Murray and G. H. Pike.

A shore dinner was served on the Lake front and was thoroughly enjoyed by everyone. The automobile ride from the office to the Lake, combined with the cooling breezes from the water, made appetites keen.

The evening was spent in dancing at Hotel Windsor. Just before the party broke up Mr. and Mrs. George H. Wallace, recently married, were presented with a purse of gold by their friends in the Department.

It was a pleasant surprise to both parties that the "Gas House Terriers" and the Coke Department selected the same time and place for their outing, since neither department had any knowledge of the plans of the other.

Miss Mary Prindeville, of the Cashier's Department, passed her vacation very pleasantly at Bay City, Michigan. On the way home there was some excitement caused by split rails which sent the engine drawing their train over an embankment. Fortunately no one was injured.

Mr. F. E. Morey, of the Auditing Department, found rest and recreation in a variety of ways during his vacation. He spent some days at his son's farm at Spencerport; also visited his old home town, Windsor, N. Y., and then went to Binghamton to pass some time with his mother who is a very vigorous lady of eighty years.

Mr. J. P. MacSweeney, of the Domestic Sales Department, and a party of friends had a very pleasant auto trip into Canada, covering some 653 miles. Their destination was Dog Lake in the Province of Ontario, and the object of the trip, fishing. Every fishing trip has its "fish story" and an interesting tale told this time is that two big mouth bass, weighing three and one-half pounds apiece, were caught at one cast.

The Electric Distribution Department sends word of pleasant vacations. Miss Lena E. Mills spent some time at Manitou and Stop 10, where swimming was the chief attraction. Trips to Coburg and other places of interest filled the balance of the time. Miss Anna L. Ade made her headquarters at Detroit, Mich, from which place she made short trips to places of interest, and finding much pleasure therein. Miss Ethel Kramer made a number of trips to the Bay, the Lake and Coburg.

Miss Jane Covert, of the Relief Department, and Mr. Earl L. Dey, of Rochester, who recently returned from overseas, were married on Saturday, July 19th, by the Rev. Samuel Robinson, D. D., at his residence on Averill Avenue. Mr. and Mrs. Dey will live at 40 Williams Street.

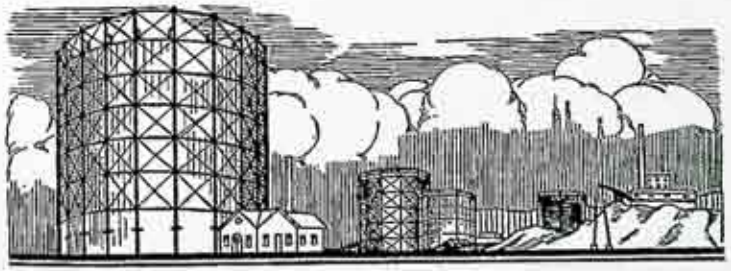
Miss Lillian Elizabeth Sullivan, of 214 Williams Street, Rochester, and Mr. Charles Godfrey Binder, formerly of the Industrial Sales Department, were married on Thursday, July 24, in St. Stephen's Episcopal Church, Philadelphia, Pa. The Rev. A. W. Keable was the officiating clergyman. Mr. and Mrs. Binder will make their home in Albany.

Miss Marie M. Skinner and Mr. Norman H. Davidson, of the Industrial Sales Department, were married at the home of the bride's parents, Mr. and Mrs. Dewitt C. Skinner, 209 Flower City Park, Thursday evening, July 31. The ceremony was performed by the Rev. Samuel W. Beaven, assistant Minister of the Lake Avenue Baptist Church. After a month's stay at Camp Sylvania, Iron Mountain, Mich., they will live at 125 Corwin Road, Browncroft.

Bright Side

There's a bad side, 'tis the sad side—
Never mind it!
There's a bright side, 'tis the right side,
Try to find it!
Pessimism's but a screen
Thrust the light and you between—
But the sun shines bright, I ween,
Just behind it!

—Jean Dwight Franklin.



The Du Bois Press of Rochester

ATTENTION!

SAILORS! SOLDIERS! MARINES!

At the recent session of Congress proposed legislation was favorably reported by both House and Senate committees providing for the construction by returned soldiers, sailors, and marines of soldier settlements in practically every State. Owing to the congestion of legislation, the bill did not come to a vote. It is expected, however, that similar legislation will be introduced and passed at the coming special session, which will give you work almost immediately and the chance to secure one of the

FARMS WHICH WILL BE AVAILABLE

In order to ascertain, for the information of Congress, the attitude of the men in the service toward the plan, the Department of the Interior wishes to hear from every soldier, sailor, and marine in the United States or overseas, who is interested in the plan. Already thousands of inquiries regarding the plan have been sent to the Department from men about to be discharged who wish work and the chance to secure a farm home.

If you are interested, write today, giving your name, home address (street, number, city, and State), age, occupation before enlistment, whether you have had previous farming experience, and where you would prefer to work, whether in your own or in some other State.

DEPARTMENT OF THE INTERIOR,
Washington, D. C.