

# GAS AND ELECTRIC NEWS

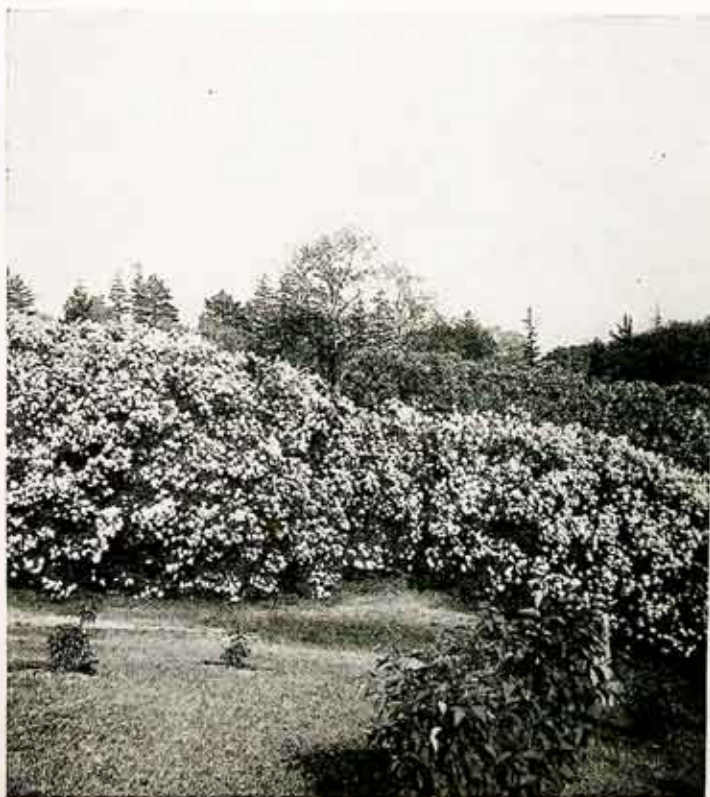
PUBLISHED BY

THE ROCHESTER RAILWAY & LIGHT CO.

VOL. 4

MAY 1917

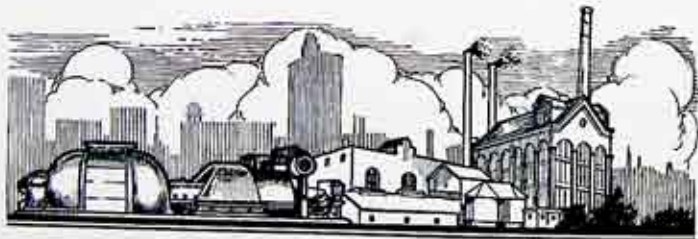
No. 11



Lilacs at Highland Park

## Be a Booster

Boost your city, boost your friends,  
Boost the club that you attend,  
Boost the people round about you,  
Possibly they can do without you;  
But success will quicker find them  
If they know that you're behind them;  
Boost for every forward movement,  
Boost for every new improvement,  
Boost the company for whom you labor;  
Cease to be a chronic knocker,  
Cease to be a progress blocker.  
If you would have your company better  
Boost it to the final letter.



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## The Back Yard Garden

EDWIN H. FISHER

*The supreme need of our own nation and of the nations with which we are co-operating is an abundance of supplies and especially of foodstuffs.*

*Without abundant food, alike for the armies and the peoples now at war, the whole great enterprise upon which we have embarked will break down and fail. The world's food reserves are low.* . . . . . Woodrow Wilson.

**E**VEN in normal times with provisions plentiful a well managed garden is a source of much satisfaction. It enables a family to have vegetables on the table fresh from the garden. It also furnishes very healthful exercise in the open air and sunlight, thus giving the city man an opportunity to get a little closer to nature.

If this is true in ordinary times, think what it means now that our country has entered the world war, the greatest war in all history. We are all familiar with the rapid advance in food prices. Last year there was a shortage in nearly all crops produced in this country, due largely to unfavorable weather conditions, and an even more serious shortage is indicated in the winter wheat crop which is to be harvested this summer. To win the war we must not only raise enough food for our own people, but we must also help feed our allies in Europe, bearing in mind that we must replace every ship load of provisions that is sent to the bottom. It is therefore the patriotic duty of all who are in a position to do so to plant a garden this year and raise at least a portion of the vegetables they use. We should do our best to make

our garden a success, and while there may be some who will be unfortunate in not getting very good results this season, they need not feel that their efforts have been in vain. No one knows how long the war will last and the experience gained this year will prove of much value in the future.

At the outset, it should be noted that the average city lot is not usually an ideal place for a garden. The gardener will have many things to contend with and should be prepared for discouragements and disappointments. He must realize that after he has planted his garden his work has only begun. Caring for a garden is not all play and he must make up his mind to do some good hard work and keep at it persistently. If he is not prepared to spend the time and effort required to properly care for a garden, he had better not waste the seed.

*Location of garden*—There is not usually much choice as to location on the average city lot. If there is nothing in the way, it is a good plan to use a strip across the back end of the lot. This will generally allow a plot varying in size from 40' x 10' to 40' x 30', and still leave some of the yard for other purposes. If there is



an electric light or telephone pole in the back of the lot, it is well to provide means of gaining access to it. The garden should be located where it will get plenty of sunlight.

*Soil*—There is also little chance to choose the soil for a garden on the

Legend.  
Unshaded portion shows moisture saved by cultivation in 100 day period.  
(Data by King.)

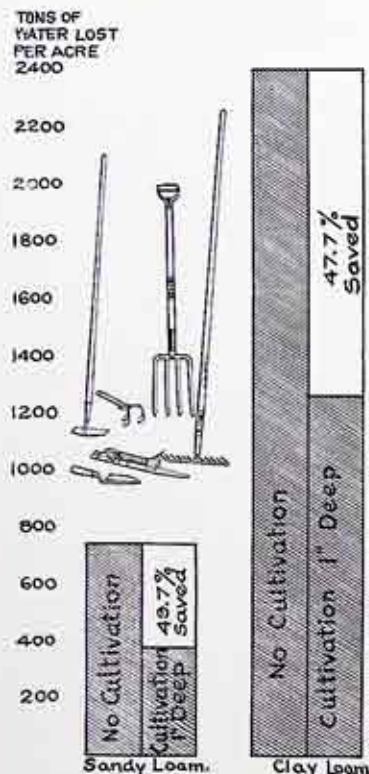


Diagram which shows the value of cultivation (1 inch deep) sand and loam soils. Insert shows tools which every gardener should have

average city lot. It is a case of take what there is and make the best of it. If the lot has been filled in with ashes, tin cans, rubbish or soil taken from an excavation, there is little use in trying

to grow a garden unless there is about a foot of soil on top and a liberal quantity of well rotted stable manure is available to be turned under. A heavy clay soil is difficult to work, but may be improved by the use of manure. Sifted coal ashes are of value in loosening up heavy soil, but not as a fertilizer. Street sweepings are of some value as a fertilizer when turned under, but not as good as well rotted stable manure. Well rotted matter such as leaves or grass will help, and the sweepings of a poultry house make excellent fertilizer. If the ground has been in sod for a long time an application of from 5 to 10 pounds per 100 square feet of air-slacked lime or ground limestone will be of material benefit. This should be turned under when the ground is spaded.

*Tools*—The necessary garden tools are a spading fork or spade, a garden rake, a hoe, and a line or piece of cord. A trowel and a toothed weeding tool may also be used to advantage.

*Preparation of the soil*—When the ground has just dried out enough to crumble when dug up and worked, it should be spaded to a depth of at least 6 to 8 inches. If the ground is in sod, this should be well turned under and not removed. Manure or other matter should be spread on top before the ground is spaded. Two to four inches of well rotted stable manure is a great help for any vegetable garden. All clods of earth should be broken up, large stones should be removed, and the ground should be worked and smoothed over.

*What to plant*—While the season is very backward now, it will probably catch up some by the time this article appears. It is not a good plan to plant too many kinds of vegetables in a small garden. Among the vegetables which might well be planted at this time are lettuce, radishes, beets, wax beans, onions, tomatoes, egg plant and carrots. Cucumbers,

Mr. Emmett O'Neil, son of Mr. Patrick O'Neil of Station No. 3, has been commended very highly for the successful rendering of the character "Hamlet" given by the Dramatic Society of Nazareth Academy.

Mr. Ray Yorkey, formerly Assistant Mechanical Engineer in the Electric Department, has resigned to accept a position as Sales Engineer with the Electric Controller and Manufacturing Company of Cleveland, Ohio.

Mr. Philip Stephens, of the Engineering Department, was taken ill very suddenly on May 4th. An operation for appendicitis was performed that night at the General Hospital. We expect to see "Steve" back on the job in the near future.

Mr. George Myers, electric iron repair man of Domestic Sales Department, answered the call to the colors and joined the Cavalry, being sent to Columbus Barracks, Columbus, Ohio. From there with five hundred more he was sent to the border.

When telephone calls are received for information which must be looked up, it is suggested that person calling be advised that he will be "called back" after the desired information is obtained. This releases the line for other calls and also saves the time of the person calling.

A letter has been received from Mr. R. D. DeWolf in which he states that he has been assigned to the U. S. S. Salem, a scout cruiser, with a speed of 26 knots. "Letters," he says, "are always welcome," and should be addressed to the Salem, c/o Postmaster, New York City.

Mr. Linus Knapp and Mr. William O'Brien, of the Consumers' Ledger Department, went to Plattsburg to take an examination for sergeant in the Quartermasters Reserve Corps. The boys both qualified and were accepted. They are awaiting orders from the Headquarters of the Depart-

ment of the East as to where they will be assigned.

Mr. Almstead, of the Domestic Sales Department, celebrated his 79th birthday on April 25th. The members of the Domestic Sales and Complaint Departments presented Mr. Almstead with a large cake made by the Demonstrators. Across the top of the cake was written the letters "seventy-nine." A large pot of beautiful baby rambler roses was also one of the gifts. "Uncle John" appeared very happy and pleased.

The following persons have been employed in various departments recently. Get acquainted with them.

Mr. S. H. Herman, Electric Meter Department; Mr. Daniel Dugan, Consumers Ledger Department; Mr. Charles F. Taillie, Drafting Record Department; Mr. Henry G. Meacham, Engineering Drafting Department; Miss Helen G. Brown, Telephone Department; and Miss Anna Butcher, Stenographic Department.

Miss Anna Helen Slattery, of the Appliance Billing Department and Arthur H. Maher, son of Mr. and Mrs. Daniel Maher, of No. 215 Melville St. were married on Monday afternoon at St. Mary's Hospital. Rev. D. J. Curran, of Corpus Christi Church, performed the ceremony. Miss Elizabeth Slattery, sister of the bride, was bridesmaid, and the best man was Leo T. Fennell.

After an Eastern trip, Mr. and Mrs. Maher will live at No. 215 Melville street.

Miss Gertrude King, formerly of the Purchasing Department, was united in marriage on April 17th, 1917, to Joseph Barrett. Rev. Louis Bedleman, of St. Louis Church at Pittsford, performed the ceremony. After breakfast served at the bride's home, Mr. and Mrs. Barrett left on a Western trip. After May 15 they will be at home at 510½ Court St..

One of the prenuptial parties given



in honor of Miss King was a luncheon given by the Purchasing Department on April 14th. Coverlets were laid for twelve in Mr. Eaton's private office and three hours were spent in telling stories and jokes, while Miss King was busily engaged in unwrapping many parcels of bridal joke gifts. A purse containing \$10.00 in gold was also presented by the members of the Department. Mrs. James B. Eaton was the invited guest.

◆

Every company must give up its quota of men during the present international crisis. As the magazine goes to press the following men have left the employ of the Company to serve the colors in the various military units listed.

NAME	DEPT.	MILITARY Co.
R. D. De Wolf	Elec. Gen.	Naval Militia
L. C. Kimpal	Indus. Sales	Naval Militia
Wendell Pierce	Engineering	Naval Militia
Fred Keller	Station 3	?
J. B. McMahon	Line	Naval Militia
H. O. Sommer	Engineering	3rd Infantry
C. Hallencrentz	Engineering	Troop H.
Lee J. Baird	Construction	3rd Infantry
G. B. Myers	Domestic Sales	Regular
Gerald Streb	Construction	3rd Infantry
Thomas Reddy	Gas Shop	?
W. F. German	Elec. Meter	3rd Infantry
W. K. Sullivan	Elec. Con.	?
James Burdell	Janitor	?

◆

### Send It In

Send it in.  
 "If you have a bit of news,  
 Send it in.  
 Or a joke that will amuse,  
 Send it in.  
 A story that is true,  
 An incident that's new,  
 We want to hear from you!  
 Send it in.  
 Will your story make us laugh?  
 Send it in.  
 Send along a photograph,  
 Send it in.  
 Never mind about your style  
 If the story's worth the while,  
 And may help, or cause a smile,  
 Send it in."

—Selected.

### Accidents That Have Happened

Mr. Edward Pye, of the Garage, was re-threading a nut when the tap slipped and ripped open the first finger on his left hand.

Mr. Harry Warren, of the Underground Department, had one of his ribs injured while he was bending cable around a manhole.

Mr. John L. Harrison, inspector at the new Gas Works, was passing a chip bench, when a chip of silicca entered his eye, injuring same.

Mr. Elmer Armstrong, of the Electric Construction Department, had a wire thrust into his eye while he was lifting a motor starting compensator.

While tightening a nut on the side of a boiler the wrench slipped off the nut and struck Mr. Barry of Station 3, on the right cheek bone, cutting same.

Mr. Charles M. Hawkins, operator at Station 33, was adjusting weights and coils on an arc transformer, when the current jumped from the coils to the lever. Mr. Hawkin's hand was badly burned.

Mr. E. C. Moore, of the Gas Shop, had his right shoulder injured while gas meters were being passed from one man to another. The meter was passed when Mr. Moore was not looking and struck him on the right shoulder.

While loading barrels filled with meter oil on a truck, one of the barrels being oil soaked slipped from the skid board and caught Mr. James Briggs', (Transportation Department) finger between two barrels, cutting same quite badly.

A team of horses was drawing a heavy casting on a wooden sled when suddenly the whiffletree caught on some steps nearby. While Mr. Culhane, of the Generation Department, was trying to loosen the whiffletree, the team of horses started, causing the casting to fall on his foot bruising two toes and cutting his left leg very badly.

corn and potatoes take up considerable space, but if there is room, a row or two of each might make the garden more interesting.

For details as to varieties, amount of seed required, depth to plant, distance apart of rows and of plants in the row, etc., consult tables which may be obtained from Mr. J. H. Vail, of the Engineering Department, who has charge of the Rochester Railway and Light garden plots and also refer to a pamphlet issued by Mayor Mitchell's Food Supply Committee, a copy of which is being distributed with this issue of the magazine. A very good bulletin called "The Home Vegetable Garden," Extension Bulletin No. 14, is published by the New York State College of Agriculture at Cornell University and may be obtained by writing to them. Information may also be obtained by applying at the Home Defense Headquarters, 44-46 Elm Street, Rochester.

**Cultivation**—The most important feature in the care of a garden is proper cultivation. There are several reasons why cultivation is important, chief among them being the conservation of soil moisture and the eradication of weeds. Cultivation should begin as soon as the plants appear and should be frequent enough to keep the top inch of soil stirred up so as to form a dust layer over the surface. The ground should always be cultivated as soon as dry enough after a rain or after watering. The reason for this is that when the ground becomes wet the value of the mulch is destroyed, and as the ground dries out and cracks appear the rate of evaporation from below increases, and unless the ground is cultivated and a mulch again established, serious loss of moisture will result.

The eradication of weeds is also important, as they rob the plants of moisture and plant food and also interfere with the plants above ground. Cultivation should always

be shallow, not over one inch in depth, as most all vegetables are shallow rooted and deeper hoeing is apt to cut off the roots. The hoe is the principal tool for use in cultivating. A weeder is a good tool to supplement the hoe for closer work.

**Irrigation**—In the case of a back yard garden irrigation would usually consist of watering the garden with a garden hose or with a sprinkling can. Except in the case of a long dry spell or extremely hot weather, very little or no watering will be required, as the cultivation will be sufficient to keep moisture in the ground.

If it is necessary to water the garden, it should be given a good soaking about once a week and not a little water every day or two. Too many people sprinkle their lawn or garden with a hose and imagine they have put on a lot of water when in reality all they have done is to moisten the surface. This may easily result in more harm than good as it simply destroys the dust mulch which has been created over the surface of the garden by cultivation and establishes a path for the more rapid evaporation of moisture from below.

It is best to put on at one application an amount of water equivalent to a depth of  $\frac{1}{2}$  inch or more over the area of the garden. For a garden 40' x 20' or 800 square feet, using an ordinary  $\frac{3}{4}$  inch garden hose and nozzle, it would be well to run the water on for at least an hour. It is best to apply the water late in the day rather than in the hot sun. When the surface is sufficiently dry after watering, it should be cultivated as after a rain to re-establish the dust mulch. Another method of watering is to run water along the surface between the rows. There is a very good method of overhead watering by means of pipes equipped with tiny nozzles and mounted on posts, but this is too expensive to install except in a permanent garden.



## Central Avenue Steam Main

CHARLES G. BINDER

**D**URING the fall and early winter the Company extended its steam distribution system so as to supply the Rochester Fire Department Headquarters and the Hotels Bristol and Savoy all located on Central Avenue. Heretofore the system extended as far as the Front Street Yards, but the main was of insufficient capacity for the additional business. As the line of run was more or less indirect due to changes made since the system was first installed, it was advisable to construct a larger and more direct line as shown in figure 1 which shows the territory supplied by the new main.

The steam is generated at Station 3 and is transmitted at one hundred pounds pressure through a six-inch main to old Station 2. The new

main starts at Station 2 and follows up the penstock to the headgates of Station 2A, thence along the old cotton mill crossing Commercial Street to the New York Central property, then along Brown's Race (being hung from the race wall) as far as the Central Avenue bridge where it crosses diagonally across the race supported on hangers suspended from the underside of the bridge. Entering the blacksmith shop of the Front Street yards it follows along the Central Avenue wall of the garage and yard to Front Street where it crosses to the Fire Department Headquarters basement, crossing Mill Street to the Hotels Bristol and Savoy.

The new main carries steam at one hundred pounds pressure, and is six

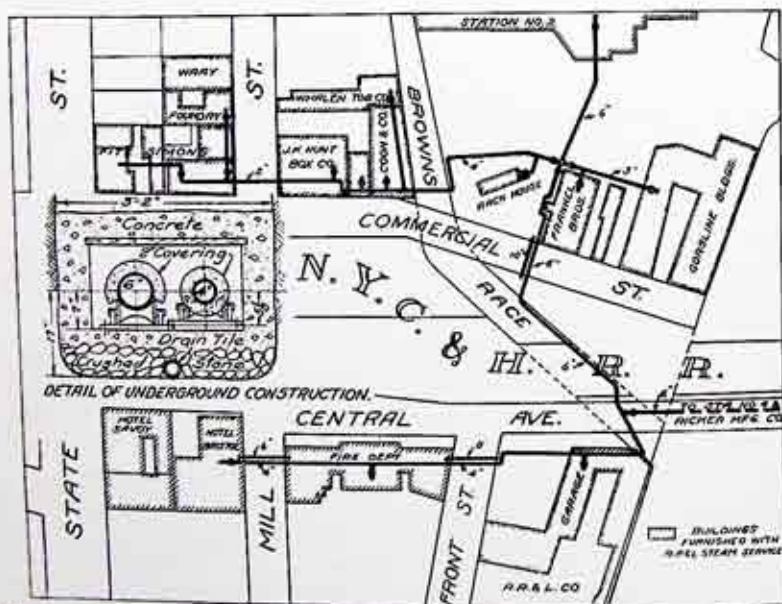


Fig. 1. Diagram of territory served by steam main described in accompanying article. Insert shows detail of the underground construction work



Fig. 2. Illustration showing how pipe ends were clamped together prior to welding.

inches in diameter as far as the Front Street yards and four inches from there to the Hotels. It is of sufficient capacity to transmit eight hundred boiler horse power in steam with a velocity of 8,000 feet per minute. The new buildings added to the line will consume 20,000,000 pounds steam per year and will demand 200 boiler horse power during zero weather. In the future, a low pressure main will parallel the high pressure main so, as shown in figure 1, provision was made for the future low pressure line wherever the pipe was placed underground.

The installation of this line involved both the overhead and underground construction, the former being used wherever possible because both the first cost and maintenance cost are less. The main is 1600 feet long, 1100 feet of which is overhead. Figure 3 shows the underground construction of the mains crossing Mill Street. The bottom of the trench is provided with drain tile and crushed stone in order to drain off any water seepage. The concrete walls were first constructed, a wooden form being used for the inside while the earth bank was used for the outside form. The inside form was then removed and the pipes were installed on cast iron rollers as shown. The line was then tested for leaks before the in-

sulation was applied. A one-inch shoulder was provided on the side walls to accommodate the one-inch boards used for the roof form which was put on last. Altho the usual depth of the main below the street surface is about three to four feet it depends somewhat upon the obstacles encountered, such as water and gas pipes, telephone and electric subways.

As the work was done during that time of the year when the outside temperature was for the most part below freezing, extra precautions had to be taken to prevent the concrete from freezing. In several cases after

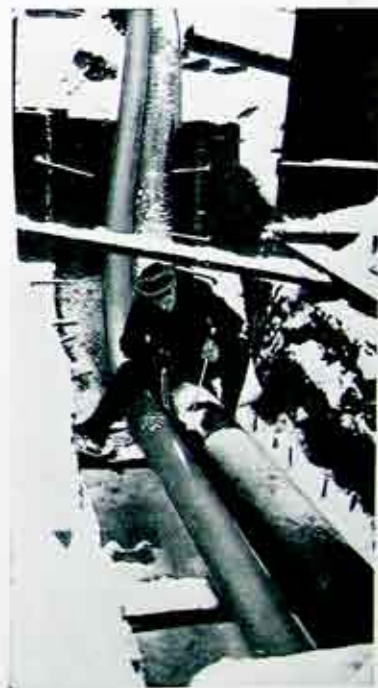


Fig. 3. Welding the 10-in. steam main which crosses Mill Street

the concrete had been poured into the trench, Vulcan Gas Heaters were temporarily installed to provide suffi-





Fig. 4. Overhead portion of steam main running over penstock near Station 2A

cient heat to maintain the temperature in the trench above freezing.

The pipe was furnished in twenty foot lengths with plain ends and was welded together on the job by the oxy-acetylene flame. Figure 2 shows the method used in aligning the pipe for welding. The two angle irons used for aligning were placed on the opposite sides of the pipe and were held in place by the two pipe clamps. The joint was "tacked" by the welder at several places prior to removing the clamps and angle irons so that the rest of the joint could be welded. The welds were tested by turning steam on the line at high pressure. The welding of steam pipes has proved very successful, the joints being just as strong as the pipe itself. In the case of a welded joint the cost is somewhat less than that of flanged union joints and the maintenance cost is eliminated, while with a flange it is necessary from

time to time to renew the packing. In all there are over one hundred welds in the line.

The heat of the steam causes the pipe to expand two and one-half inches for each one hundred feet of length and this is taken care of entirely by pipe bends, thus eliminating the use of expansion joints which are apt to cause more or less trouble due to leaks. Figure 4 shows the long radius bends in the section of the main which leaves Station 2 and runs up over the Station 2A penstock. The A frame shown in the foreground is the type of support used on all the overhead work with the exception of the portion over Browns Race.

The main is insulated against the loss of heat by a two inch thickness of Non-Pareil high pressure covering manufactured by the Armstrong Cork Company. This covering is a very effective heat insulator, the heat loss being about two and one-half per cent of the heat transmitted. If the line were fully loaded and operated at one hundred per cent load factor the loss would be slightly less than one per cent. On the overhead sections the heat insulator is covered with galvanized sheet metal covering to protect it from the weather.

The steam is transmitted to the customers premises at one hundred pounds pressure. For heating, only three to five pounds pressure is required, whereas if industrial steam is used a pressure of forty to sixty pounds is necessary. In order to provide the customer with the pressure desired it is necessary to install pressure reducing valves. The Fire Department Building uses steam for heating only, the Bristol and Savoy Hotels use steam both at five pounds for heating, and at twenty pounds for cooking and other purposes.

The underground construction work was done by the men from the Gas Street Department and the steam fitting work was done by the steamfitters from Station 3.

## The Lower Genesee Gorge

EDWARD A. ROESER

**G**EOLGY has a mysterious sound to many of us, but it is a subject of which a smattering knowledge is a decided asset to anyone. Especially to one who obtains pleasure from the appreciation of Nature's accomplishments, or to one who is concerned with the ease or difficulty of carrying some engineering work, notably hydraulic, to a successful completion.

At Station 5, a tunnel some 1400

foot is necessarily high. In submitting an estimate of the cost of any excavation a contractor is vitally interested in the character of the rock, or earth to be excavated. The required information may be obtained from a geological survey of the district together with an interpretation of the borings in the section where the excavation is to be made.

This very brief outline of the engineering and economic importance



Fig. 1. View of Genesee Gorge looking north from brink of the Lower Falls

feet in length is nearing completion. This tunnel passes through various layers of sedimentary rock. That is, in this case rock which has been formed by the deposition of sands or muds under shallow water, as shown by ripple marks, cross bedding, fossils, etc. Some of the layers are sufficiently strong and require no timbering, whereas others because they crumble so easily, require very careful timbering. When this crumbling rock is encountered progress is slow and the cost of excavation per linear

of geology indicates the necessity of its application in many fields of industrial activity. Besides its use in the field described, probably its most important application is found in the mining industries.

The interest of the subject is, however, not confined to industrial applications alone but enjoys a reputation as a pleasurable pastime. Niagara Falls, one of the seven wonders of the world, to which hundreds of thousands of people are attracted each year is of peculiar geological signif-



icance. In 1842 a survey was made of the Falls by the State of New York and since then at intervals until 1911—between these two dates the Falls

had worn back at the rate of five feet per year. From this data and the fact that the rock is the same, the geologist concludes that the river



Fig. 2. View of Lower Falls Genesee River, showing rock formation and pocket worn out at foot of falls by the water



Fig. 3. Early spring scene of view shown in figure 2

formerly plunged over a precipice about seven miles up the river at a point near the present site of Lewiston.

Our Genesee River Gorge is in a few respects similar to the Niagara Gorge. Both were formed by the



Fig 4.—Piece of sedimentary rock from Genesee Gorge showing "Brachiopods" which are ancestors to our present clam shell

river's vertical cutting away of the softer lower layers of rocks which go to form the river bed. Evidence of this is seen by the pot-holes directly under the brink of the falls, which were formed by the enormous volume of water which is continually falling in the same place. Some of these pot-holes are several feet in depth. Another similarity is the fact that the same parallel layers of rock are common to both places. In the Genesee Gorge in Rochester the layers of rock match on opposite sides of the river indicating that at one time these were continuous across the river. The Lower Falls in Rochester is not wearing back at the same rate as Niagara but nevertheless it is retreating slowly up stream.

Many rocks of sedimentary origin contain an abundance of petrified land and sea life (plant or animal) which is referred to as "fossils." As a rule rock in which fossils exist is of more interest to us than rocks in which they are not found. The writer and Mr. Sommer were enjoying a walk along the Genesee River in

the vicinity of the Lower Falls and the result of our casual investigation of some of the excavated rock disclosed the fossil laden limestone shown in figure 4.

There are several layers of limestone which outcrop in the gorge, of which the specimen shown represents a layer occurring about twenty feet above the lower river bed. It does not possess the hardness that distinguishes some of the upper strata and when it is exposed to the air it disintegrates very rapidly, crumbling into small thin flakes. Rock of this character is unsuitable for use in concrete and therefore from an engineering standpoint is useless.

The history of the formation of this rock carries us back to a time in history of which the only record we have is the record of our rocks. That a shallow sea formerly covered this section of this country is clearly evident from the presence and nature of shells imbedded in the limestone as shown in the figure. The fact that the river has been cutting the rocks deposited in this sea represents evidence which could be employed to determine its age. Authority states that this sea made several incursions over a relatively level plain and its subsidence exposed the rocks with which we are familiar, thus causing great quantities of sea life to perish and finally become tell-tale fossils. The specimen shown indicates that these shells were deposited to some considerable depth and the fact that it is free from other deposits shows that the water was quite clear and free from silt which might have been carried to the larger body of water by a turbulent stream. Inspection will also reveal a presence of plant life.

There are many other phases of the history of such a specimen of rock which would be of interest, but it would lead to a discussion of the theory involved in arriving at definite conclusions which is not within the scope of this article.



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

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Vol. IV                      MAY, 1917                      No. 11

### Obligation

Life is filled with issues. We stand face to face everyday with responsibilities which must be discharged, obligations which must be met, duties which we cannot shirk and still retain our self-respect. In the complex evolution which we call life these issues are very numerous. Some we meet with smiling faces because their performance is pleasurable, others awaken in us varying degrees of distaste and aversion, while still others arise at which we do not smile, from which we shrink, but which we meet with firmness and with an exalted spirit.

Political conditions teach us that we are seeing history made every day, history which is, so far as our country is concerned, another fitting chapter in that dignified collection which

recities our origin, growth and progress. The pages of this history are filled with descriptions of noble deeds, the heritage of which has become our sacred institutions. From them we learn the origin of our ideals of democracy, liberty and opportunity, and also that the right of opportunity carriers with it corresponding obligations. And as the obligations of improving the opportunities are inevitably associated with obligations toward mutual rights and privileges, so too is associated the obligation of grateful recognition and support of the ideals upon which the fundamental necessities for the happiness of the human race depend.

Today we, as a company, are a prosperous and happy business organization forming a part of our commonwealth and nation. As individuals and as an organization we are conscious of our position and of our obligations, to ourselves, our company and the various political units which are subdivisions of our country. As such we are facing sacred issues. We declare our steadfast belief in what is right, not what is expedient. We owe what we are and hope to be, and what we hope the world to become, to American Ideals. We have faith in our country and faith in ourselves. We may justly expect much from the quiet courage of men and women who act from principle, and who further have the intellectual certainty that defense of the nation's ideals is the very best material advantage for the individual.

So as we enter upon a war which will have direct effects upon us as

individuals, as company members and as citizens, we are taking a definite stand as supporters of the Administration. Behind the technique of our business looms a Public Policy founded upon Honor. The individual and corporate respect which is entertained for the principles to which we are committed, will like the old songs of the race, always find a response in our hearts and our imaginations. The memories of what we have become show us what we may expect to be. Democracy is here to stay.



### The Time to Do Things

"The Mill will Never Grind with the Water that has Passed." Some one has said that "Procrastination is the Thief of Time," and many know from sad experience how true it is. Why do most individuals need reminders to be "Up and Doing." Probably just because it is human nature to be optimistic, and to expect the future to bring forth great things. Many, "Kid Themselves," with flimsy arguments as to business, social or family obligations, which make such demands upon their time that they cannot commence something which has been planned. Many watch the golden days of productive activity slip away without realization of the wasted hours. A little honest thinking and a little firmer grip will mean much in the way of actually accomplishing some sincere desires. Smash through the obstacles which inertia has allowed to accumulate. Begin now to do those things which you mean to do when you have time. "Now is the accepted time."

### And Twenty Years from Now

Where will you be twenty years from now? What will you be doing? What sort of a success will you have attained? "Not a fortune-teller," do you say? Nobody ever intimated you need be—there's no relation between predicting a future for other people and looking twenty years along the thread of your own life. It's only the small man who can't tell you pretty close to what he'll be doing twenty years from now. The get-up-and-hustle chap had it all doped out from the start. He knows where he's pointing and he'll "believe" himself into landing there, see if he doesn't.



### To the Optimist

Why does the optimist have so many friends? you ask. It is because he is happy—and happiness is contagious. We all want to be happy, and happiness breeds health. Health brings enjoyment; enables us to think clearly, act wisely, and become cheerfully prosperous. So we all like the optimist.

But why is he happy? you ask again. How can he be an optimist, even when everything goes wrong? There must be a reason. Yes, there is a reason. It is Faith. The business optimist believes in himself; he believes in his business; he believes in the possibilities. He believes in his business because he knows his product; he knows its usefulness; he knows that it is needed—if not now, sometime. This knowledge gives him courage, so he works and smiles and wins. Are you an optimist?—*Clipper Clippings.*



## The Use of Gas in the Manufacture of Shoes

SAMUEL S. AMDURSKY

THAT gas has a prominent place in the manufacture of shoes will be evident when we follow the different steps necessary in the manufacture of footwear.

Shoe making may be divided into two main divisions: the minor division which includes turn shoes such as slippers, ladies thin house boots and babies shoes, and the major division in which the top of the shoe known as the upper is fastened to an insole and at least one out-sole and a heel. In this latter division are comprised various classes, shapes and qualities of goods from slippers up to long top or riding boots.

Either of the above divisions may be sub-divided into hand made and

machine made shoes. For our purpose, however, we will describe the latter method only.

The designer or pattern maker who is quite familiar with the general shape and structure of feet, first originates the particular style that he believes will meet the taste of the public. This design is then laid out on paper from which metal edged patterns are duplicated.

The first step in the manufacture of the shoe itself is to cut out (either by hand or by a machine fitted with a properly shaped die) the upper leather and linings as shown in number 2 of figure 3, to be sent to the fitting department to be fitted and stitched. Eyelets or button holes

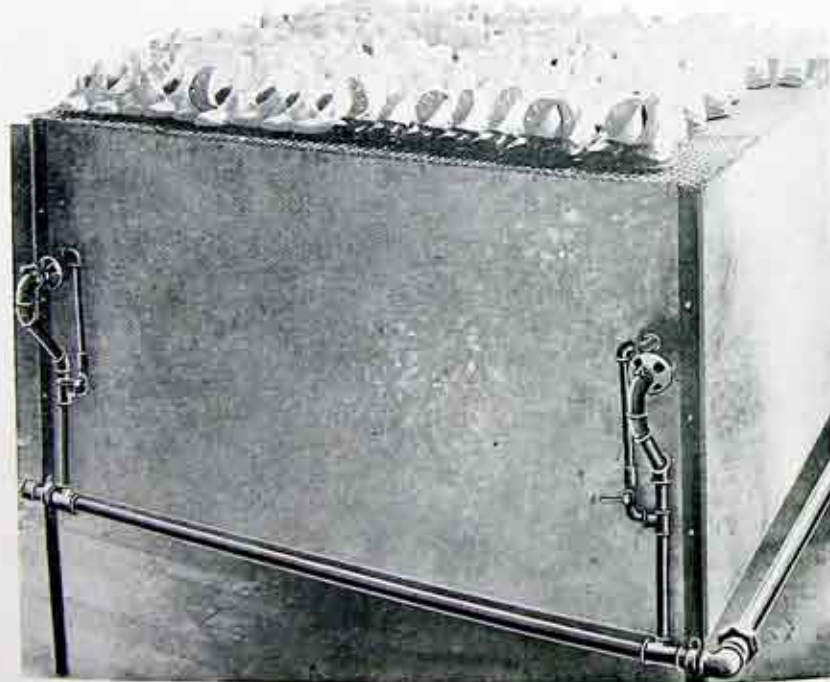


Fig. 1. View of shoe drier developed by this Company in use at the Elam Shoe Company plant

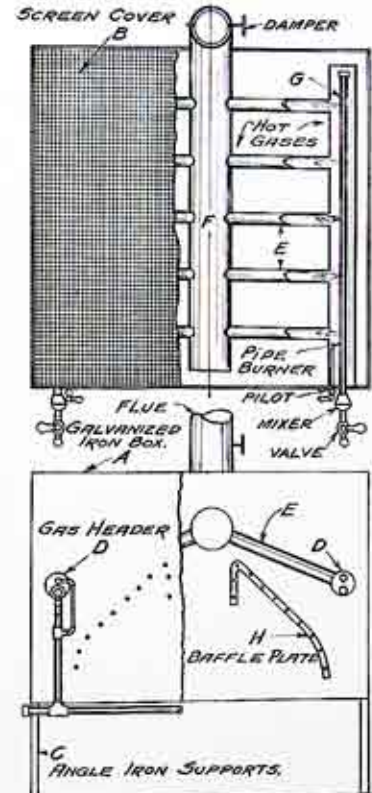


Fig. 2. Diagram showing general design of the shoe drier shown in Fig. 1

are then fastened to the uppers and the whole is sent to the lasting department where the inner sole is cut out and fastened to a last with lasting tacks (see one of figure 4) which is the exact shape and size of the finished shoe. The uppers are then drawn over the last and an inner sole by a lasting machine and tacked in place.

The shoe then passes to the trimming machine which removes all surplus material, while a staple driver fastens staples to the upper and inner sole, holding the uppers firmly in place. A tack puller removes most of the tacks before the shoe is sent to the inseam stitcher a machine which consists of many mechanical

parts, including a gas-fired steam generator which furnishes heat for a wax bath. The operator places a strip of leather about one inch broad over the edge of the upper and at the inner sole. This piece of leather is called a welt and is shown in number 5 of figure 3. The three parts are sewed together with waxed cord before the sole is filled with a compound of cork and paste material, after which it is ready to receive the out-sole. The filler compound is kept in a workable condition by placing it in a steam heated vessel, steam being furnished from the gas steam generator. The filler is then smoothed off and coated with cement, while the sole material which had previously been tempered in a gas-fired water heater is also coated with



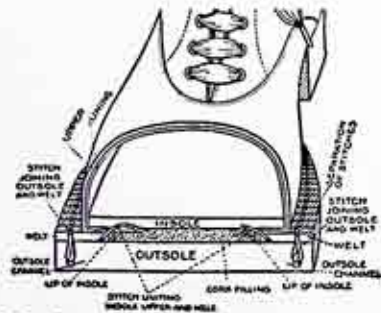
THE EVOLUTION OF A GOODYEAR WELT SHOE

1. A last. 2. An upper. 3. An insole. 4. Shoe lasted and ready to have welt sewed on. 5. Welt partly sewed on. 6. Welt entirely sewed on the shoe. 7. An outsole. 8. Shoe with outsole laid and recorded, channel lip turned up ready to be stitched. 9. Shoe with sole stitched on. 10. Shoe with heel in place. 11. Heel trimmed and shoe ready for finishing.



cement. The sole together with the shank is then pasted to a last by the sole lasting machine.

The outer sole, shown in number 7 of figure 3, is then sewed to the upper and inner sole. After having the sole soaked in water to limber it up, the shoe is passed to the leveling machine which flattens the sole. The heel is then fastened in position and the



CROSS-SECTION OF GOODYEAR WELT SHOE, SHOWING THE DIFFERENT PARTS AND THEIR RELATION TO EACH OTHER

shoe after being trimmed and shaped is sent to the burnishers. These machines are equipped with special tools heated by an open gas flame, which put creases or corrugations on the welt and sole edge.

Preparatory to sand papering, the shoe is placed on a gas-fired air drier to remove any moisture which might be left in the sole of the shoe. If the sole is not perfectly dry, the leather will wrinkle and the shoe will lose its shape. The specially designed shoe drier originated by this Company is

shown in figs. 1 and 2. The shoe drier consists of a galvanized box "A" having a screen cover "B," the whole being supported by the angle iron construction "C." The heater consists of two headers "D" from which branch pipes "E" lead into the flue "F." The pipe burner "G" is placed inside of each header, as shown, and has as many flames as there are branches, each flame having direct access into each branch. The baffle plates "H" are provided below the heaters to direct the flow of the heated air uniformly.

The particular drier here illustrated replaces a steam heated drier in a shoe factory making babies shoes. Due to the uniform temperature the shoes taken from the gas heated drier are in a much better condition and shape for sand papering than with the steam heated drier. The speed of the operation is also practically double while the heat regulation may be controlled at will. The design is such that one-half of the drier may be used if desired thus making the use of the drier flexible. The products of combustion do not come in contact with the shoes, and when the drier is not in use the gas is shut off and the fuel cost ceases.

From the drier the shoe goes through several finishing operations such as sand papering, blacking and burnishing the edges of the soles and heels, cleaning out any pegs which may have pierced through the inner sole, final inspection and boxing prior to shipping.

## Instructing Future Customers to Read Their Gas Meters

CLARENCE C. CLARK

ONE of the principal causes for complaints at the Complaint Counter is the fact that most people do not know, or do not want to take the time to learn how to read their gas or electric meters. If meters were read each day or even each week, at the same time noting what was done that day, or that week, more persons would readily answer their own questions, and the time and energy used in coming to the Company office could be saved. It takes but a few seconds to read the meter and write the reading on a card nearby. By subtracting the last reading from the one just taken one obtains the amount of gas or electricity used during that particular interval. The housewife knows how much cooking, ironing, heating or lighting was done during the interval and she immediately has a check on the meter. This should eliminate the customers' time and energy spent at the complaint counter—also the thousand and one questions that must be asked by those at the counter to get at some of the vital facts. Many persons come into the office and simply say, "My bill is too high," and expect the man at the Complaint Counter to be a wizard who knows just what, why, and when the customer used his gas or electricity. A customer should know why and when these necessary products were used, as well as he knows why and how a dozen eggs are used.

Gas and electricity are invisible products but we readily see or feel their manifestations in the form of light or heat. As made and tested today gas and electric meters are very reliable measuring instruments. The measuring instruments at the grocery or market indicate so many

pounds, the measuring instruments for gas and electricity indicate so many units—cubic feet, or kilowatt hours of gas or electricity used.

After knowing and coming in contact with these facts each day, it was indeed a pleasure to receive an invitation from a principal of one of the Public Schools, to teach about one hundred of the older children in his school how to read a gas meter. Forty-five minutes passed like five, and during that time the children all appeared very interested. Throughout the talk various readings were set on the large dial used, and it was soon discovered that seventy-five per cent of the children had learned to read the settings without assistance; even the comparatively difficult reading of 99,900 proved to be no stumbling block for them. Judging from the interest displayed by the children most of them were down in their cellars that noon studying the gas meter. They probably had never thought of a gas meter before other than a mysterious black box clicking away somewhere down in the cellar.

These children are the Company's future customers and the more they know about the Company, the more they know about meters, methods and the Company's products, the better it will be for both the Company and the customers. If the reading of meters were taught in the schools as a part of the regular work, a very useful knowledge would be given to the children. Gas and electricity are a part of our daily life, we use them continually, and it is therefore wise that we should be acquainted with their measurement as thoroughly as we are with the measurement of a pound of sugar.

*"Efficiency in the employee of a public utility company, consists of loyalty, co-operation and responsibility—loyalty to the company, co-operation in the aims of its management and willingness to assume responsibility in his acts and his manner of treating the public."*



### Adjourned Annual Meeting of the Employees' Benevolent Association.

THE adjourned annual meeting of April 5th of the Employees' Benevolent Association of the Rochester Railway and Light Company was held at the R. B. I. Hall on April 19th at 8 P. M. The employees and their families always look forward to the annual meeting with pleasure, and as a result more than four hundred persons were present to enjoy the evening.

Superintendent Gosnell called the meeting to order about 8:30 P. M. stating that the regular annual meeting of the Employees' Benevolent Association was held at the Main Office on April 5th for the purpose of electing Trustees and the reading of reports for the fiscal year; also to vote on the proposed amendments to the Constitution.

The following Trustees were elected for the ensuing year: Messrs. W. H. White, P. J. O'Neil, W. J. K. Sutherland, George Bailey, Seth Creighton, V. Hoddick, James Fahy and W. J. Conslor. The remaining business was then left over for the adjourned meeting.

Mr. H. P. Gould read the Secretary's Report, and Mr. C. A. Tucker read the Treasurer's Report, both of which have been printed in the Annual Report of the Employees' Benevolent Association which has been distributed to all the employees.

The proposed change in the Constitution to amend Article 7, Section 3, to read as follows: "Sick or accident benefits will not be paid for the first two calendar days of disability," was adopted by a unanimous vote.

Mr. F. W. Fisher gave a short talk in place of General Manager Hutchings who was unable to attend the meeting until much later in the evening. His remarks covered the practical and serviceable value of such an organization to the employees, and

also the subject of Accident Prevention as related thereto.

A safety film obtained through the courtesy of the New York Central and written by their General Safety Agent, Mr. Marcus A. Dow, entitled, "The House that Jack Built" was shown after the meeting was declared adjourned. The picture very cleverly brought home the accident prevention message, and impressed everyone with its vividness.

The entertainment committee composed of Chairman Joseph B. Snitzer, Misses Francis Moore, Mona Pratt and Irene Walsh; and Messrs. Jas. Culligan, Earl Harrington, John Stokes, R. Farnum and Wm. O'Brien had left no stone unturned to insure a pleasant evening to all. Small American Flags were distributed to each person as he entered, and the hall was appropriately decorated with palms and purple and white colors.

After the film was shown the hall was cleared preparatory to the dancing which continued through the remainder of the evening. Refreshments in the form of ice cream and cake were served to all.

### Women's Club Red Cross Work

THE Women's Club has devoted two evenings during the past month to Red Cross activities. On April 6th Dr. E. C. Boddy gave a talk on his experiences while in the service of the American Red Cross in Serbia. Dr. Boddy spent most of the twenty months he was in Europe at the base hospital in Nish, and in his talk before the Women's Club gave an exceedingly interesting account of his experiences working among the wounded and war sufferers while there. At this meeting the sum of fifty dollars was voted by the Club to the Red Cross to be used for work among the French wounded. A donation has also been made by the Club to the fund for the starving children in Belgium.

On the evening of April 25th the Club sewed and worked on supplies for the wounded in Europe,—rolling bandages, stitching bed shoes, making compresses and binders. The members of the Club are giving an evening twice a month to working on hospital supplies, in view of the tremendous need in Europe and the dependence the allied nations place in the United States to assist them in this work. This need of the wounded in Europe has opened an avenue for splendid service on the part of the women of America to which they are rising nobly.



The Company has furnished one end of the Assembly Room on the third floor to be known and used as a recreation room for the women employees. It is attractively furnished in wicker and cretonne upholstery. This fills a long felt need of the girls of the Company and they expect to derive a great deal of pleasure from the use of their new quarters.

### Lecture on Electric Meters

Mr. Berger, of the Westinghouse Electric Manufacturing Company, was in Rochester on May 3rd and gave a talk on electric meters to the members of this Company's electric meter department. Mr. Berger's very interesting talk covered the early history and development of the electric meter, following the subject thru the various stages up to the present stage of the art. The talk was profusely illustrated with lantern slides which very clearly brought out the salient points.

### A Swarm of B's

B industrious, B active,  
B truthful, B kind,  
B cheerful, B just and  
B even of mind.  
B punctual, B patient,  
B hopeful, B pure,  
B virtuous, B honest,  
B liberal, B sure.—Topics.

### A Garden for You

In order to be of material assistance in the case of a threatened food shortage the Company has offered its tillable land to its employees. A copy of the circular which was distributed to each employe is given below. Due to Mr. Stephens sudden illness, Mr. J. H. Vail of the Engineering Department has been appointed to direct the work.

The Rochester Railway and Light Company has several acres of land suitable for gardening purposes which is now available for use by its employees. This land has been divided into plots 50' by 50', or approximately an area of 2500 square feet, which will be assigned to employees desiring them in the order of their requests. Where possible, land will be assigned near an employee's home or near his work. In case the lot is too large, smaller portions will be assigned.

The Chamber of Commerce and the City also have fertile land available, and if requests from this Company's employees are greater than the Company can supply, an attempt will be made to procure land from the above sources.

In order that employees may be able to work their land during the afternoon hours, an attempt will be made to adjust the working hours so that an employee will get off earlier in the afternoon.

The Company will supply plowing, harrowing, fertilizer and seed at cost.

Address all inquiries to Mr. P. F. Stephens of the Engineering Department, who has been appointed to direct this work.

Return this with answers to the questions below. Get busy!—This means dollars to you!

Are you married? .....

Have you children who can help you? .....

Have you a garden of your own? .....

Do you want one or more of these plots? .....

Name.....

Department.....

Home address.....

An advertisement which appeared in a western newspaper:

"Don't kill your wife, let the Western Colonial Laundry do the work."

The hits you made yesterday don't win today's game.



## Gas and Electricity in the Home

BY THE GAS DEMONSTRATORS

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

### Canning

**T**HIS year gardeners and farmers are being urged to make their land yield its maximum in order that we may not only have enough food for our own use, but that we may furnish a surplus to be sent across the waters, perhaps for our own soldiers. This effort on the part of the farmers will have been in vain if the food produced is not stored in time of plenty for the winter season. In this storing, each of us must do our part in canning and preserving the perishable fruits and vegetables as they come on the market. This is a much simpler process than it once was because modern science has helped us in so many ways.

Let us not feel that perhaps this storing of our food is simply advisable, but rather regard it as a sacred trust for our country's sake. This attitude will make our labor lighter, and each of us will feel that we are doing our little part.

We now know why fruit spoils and what to do to prevent it. We may light a gas burner and can a few quarts at a time, using only what heat we need instead of lighting a coal or wood fire, making it almost necessary to spend hours of hard work at one time in order to make the trouble worth while.

Floating everywhere in the air are countless organisms, bacteria yeasts and molds that will settle upon food substances and consume them for their own growth. In preserving food, all these organisms must be killed and the food placed where it cannot be reached by any others. Sterilization by heat kills the germs and tight sealing of receptacles keeps contents sterile. To sterilize cans, lids, funnels, ladles, etc., place them on a cloth in a pan and cover with cold

water, bring to the boiling point and boil three minutes.

### Points to Remember in Canning

The food itself and everything with which it comes in contact must be sterilized by heat; then this sterile food must be sealed at once to exclude all organisms from without.

Only young, tender vegetables may be canned successfully. Fruit is at its best for all cooking purposes just before it is perfectly ripe. In making preserves or in canning fruit, retention of shape and flavor are most essential. Overripe fruit is never perfect in shape and has lost its flavor.

In selecting jars, select those that are in perfect condition. Cans nicked at the top or glass covers nicked on the edge or white-lined metal covers not absolutely level on the edge should be discarded.

Rubber rings should be fresh and new. A soft, elastic ring is preferable to one that is firm, for a closer joint is then secured.

For home canning two methods of procedure are in general use: (1) cooking in a saucepan and then transferring the article to the sterilized cans, and (2) cooking the product in the jar in which it is to be stored.

Bulky foods like spinach and beet greens, hard fruits like apples and quinces and foods in which there is considerable waste as beets, are canned more easily if the process is begun in a saucepan. Peas, asparagus, beans, corn, carrots and tomatoes retain their flavor and keep much better if canned in the receptacle in which they are to be stored. Fruits such as berries, peaches, pears and plums are very satisfactory when either method is used.

The saucepan method was ex-

plained fully in the August 1916 number of this magazine.

For canning fruits or vegetables which are to be cooked in the jars, a patent canner is a delight but a large kettle or a washboiler fitted with a rack that holds the cans from the bottom of the boiler answers all purposes. The rack used in the boiler may be made of lath or similar strips of wood. When finished it should be an inch or two shorter and narrower than the boiler so that it may be lowered with ease. It should be reinforced with supports below so that it will not sag in the middle when laden with filled jars; but these supports must not hinder the free circulation of water below the jars. As the jars are set side by side on the rack, it is advisable to press cloth between them at the bottom to hold them in place. If jars come in contact at any point during the process of cooking they are likely to break.

### Rhubarb

Set the sterilized jars filled with boiling water at one side to cool, then empty out the water and fill to overflow with cold water from the faucet. Have ready stalks of rhubarb cut in pieces almost an inch in length, drop these into the water in the jars, shaking them down meanwhile until no more can be put into them and leave space for at least an inch of water above; add more cold water, adjust the rubber rings and sterile covers, tighten the covers and store in a cool, dark, dry place.

**NOTE:** When lemons are the lowest in price, they may be economically canned in the same way by putting the whole lemon (without cutting) into the cold water.

### Strawberries Canned to Retain Color

Hull and weigh the berries. For each pound of berries allow ten ounces of sugar and one-fourth a cup of water. Cook the sugar and water to a thick syrup, let cool a little, then pour over the washed berries which

have been drained and put into sterilized fruit jars. Fill the jars to overflow, adjust the rubbers and screw down the covers loosely. Set the jars on the rack in cooker and surround with water at about the temperature of the jars. Bring slowly to the boiling point and let boil ten minutes. Tighten the covers and let the jars cool in the cooker. Store in a dark, dry and cool place.

### Spinach

Pick over the spinach, wash through many waters, then set to cook in about a cup of boiling water to a peck. When tender, skim from the water and place in sterilized jars, packing it in solid; adjust the rubbers, strain the water in which the spinach was cooked through cheese cloth wrung out of boiling water, reheat to the boiling point and use to fill the jars to overflow, put on the lids, let cook ten minutes after boiling begins, then tighten the lids.

### Canning Pineapple

Can the pineapple when it is cheapest of course. With a knife trim off the outside and take out "the eyes." The next step will depend upon the use you are to make of the fruit. A round slice with a hole in the center where the core has been removed is pretty for many desserts and salads; lengthwise slices are favored in some tropical countries and pieces picked from the core with a silver fork, the fork following the natural lines of division are good for use in salads and cocktails. For use in omelets, souffles, Bavarian Cream and punch, grated pineapple is preferable. The fruit is canned just as successfully without sugar as with it and the omission of the sugar simplifies the preparation of a dish in which the pineapple is used with other ingredients. In canning in an open kettle cook until tender, in the jar cook about half an hour. Fill the jars with hot water or syrup (a cup of sugar to a can) as is desired.





## Sales



### Construction Work on Barge Canal

HAROLD O. STEWART

THE Ganley Construction Company of Minneapolis is about to commence its work on the Barge Canal Harbor. This work will consist of building the concrete walls along the river banks between the Erie Railroad Bridge and the Court Street dam.

The methods to be used on this contract are new and would seem to be very efficient. As the chief work consists in handling gravel, sand and cement, before and after being mixed with water, almost every step can be done by machinery. The contractor will use the track nearest the river for his portable storage bins and the concrete mixing and handling car. The portable storage bins will be moved forward once for every 1000 feet of wall. There will be a pit under these bins into which sand and gravel will be dumped from the cars, and a bucket conveyor will elevate the sand and gravel from the pit to the bins.

A narrow gauge track is to be laid between the rails of the standard track. This track will run under the bins and to a "Y" near the mixer and hoist car from which two tracks will run to the rear of the car.

The mixing and hoisting equipment will be mounted on a flat car at the rear of which will be two elevators, one over each narrow gauge track. The elevator platforms will be so connected with cable that when one platform is up, the other will be down. The mixer will be near the center of the car, and there will be a platform over the mixer and extending to the

two elevators. In the front of the mixer will be a hoisting and distributing tower for placing concrete in forms which are above the car level. This same hoisting machinery will be used to pull the car ahead. A three horsepower motor driven centrifugal pump will be mounted on the main car to supply water to the mixer.

The cycle of operations is as follows: A small car is run under the bins, it is filled, drawn along the track and run on to one of the elevators at the rear of the mixer car. The car is raised to the platform above the mixer, pushed over to the mixer hopper and dumped. This car is then pushed over to the other elevator, lowered and returned to the bins.

Electric motors will be used for the operation of all machinery. A three phase power line will be run along the track and electrical connections for the portable machinery will be installed on every third or fourth pole.

The new paper mill at East Rochester, which is owned by the Lawless Bros. Paper Co., commenced making paper on March twelfth. The designing work and the supervision of the installation of paper making machinery was so carefully done that the delays usually encountered in starting complicated machinery were eliminated. The main motor drive consists of a 250 kilovolt ampere synchronous motor. The machines driven by this motor are, two beaters with their screens and separators, one jordan, and several pumps. A small steam engine operates the adjustable speed section of the paper machine, the exhaust steam being

used to heat water for the beaters. The constant speed section is driven by a 35 horsepower motor. Water for the mill is pumped from Irondequoit Creek by a 15 horsepower centrifugal pump. The machine shop is driven by a 5 horsepower motor.

In order to change the 25-cycle line along the B. R. & P. R. R. which supplies the Ritter Dental Manufacturing Company with power, it will be necessary to replace the 25-cycle motors with 60-cycle motors. The Ritter Dental Mfg. Co. has given this Company the necessary permission to make the change. They also have assured the Company that they will continue to use its current and will add 35 horsepower in motors to the present connected load of 115 horsepower.

Bastian Bros., 59 Mount Hope Avenue, 'threw over' their entire load upon the lines of the Rochester Railway and Light Company on April 19th in order to try out the service for a month with the understanding that if the cost is satisfactory, they will continue to use it exclusively during the summer months and partially during the winter months when steam will be required for heating purposes.

On April 24th construction was begun on the new steam main running from the Rochester Candy Company to the Shinola Company at 8 Jay St. Upon completion of this main, the entire steam and electrical loads of the Shinola Company will be taken over by the Rochester Railway and Light Co.

When the Dock Contractor Company took the contract to build the new Station 5 it was found that they had direct current, three phase and two phase motors. In order to avoid changing the motors and still supply

the power from our three phase service, a motor generator set was installed to supply direct current for the electric hoists and locomotives, and a three phase to two phase transformer to supply power to the two phase motors.

Mr. Fred Becker will soon erect a large limestone crushing and pulverizing plant near Gates Centre on the New York Central Railroad. The pulverized stone is to be used for treating farm soils. 150 horsepower in electric motors will be installed for the operation of the machinery.

The Rochester Herald is equipping its new home, the Barry Building, with complete gas equipment including linotype machines, stereotype furnace, matrix heaters, steam tables, dross melting furnace and other smaller appliances.

The Genesee Valley Lithograph Company, 27 N. Washington St., has had its large embossing machine equipped with gas burners. These burners replace a steam coil.

Mason's Best Yet Laundry, 1610 Dewey Avenue, has purchased a 10 horsepower motor to take the place of a 35 horsepower Augustein rotary steam engine.

The Rochester Can Co. is erecting a large addition to its factory on Hague Street. All of the machinery will be motor driven.

The Pfaudler Company has recently purchased one large oven furnace for use in its experimental laboratory.

Coates, Bennett & Reidenbach, Hague Street, are installing a 40 horsepower motor on a scrap baling machine.



The Shantz Button Company has placed an order for a Selas Apparatus to displace gasoline equipment.

The Bausch & Lomb Optical Company has purchased one of the largest Selas apparatus used in this country.

George Boudon, Electric Garage, has recently installed a specially designed battery heater.

The Vacuum Oil Company has purchased ten additional Johnson Furnaces for its can shop.

This Company has recently designed and installed a shoe dryer at the Elam Shoe Company.

The Demler Art Corporation has installed two enameling ovens.

The American Laundry Machinery Company has purchased two ten gallon coffee urns to supply coffee to employes.

The Foster Armstrong Company of East Rochester has placed an order for special burners to heat bronzing ovens.

The Samuel Weiss Dry Cleaning Company has installed a three horse-power gas-fired steam boiler.

The Rochester Spectacle Company has installed one additional gold melting furnace.

The Rochester Evening Times has placed an order for a gas-fired stereotype furnace.



How would you like to have one of these "250 light" (3200 cubic feet per hour) meters installed in your basement? Four of these meters have been installed in a local manufacturing plant

## How a Gas Service Leak is Handled

FRANK R. HERRING

WHEN a consumer registers a complaint regarding an odor of gas in the house, the complaint is referred to the Gas Shop Department. If it is an inside leak, that is from the inlet of the meter through the riser, house-piping, etc., it is taken care of by the Gas Shop.

If the odor of gas is coming through the cellar wall the complaint is referred to the Gas Street Department which immediately investigates to determine whether gas is escaping from the service or main. A test is first made by placing needle holes in the lawn over the service with a bar and then testing with a hollow bar to determine where the odor of gas is the strongest. Thus, if the leak is in the service, an excavation is made where the odor is the strongest and the service pipe is bared until the source of trouble is found. There are many causes of gas leaks in services, such as split pipe, broken service at main, leaking joints, pipe rusted out at cellar wall, electrolysis and pipe eaten through by ashes.

When a leak is found it is repaired temporarily by wrapping the pipe with tallowed muslin. If it is necessary to renew the service pipe it is plugged near the main and then a new pipe is installed. All services are renewed with 1½-inch pipe and where the gas consumption warrants, a larger service is installed. There are gas services in Rochester as large as 8 inches but this is unusual, about 90% of the services being 1½ inches.

The leaks referred to above are those in the residential section. Where a leak is found in the downtown section it is very much more difficult because there are so many possible obstructions to be considered, such as electric ducts, telephone cables, and water lines.

## Gas Manufacture

With No. 4 water gas set and the waste heat boiler down for repairs, spring house cleaning at East Station is well under way. This unit has been in continuous service for 120 days and in that time it has made nearly four hundred million cubic feet of gas, consuming approximately seven thousand tons of fuel, fourteen million pounds of steam, and one million five hundred thousand gallons of oil.

The waste heat boiler which is an auxiliary to this water gas machine has been in operation about the same length of time. By its utilization of the waste blast gases from the set, it has saved during this period, approximately 550 tons of boiler fuel.

The 20" gas main connecting stations East and West is completed from the west end of the pipe bridge crossing the Genesee River, to within a few feet of the inlet of the concrete purifiers to which it will ultimately be connected. The section of the main on the bridge is made of steel pipe with welded joints—beyond the bridge it is constructed of standard 20" cast iron pipe with air driven lead wool joints.

Mr. N. C. Slaton, erecting engineer for H. Koppers Company, is in Rochester with his assistants, and foundations are already laid for most of the equipment of the new light oil plant, which this Company is installing. The washer itself will be so located that the entire gas output from both East and West Stations can at all times be passed through it. This necessitates cutting into a twenty-four inch live gas main for insertion of valves and fittings.

"Charms strike the sight, but merit wins the soul."—Pope.





## Electric Generation



**P**REPARATORY to the installation of two self-cooled transformers at Station 35 it was found necessary to excavate below the basement floor to a depth of four and a half feet to allow sufficient head room for the high tension leads on each transformer. Directly below the basement floor there exists a very hard type of rock making excavating very slow and difficult. Dynamite can not be used at this particular location as the first floor which supports columns would be subjected to a dangerous strain.

The transformers will be lowered through an opening in the floor and moved on rollers to their respective places. A dividing wall between each transformer eliminates the hazard of communicating trouble in case one transformer should develop a fault. Owing to the great number of cables supported on the basement ceiling and considering those to be added in the future it was decided to build a subway below the basement floor level and along the north wall of the station connecting the manholes at the northeast and northwest corners of the station. This subway will be laid in the same rock formation which was excavated for the transformers. Drainage for the transformer pit subway and subway manholes will be by gravity to a sump in the northwest corner of the station, all drainage being pumped from this sump to the sewer. The present switchboard located on the east gallery will be moved to the southeast corner of the apparatus floor directly over the transformers, the starting panels for both rotaries being an added part to this switchboard. The street railway switch-

board will be located in the northeast corner of the station directly over the station subway entrance. The cables on leaving the board will enter directly into subway conduits.

The 1000 KW direct current, McIntosh-Seymour unit at Station 3, is being dismantled for the purpose of making room for a present 2000 KW railway rotary converter and a future 1250 KW Edison rotary converter. These machines will be supported by concrete columns, ample space being provided between columns for the convenient moving of transformers in case the necessity arises for removing a transformer core. The present 11,000 volt bus gallery is to be extended about three feet to provide room for eighteen current and potential transformer cells, which is a part of the installation for the six 11,000 volt oil switches which are now being installed.

A new floor for supporting future transformer installations is being installed at Station 6 in the southwestern section of the building below the apparatus floor. Concrete piers are being built from the raceway bed to the supporting eye-beam level. The water flowing through this particular section was controlled so that only a small cofferdam was necessary to protect the building of the concrete piers.

### A New Arithmetic

"I am not much of a mathematician," said the cigarette, "but I can add nervous troubles to a boy, I can subtract from his physical energy, I can multiply his aches and pains, I can take interest from his work and discount his chances for success."



## Auditing



### Monthly Report on New Business

Net Increase in Consumers in first three Months of 1917			
	Dec. 31, 1916	Mar. 31, 1917	Increase (Dec.)
Gas.....	72,721	72,652	69
Electric.....	22,282	22,778	496
Steam.....	43	49	6
	95,046	95,479	433

Net Increase in Consumers in twelve Months ending March 31, 1917			
	Mar. 31, 1916	Mar. 31, 1917	Increase
Gas.....	69,492	72,652	3,160
Electric.....	20,050	22,778	2,728
Steam.....	41	49	8
	89,583	95,479	5,896

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

Mar. 31st	Gas	Electric	Steam	Total	Increase Each Yr.
1908	37,481	5,345	---	42,826	---
1909	41,029	5,730	---	46,759	3,933
1910	45,800	6,406	---	52,206	5,447
1911	50,997	7,950	16	58,963	6,757
1912	55,592	9,552	19	65,163	6,200
1913	60,163	12,157	23	72,343	7,180
1914	64,914	14,349	30	79,293	6,950
1915	67,858	17,346	37	85,241	5,948
1916	69,492	20,050	41	89,583	4,342
1917	72,652	22,778	49	95,479	5,896
Inc. in 9 Yrs.	35,171	17,433	49	52,653	52,653

### 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
	755	788	433

### Company's Savings Depositors

STATEMENT TO APRIL 1ST, 1917	
No. of depositors, May 1, 1917.....	92
Increase during April 1917.....	1
Amount deposited during April.....	\$723.50
Total deposits to May 1, 1917.....	\$10,067.26

### Miscellaneous Data

	Mar. 31, 1916	Mar. 31, 1917	Increase
Miles of Gas Main.....	435	444	9
Miles of Overhead Line.....	1,765	1,824	59
Miles of Underground Cable.....	1,040	1,060	20
Miles of Subway Duct.....	906	948	42
No. of Street Arc Lamps.....	4,149	1,576 (Dec.)	2,573
No. of Street Incandescent Lamps.....	4,524	7,818	3,294
Total No. of Street Lamps.....	8,673	9,394	721
No. of Employees.....	1,053	1,188	135
Amt. of Pay-roll (Mo.).....	\$84,846.90	\$99,471.86	\$14,624.96

### Employees' Benevolent Association of Rochester Railway and Light Co. For Month of April, 1917

Receipts	
Bal. on hand 1st of month.....	\$1,924.01
Dues—Members.....	\$508.46
Dues—Company.....	508.46
Fees—Members.....	40.00
Fees—Company.....	40.00
Assessment No. 5—Mem.....	75
Assessment No. 5—Com.....	75
Group Life Insurance.....	10.79
Mem. Additional Life Ins.....	25.74
Total.....	\$3,058.96

### Disbursements

Sick Benefits.....	\$354.25
Accidents off Duty Ben.....	58.93
Accidents on Duty Ben.....	59.35
Group Life Insurance.....	20.37
	\$552.90

Bal. on hand May 1, 1917..... \$2,506.06

Members in good standing March 31, 1917.....	757
Affiliated during April.....	33
Unaffiliated during April.....	14
Gain.....	19

Total Membership ending April 30, 1917..... 776



## Athletics



The Company's Baseball Team has been reorganized for the season 1917 and has entered the Rochester City League, which is considered the strongest League Rochester has seen as yet. It consists of four teams—Rochester Ry. and Light, Kodak Park, Nationals and Maltops. By reducing it to four instead of six Clubs as last year, it brings the games to a higher standard, inasmuch as the best players have been secured by the teams mentioned.

Mr. J. P. MacSweeney is President of the league and Mr. E. C. Scobell is one of its Board of Directors. Ray Connell has obtained a team which he says will win the pennant this year, and Mannie Freedman will Captain same and hold down first base.

A practice game was played Sunday, April 29th, at the Company's grounds, Blossom Road, and the result was that Connell's team beat Ray Guppy's team by 1-0. They will continue to play each Sunday until the opening game, which takes place against the Nationals on May 20th at National Park, Hudson Ave. Come out and give the boys a good send off.

## BOWLING

West Station sent forth a bowling challenge in the February issue of the Gas and Electric News. On March 2nd five sturdy bowlers went forth and conquered West Station. But West Station was sure it could win and the same five were challenged again for a match on April 27th. This time the West Station boys won—they bowled like they never bowled before. All those who care to witness a bowling match which will be fought every inch of the way, should be

present to see the third and final game to be played sometime in May. The rivalry is now keen!

Result of the last game:

Office	Works
870	780
735	788
754	791

Herman Russell	J. P. Haftenkamp
Harry P. Gould	S. V. Van Riper
Ray L. Davis	J. E. Cooper
Ernest C. Scobell	D. S. Crawford
Ivaar Lundgaard	J. L. Harrison

## Personals

Miss Marion Rogers has been engaged as saleslady on the main floor in Domestic Sales Department.

Miss Rogers, of the Balancing Group, has returned to her duties after an absence of about four months.

Mr. Fred Close, Chief Operator at Station 3, has returned from a two-weeks vacation spent in the vicinity of Rochester.

Mr. Manic Freedman, the "draft clerk," reports that the ventilation in the Billing Department is very satisfactory.

Miss Francis Kennedy, of the Billing Department, is spending a two weeks' vacation with her mother at Watertown, N. Y.

Mr. Alfred Reamer, lamp counter salesman, Domestic Sales Department, gave us a call recently after nine weeks in the hospital.

We are pleased to see Mr. Slobbe back again selling goods in the Domestic Sales Department after a severe attack of tonsillitis.

Mr. Charles Rhodes, Domestic Sales Store-Keeper, recently had all of his chickens stolen. He then sold his cow and pig fearing they might be called for.

**I**F you want to know whether you are going to be a success or a failure in life," said the late James J. Hill, President of the Great Northern Railway, "you can easily find out. The test is simple and infallible. Are you able to save money? If not, drop out. You will lose. You may not think it, but you will lose as sure as you live. The seed of success is not in you."

