

Volume 11 Number 6

GAS and ELECTRIC NEWS

Published by
The Rochester Gas & Electric Corporation

DECEMBER, 1924



Our 6% Preferred Stock
The Gift That Endures



MR. WALTER N. KERNAN

Vice President and Director of the Rochester Gas and Electric Corporation.


Vice President and Director of the Mt. Morris Water Power Company.

Vice President and Director of the Mt. Morris Illuminating Company.

First Vice President and Director of the New York State Railways.

President and Director of the Mohawk Valley Company.

Season's Greetings

 AM pleased to be asked to write the "Season's Greetings" for the "News" and glad of the opportunity of stating what, to my mind, have been the main factors in the past success and prosperity of the Company— First, the foresight, the energy, the initiative, the policy of frankness and fair dealing with the Public and the Company's customers of Mr. Searle, Mr. Russell and their associates; Second, and equally necessary to attain the results desired, the hard work, the efficiency, the intelligent co-operation of the many men and women working with them and under their direction.

It is my sincere wish that every member of the organization, every employee of the Company, may share in the prosperity that his and her work, so well and so loyally done, has and will bring to the Company, and that to each of them may come, not only this but many another, Merry Christmas and ever increasingly prosperous Happy New Year.

Sincerely yours
Walter N. Kernan

GAS & ELECTRIC NEWS

Published by The Rochester Gas & Electric Corporation

Vol. 12

DECEMBER, 1924

No. 6

Gas for House Heating

JOHN B. ALLINGTON



GAS was first used for house-heating purposes in the natural gas fields. Natural gas was very cheap and was burned in ordinary coal furnaces and boilers. This, of course, was a very wasteful method of burning gas, but the rate being very low it was still cheaper than coal. Its very cheapness was the cause of failure. In time there were so many users that the wells could not produce enough on cold days and it was largely abandoned on account of unsatisfactory service. The development of more economical burners and more efficient appliances has led to a new future for heating with natural gas in some fields and has been a big factor in the development of the use of manufactured gas for heating.

In the use of manufactured gas for house-heating we need have no fear of shortage because as the demand grows the gas manufacturing plants are enlarged, or more efficient methods employed so that the supply is always adequate and the quality of service always improving. The increased cost of manufactured gas over the cost of coal is in itself a check, demanding the use of only the most efficient appliances and discouraging waste.

A ton of coal could be delivered in your cellar twenty years ago for \$5.00 per ton. This was equivalent to 25,000 to 30,000 cubic feet of manufactured gas which at 95 cents per

1000 would cost \$23.75 to \$28.50. Obviously it was out of the question to use gas when coal was so cheap. Today that same ton of coal would cost \$15.00 and for house-heating purposes the cost of gas has not increased. This change in comparative costs has made it practical to use manufactured gas to replace coal.

In the fall of 1921 a hot water boiler was sold to Mr. Herbert B. Cash of 591 Wellington Avenue. Mr. Cash had built a new home and wanted to use gas because of its cleanliness and convenience. The installation consisted merely of the boiler with thermostatic control and water temperature control such as is used on any coal fired boiler. Mr. Cash's bills for heating were well within our estimates and he has been pleased with his installation. At one time he left the city for a week leaving the boiler without attention. The faithful control maintained a uniform temperature of 50°F. during this period without attention of any kind.

Mr. Searle, who has always been a gas enthusiast, early became interested and asked for a gas furnace for his home. We were not satisfied with the hot air furnaces on the market, feeling that the corrosive action of the flue gases would seriously affect them. A hot air furnace was built by the Portland Gas and Coke Co. of Portland, Oregon, made almost entirely of cast iron, but we could not pur-

chase one of these. We, therefore, designed a furnace and the illustration, Fig. 1, shows the first furnace built in Mr. Searle's home. This furnace was decidedly a success in that it was highly efficient and had wonderful heating characteristics. It required the development of a better humidifier, refinements in design to reduce its cost and improvement in burner design but it pointed the way to a future in hot air furnaces that has not yet been appreciated in general by other gas companies.

Mr. Searle then sent the writer out to learn more about hot air furnaces and the developments were studied in Baltimore, Denver, Los Angeles, San Francisco and Portland. It had been our fear that the corrosion difficulty had not yet been satisfactorily solved and the result of our

studies was the later development of the second furnace built in Mr. Searle's home. This furnace is illustrated in Fig. 5 showing the front and Fig. 3 showing the rear of the furnace.

This furnace is distinguished from the first in that it has two combustion chambers. There are essentially two furnaces within one casing. The humidifier is shown on the rear. This consists of a fine jet of water impinging on a wooden block. Cold air from the return pipe carries a portion of the resulting mist into the hot part of the furnace where it is evaporated and the excess is drained to the sewer. No adjustment is necessary and the amount of water evaporated being proportional to the circulation of air, it follows that on cold days when a larger amount of water is

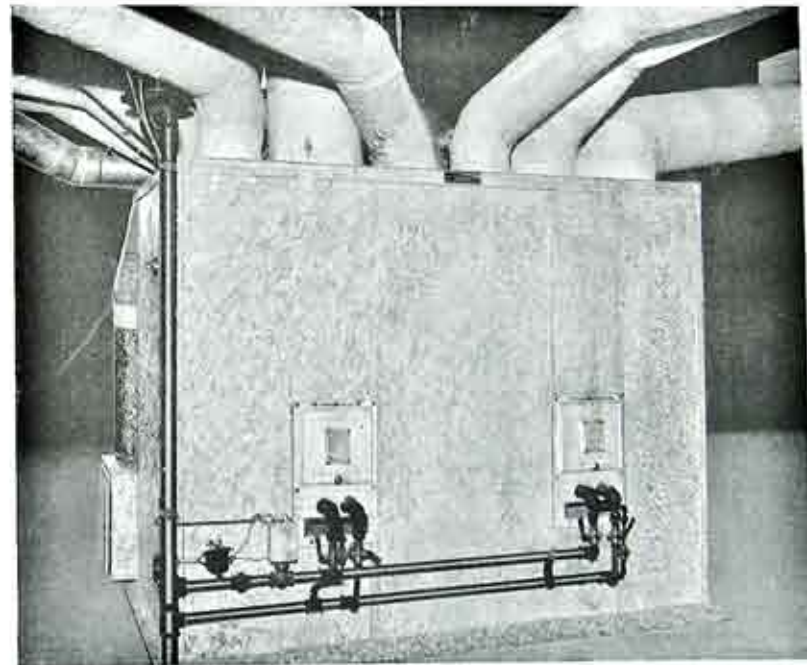


Fig. 5: Front View of Second Gas Furnace Developed by the Company. This is Another View of the Same Furnace as That Shown in Fig. 3.

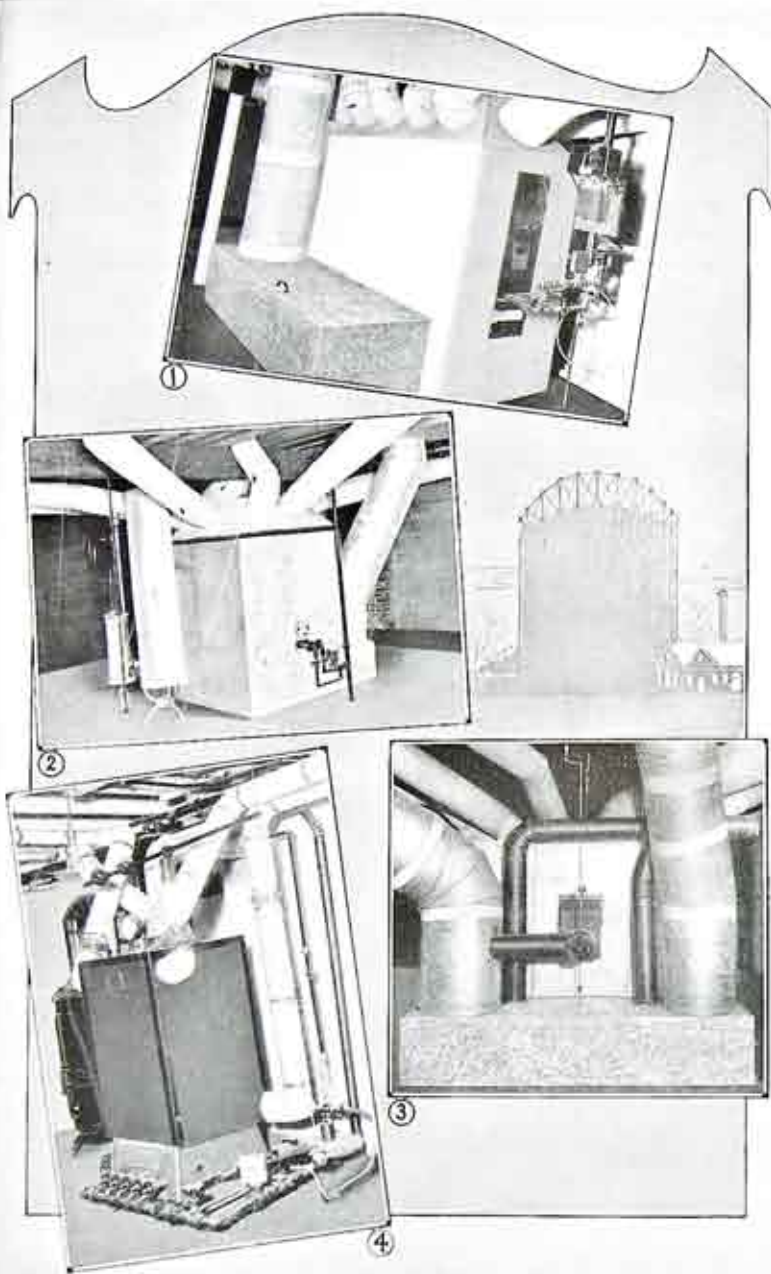


Fig. 1: The Company's First Gas Furnace. Fig. 2: Recent Installation of Hot Air Gas Furnace in Home of Mr. I. E. La Grange, 28 Navarre Rd. Fig. 3: Back View of One of the Models Developed in Mr. Searle's Home. Fig. 4: Hot Water Boiler Installed in Home of Mr. J. J. Ottmann, 44 Crossman Terrace.

necessary to maintain a proper relative humidity, the circulation being faster, more is carried into the furnace to be evaporated. A constant flow of 20 gallons of water per day, which costs 25 cents per month, maintains a constant relative humidity of 40-50% in the house. Aside from the humidifier which is a Rochester development this furnace was practically the same as the one developed in Portland. Dividing the combustion chamber relieved us of

chamber is now made of a single casting with vertical flues in place of the former welded steel box. This has increased the capacity and improved the flue condition. The casing has been made stronger, better and cheaper and an equalizing bonnet has been added for the hot air off-take. The humidifier has been improved in appearance and is now made of zinc. These developments will undoubtedly go on and the furnace of the future may be cheaper and



Fig. 6: Mr. J. J. Ottman's Residence, 44 Crosman Terrace, Which Is Being Heated by the Hot Water Boiler Shown in Fig. 4.

most of our burner troubles and a further improvement was made in the casing.

Fig. 4 shows a hot water boiler installed for Mr. J. J. Ottman, at 44 Crosman Terrace. This boiler is controlled by an electric motor operated gas valve actuated by an eight-day clock thermostat in the living room. Mr. Ottman merely winds his clock once every week and his heating system runs itself.

During the past year there has been a still further development of the hot air furnace. The combustion

better although no more efficient, as we have now reached the ultimate in practicable efficiency. The heat left in the waste gases is necessary to carry them up the flue.

Fig. 2 shows one of the most recent hot air furnaces. This is installed in the home of Mr. I. E. La Grange at 28 Navarre Road. We have made intensive studies of warm air distribution systems and in nearly every installation make corrections in the existing piping to insure a proper distribution of the heat to the rooms. In the past, hot air heating

systems have fallen from favor largely because of faulty installations and there are few coal-fired hot air systems now installed in which proper provision has been made for return circulation. Outside or cellar air is largely used and return circulation from the rooms is nearly always inadequate even when installed. In all of our gas fired hot air installations returns from the rooms have been installed having a capacity equal to the total hot air output of the furnace.

Recent studies have been made of the use of a secondary return system to be used in living rooms to reduce the temperature difference between the floor and ceiling. Laboratory experiments show that this difference can be reduced 50% and a practical experiment along this line is now being tried out in the model house. In this case, return air is carried from the floor of the living room to the furnace exactly as in any other installations. The hot air pipe

intersects the cold air return and is open to the cold air through a series of baffles in such a manner that the hot air supply, although not diminished in quantity, is diluted somewhat by the cold air just before it enters the register. The resultant larger volume of tempered air does not rise to the ceiling so rapidly and is more easily diffused in the room. The lower ceiling temperature with no change in the temperature at the five-foot level, is a decided economy. It is our intention to continue such experiments and give gas furnace installations the benefit of the best engineering practice.

The furnace as now constructed consists of central combustion chamber and distributor, the radiator sections, the flue manifold and the outside casing. The combustion chamber and distributor is a single casting consisting of a burner box at the bottom approximately 8 in. by 10 in. by 24 in. long, the only opening being the door for lighting and for the



Fig. 7: Home of Mr. I. E. La Grange, 28 Navarre Road, in Which the Hot Air Gas Furnace Shown in Fig. 2 Is Now in Operation.

admission of secondary air for combustion. At the rear is a thin sheet steel plate lightly attached to act as an explosion vent for safety. From the top of this burner box rise six tubes or flues of elliptical cross-section carrying the hot burned gases to the box at the top which acts as an equalizer. These hot tubes have a decided flue effect on the burners and pull the burned gases away rapidly. From the distributor the gases pass into cast iron radiator sections and are drawn down to a heavy cast iron flue manifold from which they are discharged to the flue. Return air from the rooms is admitted at the bottom of the casing and passing upward over the hot radiator sections and other castings remove the heat. Furnaces of different heating capaci-

ties are made by using the proper number of radiator sections or by enclosing two or more furnaces within a single casing. Control of the burners is effected by a solenoid or magnetically operated valve which is energized by the ordinary room temperature thermostat.

During this development of the hot air furnace, sales were made of hot water, steam and some hot air installations. Last winter fourteen heating installations were in service in Rochester, all giving consistently good results. This winter there are fifty installations and our outlook for the future is toward an ever increasing number of satisfied consumers and a volume of gas sales that promises to be enormous in time.



Burning Raw Coal is Wasteful

IN one of our large national weeklies a premier American manufacturer recently made the following statement: "It is now no longer necessary to burn raw coal. Coal may be distilled and a great many valuable products taken from it. Then, from what is left over, as much power may be had as from the original coal."

The last sentence indicates that the speaker has finally succeeded in getting something for nothing; succeeded in subtracting 1 from 3 and having 3 left; succeeded in sidestepping the recognized laws of both mathematics and physics. His statement is, we believe, misleading.

Let us take for example a Pittsburgh soft coal, much of which is used by this Company in its plants. This coal contains, approximately, the following constituents: moisture 2%, volatile matter 35%, combustible solids 55.5%, and ash content 7.5%, making 100 units in all.

When we distill this raw coal, the first two units, the moisture and the volatile matter, or about 37% of all the constituents in the coal, are driven off by distillation. The left-over amount, 63% approximately, of the original coal, is a fuel called coke. It is this left-over amount which is reputed to contain as much heat energy or power as original coal.

As the volatile matter distilled off is very rich in heat energy, this is obviously impossible as two-thirds of anything cannot equal three-thirds of the entire amount of the original quantity. If, however, the same quantity of the "left-over" mentioned in the statement referred to, be used in the comparison, we may say that approximately 100 pounds of left-over contains as much heat energy or power as 100 pounds of the original coal; but we must remember that to produce 100 pounds of "left-over" after distillation we must start with 150 pounds of raw coal.

Private Initiative

WE take pleasure in printing an article from "The Manufacturer and Industrial News Bureau," relative to the insurance problem and its settlement resulting from the great San Francisco fire.

This article entitled, "With Poor Grace," runs as follows:

"A prominent San Francisco citizen in a recent public address alleged that because of a 'fire insurance trust' San Francisco staggered under a heavy burden and that money paid for insurance premiums, instead of remaining at home, was distributed all over the world. The mythical 'trust' was in his imagination only.

"No city in the world has profited so largely by fire insurance payments as did San Francisco when it collected on a \$240,000,000 fire caused by an earthquake which in many instances would probably have nullified the responsibility of the insurance companies if they wished to stand on technicalities. They did not do this—they paid the loss.

"Seventeen years later a \$10,000,000 fire wiped out fifty-two blocks in Berkeley and insurance money paid for \$3,648,076 of the damage. Supposing California had been loaded with state insurance and such losses instead of being distributed in companies all over the world, had been borne entirely by home people? What would have happened to insurance policies of insured or to taxpayer? One or the other would have suffered a crushing loss.

"The fact that San Francisco's insurance was scattered over the world saved insurance companies from bankruptcy and consequently saved San Francisco. The insurance premiums from the rest of the world are paying the fire losses for the San Francisco Bay district. If San Francisco paid \$5,000,000 a year in premiums to insurance companies, it

would take fifty or sixty years to repay its one great fire loss.

"It is hard to say just what would have happened to California taxpayers or policy holders if state insurance with premium income confined to California, had been in force during the past twenty years. The greatest community reconstructive force for rebuilding burned homes, business places, industries and cities devastated by conflagrations is insurance.

"In England they speak of it as assurance. But insurance or assurance, the idea expressed is one of the main objects of intelligent life and social organization.

"Insurance of property is an economic problem, a business. It is much more. Insurance is in the main founded on the qualities of human mind and heart which make civilized society possible. For it is the man who is willing to make sacrifice for others and who has intelligence and self-control enough to seek provision for misfortune who makes civilized society possible.

"Insurance will spread with the spread of popular intelligence. It is one of the chief factors in American prosperity and well being and its importance is steadily increasing. It is a business, but it is also and above all, service. It has been built up by private initiative and enterprise."

President R. M. Searle in reviewing the above article adds this pithy supplementary interpretation: "San Francisco in collecting 240 millions has, in fact, been able to invest that amount of money, and consequently is receiving on it yearly at least 10% in earnings, or 25 million dollars. Thus, with an annual insurance premium of 5 million dollars, San Francisco, from this investment, gets its insurance for nothing, or better still, its insurance premium is thus paid five times over."

Progress of the Electrical League of Rochester

EDWARD A. ROESER

THE Electrical League of Rochester has been in operation with headquarters and office personnel since the 1st of October, 1924. Its initial activity, the Home Lighting Contest, has upon analysis of the data accumulated proved to be a very successful operation from the point of view of the educational work accomplished through the co-operative efforts of the local industry.

The quality of the returns is such as to arouse interest concerning those contestants who have qualified as entrants in the international contest. It has been felt that interest in the advance of lighting development has been aroused. If such contention is correct a noticeable improvement in home lighting ought to develop and the index may be looked for in the increased electrical consumption per residence as well as in observations. The wholesome educational work benefits the industry as well as the public. In its program the league aims to be of service to the public and its membership.

To carry out the latter aim a series of six lighting talks were delivered by experts from various branches of the highly specialized lighting industry. A keen interest was manifested among league members for additional service to the industry. The results

have been weighed carefully and league headquarters is now collecting information to be considered by a competent committee regarding a lighting course and a merchandising course. A service of this character is now being demanded and its value may be looked for through more harmonious relations, good will and continued support of the league.

Many profitable activities are now being developed. The outstanding of these is the "Red Seal Plan," an educational campaign for a standard of wiring adequacy in our homes. It is the intention to indicate such a standard through a symbol which will appear on the consumers cabinet at the electrical service entrance. The layman then has a guide for wiring adequacy vouched for by the local electrical interests and this coupled with the present underwriters inspection insures a satisfactory working installation. The Red Seal Plan is not compulsory but merely appeals to the judgement of those seeking authority for a decision.

The League is hopeful of establishing a wide and useful contact with the public whose problems are electrical. Thus, it is hoped, a service will be built up to satisfy the demands of the public that are within the League's capacity and field of operation.

Sounds Much Like a Surgeon's Memo

ONE of the repair orders that went through the Electric Distribution offices recently read as follows: Repair one old man, one young man, one sister hook and one pole dolly.

As strange as it may seem all these peculiar names refer to equipment used regularly by the Line Depart-

ment. Where they got their names from we do not know any more than we know who picks out the nicknames for the men in Benny Cahill's gang. In either case the name is of secondary importance, being able to "deliver the goods" is the chief requirement in that line of work.

Election Results Indicate the Public's Lack of Faith in Government Ownership of Utilities

PRESIDENT ROBERT M. SEARLE



ACCORDING to one of Joe Goldberg's familiar comics, "They all look good when they're far away." This logic applies to many things in life. We know how many persons have sought far and wide for the bluebird of happiness, only to find after days of painful, unprofitable searching that it existed all the time in their own homes. Their longing eyes, like those of the cow which persists in poking her nose through the barbed wire fence, failed to observe the wonderful pastures that were available right at their feet, in fact, all about them.

It is much the same with the operation of utilities, especially those supplying transportation, light and power, the basic industries of all nations. Demagogues and chronic fault finders, unscrupulous politicians with axes to grind and many other persons have been harping for some time about the wonderful possibilities of municipal ownership in connection with such utilities. They have said much in commendation of such systems functioning in California, Washington State and across the border in Canada. The recent defeat of municipal and state ownership measures in two far western states brings out the fact that much that has been said of it is propaganda and mis-directed idealism. The results of the election of November 4th show conclusively that the people at large do not wish to surrender the public utilities of this country to national, state or municipal ownership. Could

there be a better test for this system than that afforded by such a referendum of the people?

In the state of California during the last election there was a re-submission of the water and power act by initiative. In the same election, in Washington State, there came before the people the initiated measure known as the Bone bill. The former measure stood for bonding the state of California for \$500,000,000, for the purpose of engaging in a gigantic hydro-electric development. The California water and power act was planned to endow California cities and towns with the privilege of purchasing and selling electrical energy inside and outside their corporate limits and to establish and maintain their electric generation, transmission and distribution systems.

That both these pet measures were decisively defeated at the polls shows that something besides idle gossip and propaganda is necessary to convince the public that government ownership, or state or municipal ownership of essential utilities is anything but an extravagant, uneconomical scheme.

Western people are characteristically more friendly and hospitable than we of the East are. Being a newer country, comparatively, it is not strange that they should look with favor upon issues which to the conservative East hold less of idealism and practicability. It seems that no fairer battle ground for the settling of this municipal versus private ownership of utilities question could be found. California and Washington, at least, have weighed municipal ownership in the balance of public opinion and found it wanting.

The fact that they have tried it out fairly in connection with street railways and power and lighting projects adds to the decisiveness of its defeat. In some California cities the two types of ownership have operated side by side for some time so that fair comparisons may be made. In many of these places, Los Angeles, for instance, the municipal power companies could not even supply their lighting customers were it not for the surplus power they buy from the private companies. The same conditions are to be found in Seattle and many other cities and towns where people have persisted in experimenting with the two forms of operation, to their sorrow.

Strange as it may seem, the privately owned utilities must come to the rescue of those of the other type which fall by the wayside. They must take up the fallen standards of the people and carry them on to success.

It can now be conclusively stated that anything but private state regulated, ownership of utilities has proved to be a fallacy. The experiment in these two states and many others has been a costly one, one that will not soon be forgotten. The influence of this defeat will tend to keep in popular favor such utilities as that operated by this Company, under the regulation of the Public Service Commission of the State of New York.

Distance lends enchantment and we have read during the past year many utopian arguments in favor of government ownership as functioning in the West. We are not told, however, that two years ago the people of California defeated a measure similar to the one we have mentioned above, by a vote of nearly three to one, and that in the past three years they have not changed their opinion of municipal ownership one iota. Neither were we told till recently that govern-

ment ownership is responsible for the tremendous financial burden under which many California and Washington cities struggle today.

Government ownership of street cars and other utilities is attractive in theory, but when one has to pay ten cents a car ride as is required in Seattle, or ride for a nickel in San Francisco and pile up a huge financial deficit, it does not have such a wonderful appeal. In addition to this high cost of riding one has to bear his share of some half-million dollars a year in taxes which the private utility company formerly paid.

Under this scheme, it is not hard to understand why it is that persons who own nothing and have nothing to lose sometimes become radicals. The so-called landless man can pass the buck to the owner of property, farmers and others, who have to stand the financial "gaff" of municipal ownership. The landless man, however, still loses, for he in turn pays more in rent, taxes and commodities.

If one wanted evidence of the superiority of privately owned over any form of government owned utilities, the two largest cities of the world would furnish it. In the privately owned and operated systems of New York City more electricity is generated than in all of Great Britain. In the city of London alone, there are about 70 generating stations representing 50 different companies, 24 different voltages and 10 different frequencies. California has only one-fifteenth of the population of Great Britain but uses more electricity.

Electricity was introduced in America and in England at about the same time. In the United States it has been developed by private enterprise, in Great Britain by municipalities. In this country over 96% of all electricity generated is generated by privately owned utilities and the per capita use is approximately 600 kilowatt hours. In Great Britain

under municipal operation the per capita use is 150 kilowatt hours.

The American people are said to be more interested in the service they receive from their utilities at fair rates than in the way such service is secured. Privately owned utilities have proved over and over again that they can "deliver the goods" better than any other system of operation.

The talk of a possible power trust in this country is merely a "scare head" designed to intimidate those who are unacquainted with the facts. This is proved by the fact that over 85% of the undeveloped water power in the United States is controlled by the Federal government. This may only be leased to private enterprise for a period of not over 50 years, after which the government may take over the property or re-lease it.

The only enduring public ownership of utilities seems to be that shown by statistics which prove that the utilities of this country today are being financed quite largely by the sale of stock to customers and employees. This places the ownership right where it belongs and, with state regulation, forms the nucleus for the most satisfactory and prosperous kind of service.

In California, especially, which is said to be the home of customer-ownership of securities, more stock in privately owned utilities has been sold to customers than in any other state. This fact is significant in analyzing the defeat of municipal

ownership. Customer-ownership, it may be said, is the best kind of public-ownership, and the people of the far West have apparently refused to be misled by the municipal-ownership bugaboo which, they believe, means nothing short of political-ownership, bureaucracy and the mobilization of an army of civil service workers, all of which spells inflexibility, inefficiency, economic waste and exorbitant rates.

If there is any one outstanding lesson to be learned from the California-Washington election it may be this, that the obligation for maintaining and enhancing a proper feeling between Company and customer is quite largely up to the utilities. Being basically honest and efficient, utilities must sell themselves to the public and gain its confidence through an adequate program of public relations. Privately owned utilities in California are doing pioneer work along these lines, as results indicate.

The recent elections throughout this entire country plainly show that if the people understand the facts, privately owned and operated utilities have nothing to fear so far as future prosperity is concerned. What the public wants is a square deal, and that is what it is consistently getting throughout this country from privately owned utilities, which, in the case of electricity alone, supply over 96% of all the electrical energy produced.



Turning Cinders into a Useful Product

ONE hundred years ago, in October 1824, the English bricklayer, Joseph Aspdin, took out his famous patent on Portland cement an artificial cement obtained from burning mixtures of clay and limestone. That marked the beginning of a renaissance in the building industry, and during the last fifty years concrete has come into prominence as one of the permanent and best adaptable materials of construction.

A very important branch of the building industry is the manufacture of concrete building units, such as brick, block, and tile. This particular industry has grown enormously throughout the United States within the last few years, and reliable estimates show that in the year 1922, approximately five hundred million concrete blocks were manufactured—the equivalent of six billion common brick.

The principal reasons for the success of concrete products are the growing desire for a permanent building material and also the low cost of these units. It has been demonstrated that a house of concrete masonry can be built at about the same price as that of a frame house, and, considering the saving in depreciation, the elimination of fire hazard, and the increased comfort afforded by such a dwelling, it is easily understood why concrete is replacing frame in the construction of schools, factories, etc.

Concrete, however, is not yet fully developed. One of the most serious handicaps is the weight of the materials ordinarily used—the sand and the stone. Together they are called the "aggregate," and, while it may not be possible to lighten the weight of the cement, it is possible to substitute lighter materials for aggregate.

Naturally, the first substitute to be considered was cinders, and cinder concrete has been used as long as Portland Cement has been on the market. In addition to its lightness cinder concrete has other advantages that are soon noticed. Nails can be driven into it, and cinders, being porous, have unusual insulating properties. Concrete made from cinders was found to have also a rough surface to which plaster and stucco would stick. And last, but not least cinders are waste and can be obtained at low cost.

Notwithstanding these features cinders were frequently condemned by leading concrete engineers. The main reason was that they were not sufficiently uniform to give a guaranty as to their suitability. One of the fundamentals of concrete practice is always to use clean, reliable, materials. But cinders are not clean; they contain coke,

soluble salts, iron, and the like which impair the strength and soundness of the concrete.

A survey of the cinders available in this country discloses an average coke content of from twenty to fifty per cent. This may seem appalling, but it is difficult to avoid this waste in present boiler practice. Coke does not make good concrete, and the presence of coke in the cinders results in decrease of strength, weather resistance, and fireproof qualities.

Here, then, is plenty of aggregate for concrete, cheap and of excellent promise, if the objectionable features could be eliminated. This was accomplished by the "BO PROCESS," the invention of a Rochester brick mason, Sigurd Bo.

By this process the coke is reclaimed and forms a valuable by-product which is used for heating purposes. The soluble salts and other impurities are separated, and only the remaining clean, hard clinkers are used for concrete. This aggregate, known as Purified Cinders, is different from the original raw material. Mixed with Portland cement and water it makes the high class concrete products known as BO PRODUCTS.

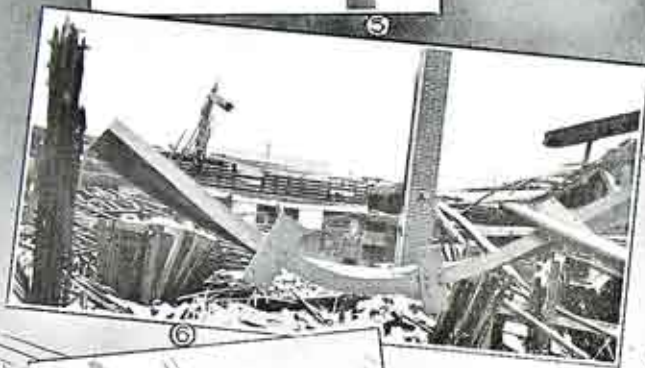
The Bo Process is covered by United States patent issued in August 1923. This patent is owned by a Rochester concern, Cinder Products Corporation, formed by the inventor and a few friends, and licenses are issued on a reasonable royalty basis. The parent company furnishes engineering service for the erection and operation of Bo Process plants, and the proposition is handled on a strictly cooperative basis. Plants are now operating in Rochester, Buffalo, Lockport, Geneva, N. Y. and in Harrisburg, Pa. The last mentioned plant opened this month.

The process was developed here in Rochester, but the first plant was erected in Lockport. This plant, owned by Raymond Wilson of that city, has been used as an experimental plant, and there the process was first put on a commercial scale and the product perfected. The second plant was built in Rochester, and is known as the Genesee Brick and Supply Corporation at 832 St. Paul Street. Mr. C. Edward Coughlin is manager. This plant uses cinders from the Rochester Gas and Electric corporation and manufactures hollow "Bo" building block that have been used to a very great extent during the last two years.

To the casual observer it appears to be a granite-like block of a pleasing blue grey color. A further investigation of the product will disclose, first of all, its lightness. It



1—Bo Block Ready for Stucco. 2-3—Stucco on Bo Block. 4—Sea Breeze Parochial School; Plain Bo Block, Plastered, on Interior.



5—Bo Brick Kept These Walls Up. 6—Steel Failed But Bo Brick Endured Intense Heat
7—Clay Brick Chimney Collapsed. 8—The Harrisburg, Pa., Plant.

weighs thirty per cent. less than sand concrete block of the same size, which means ease in handling and laying as well as a saving in the dead load of walls. The block has a rough surface that furnishes a good key for stucco and plaster, and is primarily a stucco block. Houses of this construction are very popular, and justly so. Stucco is a plastic material that makes it possible to give the home an appearance of pleasing individuality. It is important, however, to get a good bond between the stucco and the background, and this is accomplished by building the wall with Bo Block.

Bo Block furnishes an equally good surface for plastering. It is of importance here that the wall be damp-proof; otherwise, it would be necessary to go to the expense of using furring and lathing. Bo Block, however, makes an absolutely dry wall—free from condensation or penetration by moisture. It is damp-proof because of the insulating quality of the cinders. For the same reason a house built of this material is comfortable in summer as well as in winter; changes in the outside temperature do not penetrate the walls. The nature of the cinders also accounts for the sound-proof quality of the block.

Nails can be driven into the Bo Block. They will stick and never rust. This means that all interior trim, etc., can be nailed directly to the wall, and the plaster on the walls will not crack when you hang your pictures.

Perhaps the outstanding feature of the product is that it is fireproof. The combustibles are removed from the cinders and the remaining clinkers have already been through the fire, thus eliminating the possibility of the block burning.

The Cinder Products Corporation requires all Bo Block to stand and sustain a weight at least eight hundred pounds per square inch. This means that a standard block will carry a load of more than fifty tons. In addition to tests for crushing strength other tests are made for absorption, transverse strength, weather resistance, etc. The test for weather resistance is the so-called freezing and thawing test.

This test is made by saturating the test specimen—usually a brick—in water, freezing it, then thawing it in hot water, freezing it again, and so on until the brick shows signs of deterioration. A test of this kind was made at the Municipal Testing Laboratory in Rochester, and the brick, after forty-two freezing and thawing treatments, showed an

increase in strength. This test indicates the timeproof quality of the product.

An extensive series of tests was made at Columbia University in New York for the purpose of having the brick accepted by the New York Building Department. In that test the brick showed an average crushing strength of 4,920 pounds per square inch—or more than seventy-five tons per brick.

It may be interesting to hear how Bo Products are made. The raw material consists of ordinary cinders as they come from boilers. This material is first conveyed to a magnetic separator where all free, magnetic iron is separated. The non-magnetic cinders pass then to the so-called Purification tank. Here the coke is reclaimed by flotation while the clinkers are washed and treated before being crushed and conveyed to the storage bin. The crushed and purified cinders are carefully mixed with cement and water in the right proportions and formed into brick, block, or tile in powerful tamping machines. The green concrete products are stored in steam rooms for a period of twenty-four hours and then left in the yard until ready for shipment.

The Cinder Products Corporation has its main office at 416 Union Trust Building. Sigurd Bo, inventor of the process, is President; Gilbert T. Amsden, Vice-President; Charles L. Pierce, Secretary; George Farron, Treasurer—all of Rochester. These four and Raymond Wilson of Lockport constitute the board of directors. Einar Christensen is Chemical Engineer in charge of all technical work.

The first building erected from Bo Block at Rochester was the Parochial School at Sea Breeze built by Father Staub in 1921. This building is particularly interesting because it has been standing without stucco through several hard winters and has furnished a good opportunity to test the insulating properties of the block.

A number of other buildings have since been erected. The accompanying pictures show some typical stucco houses before and after the application of stucco. Three of the illustrations give an idea of the fire in Buffalo above mentioned.

The Bo Process is a valuable asset to the building trade. It utilizes a waste material and turns it into a commodity, the demand for which is unlimited. Millions of houses will be built of it in this country when people fully realize that the homes of a nation must be safe and fireproof.

If your Job was all fun there'd be lots of folks willing
to do it for nothing

GAS & ELECTRIC NEWS

ROCHESTER GAS & ELECTRIC CORPORATION
34 Clinton Ave. N., Rochester, N. Y.

FLOYD MASON - - - - - Editor
Employment and Claim Department

Department Correspondence Staff

EDWARD A. ROESER -	Industrial Sales
JOSEPH P. MACSWEENEY -	Domestic Sales
RALPH R. VELA -	Electric Generation
HENRY A. DAVIS -	Electric Distribution
WILLIAM H. EARLE -	Gas Manufacture
WADSWORTH C. SYKES -	Gas Distribution
FREDERICK H. PATTERSON -	Auditing
HOWARD HARDING -	Engineering
MARVIN C. WINTER -	Electric Construction
GEORGE B. HESTED -	General Construction
E. H. STEIN -	Garage
MISS FLORENCE FREER,	Housekeeping Suggestion

Material may be copied provided credit is given

VOL. 12 DECEMBER, 1924 No. 6

*The most priceless pictures are those we hang
on the walls of our memory.—Selected.*

The Holidays

THE Holidays come at the ebb of the old year and the flow of the new year. Following Thanksgiving day, we enter upon the festivities of the Yuletide season with its Christmas climax, and next are confronted by the responsibilities of a New Year. What a series of thrills these days hold for us. Young or old, we anticipate them, enjoy them and then hang their memories away in the picture galleries of our minds, where we can recall them, in years to come, and live them over again.

Holiday spirit is a relative reaction and no one knows just what the feelings prompting it depend upon. We know it does not hinge necessarily upon wealth, the enjoyment of all our senses, position or even the highest degree of integrity or virtue, for persons in all planes and circum-

stances of life seem able to attune their individual spheres to a fairly comprehensive enjoyment of it. This, perhaps, is why Christmas, especially, is such a universally wonderful holiday for all of us. It was planned to be just such a day.

As we analyze our Holiday experiences, we find that although most of our thrills come from within, still, enjoyment of them may be heightened and accelerated by conditions which we find about us. While these external things may not be classed with the absolute essentials for a happy Christmas they may be called very important auxiliaries to it.

From the first Christmas day, men and women have been giving to the world, and the world has become a better place in which to live because of their knowledge and sacrifice. Science, invention, and the ethics of life, show the influence of the Almighty working in the human mind. What greater adoration is possible than this which gives to humanity the benefits and potential blessings to be found in the gigantic storehouse of the earth, stored away for us to develop and husband.

As we enjoy this Holiday season, let us not forget how much we have for which to be thankful. Scarcely a home but will have its Christmas thrills, relative though they may be. Where there are little children to play about the well lighted Christmas tree in safety and security that electric illumination brings, joy will be keenest for, "Of such is the Kingdom of Heaven." In homes where the children have grown up and launched into homes of their own, there will be the pleasurable visits to see Grandma and Grandpa and other relatives and friends over Christmas. Where this is not possible, there remains to draw upon that vast storehouse of our memories, from which we may ever pull a thrill; it is one of Santa Claus' largest stockings.

After the seasonal festivities have subsided and we resume our normal everyday characters again and rediscover that we must take up the business of life and again face its burdens and responsibilities as usual, let us realize that the essential blessings of life with which we have been endowed are the best gifts. Let us learn to use them more wisely. And may Christmas time find us not unappreciative of those external features which enrich our lives, cut down its hardships and give us ample periods of time for self development and enjoyment.

The Imp of Discouragement

IN the Street of Life, walking in the darkness of the shadow, hungry old Satan was out hunting with his dogs, the little imps of human weakness.

A man came walking through Life's street.

Satan said to the little devil with a bitter face, "Go; get him for me."

Quickly the imp crossed the street; silently and lightly hopped to the man's shoulder. Close in his ear he whispered:

"You are discouraged."

"No," said the man, "I am not discouraged."

"You are discouraged."

The man replied this time, "I do not think I am."

Louder and more decidedly the little imp said again: "I tell you, you are discouraged."

The man dropped his head and replied, "Well, I suppose I am."

The imp hopped back to Satan, and said proudly, "I got him; he is discouraged."

Another man passed. Again old Satan said: "Get him for me."

The proud little demon of discouragement repeated his tactics.

The first time that he said, "You

are discouraged," the man replied emphatically, "No!"

The second time, the man replied, "I tell you I am not discouraged."

The third time he said: "I am not discouraged. You lie!"

The man walked down the street, his head up, going toward the light.

The imp of discouragement returned to his master, crest-fallen.

"I couldn't get him. Three times I told him he was discouraged. The third time he called me a liar, and that discouraged me."—From *Editorial in former Chicago Examiner.*

Banked Fires

HOW many men might echo the sentiment of a certain father in these words from a letter to his son in college:

"All my life I have wanted to do something worth while and haven't. It seems the fires of my life have always been banked."

Behind many a boy or girl in college may be found the parents who have renounced willingly all opportunity to achieve the heart's desire. Behind the big man or woman mastering his or her hour on the world stage, may be usually found someone who has sacrificed much to make this success possible. Normally it is a father or a mother, or both. Not infrequently an older brother or sister or more distant relative has banked the fires of ambition in favor of another.

Disappointed hope is one of the bitterest pills that life prescribes for the man who has failed and who knows it. But to see one's hope recreated in another and younger life, more fully equipped for the task, is no small compensation, especially when that younger and more favored life understands the sacrifice involved in his advancement, and appreciates it by making good.

—Rochester Times-Union



Making Christmas Goodies

ONE of the very pleasant tasks that the homemaker can complete before the holidays is the making of Christmas cookies and the rich little cakes which can be kept very satisfactorily in tin boxes and cans. The tin cans in which crackers come provide suitable containers to hold the little cakes until ready for use. These Xmas cakes and cookies lend themselves as Xmas gifts packed in attractive Xmas boxes. One may purchase the holly boxes or the red boxes, and the old candy boxes which one has on hand may be covered with gay colored paper, and lined with the lace paper which comes by the yard, or with silver and gold colored paper.

The children will be especially delighted with the gingerbread men dressed in their red and blue coats and trousers, and any grown-up would be pleased with an assortment of the decorated cookies, sand tarts and walnut wafers. Either the Prize Cake or the Fruit Cake may be baked to fit special boxes, and attractively decorated with frosting. Holly may be represented by candied cherries and angelica cut in the shape of leaves. Following are some tested recipes which you will want to try for the Holiday table:

Prize Cake

Yolks 4 eggs	2 cups flour
Whites 2 eggs	2½ tsp. baking powder
1 cup sugar	½ cup milk
	½ cup melted butter

Put egg yolks and whites into a bowl and beat until thick, using a Dover egg beater; then add sugar gradually, while beating constantly. Mix and sift flour and baking powder and add alternately with milk to first mixture;

then add one third cup melted butter. Turn into a buttered and floured shallow cake pan and bake in a moderate oven 35 minutes. This mixture is well adapted for reception cakes. It may be cut into small squares, oblongs, triangles, or any desired shapes, dipped in Oscar's frosting and decorated with candied fruits, candies or ornamental frosting.

Walnut Wafers

2 tbsp. butter	1 egg
1½ c. brown sugar	1½ c. chopped nuts
4 tbsp. flour	2 tsp. water

Cream butter, add sugar gradually, add egg slightly beaten, nuts mixed with flour and the water. Drop by teaspoon two inches apart on greased baking sheet. Bake in hot oven 7 to 10 minutes. Remove from oven, cool one minute before taking from pan.

Sand Tarts

½ cup butter	2 tsp. Baking Powder
1 cup sugar	White 1 egg
1 egg	Blanched Almonds
1½ cup flour	1 tbsp. sugar
	1 tsp. cinnamon

Cream butter, add sugar gradually and egg well beaten, then add flour mixed and sifted with Baking Powder. Chill, toss one half mixture on a floured board, roll ¼ inch thick. Shape with a doughnut cutter. Brush over with white of egg, and sprinkle with sugar mixed with cinnamon. Split almonds and arrange three halves on each at equal distances. Place on a buttered sheet and bake 8 minutes in a slow oven.

Frosting for Cookies

1 cup powdered sugar	1 tsp. vanilla
¼ cup hot milk	¼ sq. of chocolate if desired.

Gingerbread Men

5 c. flour	2 tsp. ginger
1 c. sugar	1 c. molasses
1 tsp. salt	1 c. fat
1 tsp. soda	1 c. hot water
¼ tsp. cinnamon	colored sugar, red and blue. Few currants.

Sift together all the dry ingredients. Melt the fat in the hot water, add molasses and add this liquid to the dry ingredients. Mix well, chill, roll on a floured board to about a quarter inch in thickness. Cut in the shape of a man by means of a tin cutter or cardboard pattern. Put in the currants for eyes, draw a mouth and

the nose with the point of sharp knife. Sprinkle his coat with blue sugar and trousers with red. Bake in moderate oven about 15 minutes.

Fruit Cake (Without Butter or Eggs)

1 c. sugar	4 tsp. Baking Powder
1 c. molasses	½ tsp. salt
1 c. milk	1 tsp. cinnamon
1 c. coffee infusion	Allspice, clove, mace,
1 c. entire wheat flour	grated nutmeg, ½
1 c. white flour	tsp. each
	1 lb. raisins seeded and cut

Mix sugar, molasses milk and coffee. Mix and sift dry ingredients reserving one fourth cup white flour. Combine mixtures and add raisins, dredged with remaining flour. Turn into a buttered and floured bread pan and bake in a moderate oven 50 minutes.

Light Fruit Cake

½ c. butter or other shortening	½ c. raisins
1 c. sugar	2 oz. citron
½ c. milk	½ c. walnuts
2 cups flour	dredge fruit with ½ c. flour reserved from the 2 cups flour.
3 tsp. Baking Powder	
4 egg whites	
1 tsp. vanilla	

Chocolate Brownies

1 cup sugar	2 sq. chocolate
½ c. shortening	½ cup nuts
1 c. flour	vanilla
	2 eggs

Chocolate Drop Cakes

1 pt. or 15 ounces condensed milk	2 ozs. chocolate cocoanut.
-----------------------------------	----------------------------

Melt chocolate over hot water, add the condensed milk and mix thoroughly. Stir in enough cocoanut to make a drop batter. Drop on buttered sheets and bake 20 minutes in a moderate oven.

Confectioner's Frosting

2 tbsp. boiling water	Confectioners' sugar or cream
	Flavoring

To liquid add enough sifted sugar to make of right consistency to spread; then add flavoring. Fresh fruit juice may be used in place of boiling water. This is a most satisfactory frosting and is both easily and quickly made.

White Mountain Cream

1 cup sugar	white 1 egg
½ cup cold water	1 tsp. vanilla or ½ tsp. lemon juice

Put sugar and water in saucepan, and stir to prevent sugar from adhering to saucepan; heat gradually to boiling point, and boil without stirring until syrup will thread when dropped from tip of spoon or tines of silver fork. Pour syrup gradually on beaten white of egg, beating mixture to spread; then add flavoring and pour

over cake, spreading evenly with back of spoon. Crease as soon as firm. If not beaten long enough, frosting will run; if beaten too long, it will not be smooth. Frosting beaten too long may be improved by adding a few drops of lemon juice or boiling water. This frosting is soft inside and has a glossy surface.

Bits from the Scrap Basket

1—If the children track the road tar on the best rug, don't scold but remove it by applying turpentine with a clean cloth; or it may be softened with kerosene and taken out with gasoline.

2—Try pinning handkerchiefs, collars, and other small pieces to a tape and pin this to the line on wash day. It will save cold fingers in winter weather and much time searching these small articles out of the general melee.

3—Finely chopped apples, served with powdered sugar, a dash of lemon juice, and cream, make a good dessert change from pie during the apple season.

4—Several strips of bacon laid across a chicken while it is being roasted improves the flavor.

5—When meat is selected for real food and vitamin value, the kidney, liver and sweetbread end of the counter will be as popular as the roast sections.

6—Egg plant has become more popular with many housewives since cooks have decided that it isn't necessary to bother with soaking it in salt water and pressing out the juice before it is cooked.

7—Strips of plain, white, washable material tacked over the ends of comfortable are easily laundered and help to keep the heavier bed coverings clean.

8—Ordinary cottage cheese served with lettuce or other green salad and a small amount of rich homemade preserves makes an appetizing combination.

9—Don't guess—measure. Many a good recipe has failed because a "level" cup was "Heaping".

10—Try using a tablespoon or two of some of the chilis and relishes in the boiled salad dressing.

11—Don't hold your breath and fear the worst when you put your cake in the oven. Use a Thermometer and be certain.

12—Molasses is a wholesome sweet, richer in iron than sugar so let's have gingerbread and an old-fashioned Indian pudding occasionally.

Electrical Gifts Play a Delightful Part in Bringing Christmas Happiness

THE Domestic Sales Department of the Company, as usual, is in league with Santa Claus again this season. A mere glance at the activity on the Main Floor suffices to remind one that "Christmas is coming." Artificial decorations of holley, et cetera, are merely auxillary to the effects in color and lighting obtained by the numerous lamps and other household articles and devices to be found there.

The seasonal query, "What shall I give them for Christmas," automatically solves itself as one looks about, for there are plenty of visual suggestions for the observing who ordinarily find it hard to pick just the right gift. To be sure, the Domestic Sales Department is especially fitted to provide gifts for the entire family, gifts that survive the Holiday season and live to serve for many seasons to come, day in and day out.

It is interesting to reflect upon

what electricity has done toward moulding the Holiday season into something more than a mere seasonal period of happiness. The activity about the Lamp Counter indicates that people are going to have their homes well lighted, and who will deny that adequate illumination "peps up" the festivities and adds to the enjoyment of all. And how the gifts glitter and shine, adding a certain zest and attraction to the appeal they make to us and permitting none of the beauty of the most gorgeous ones to become lost.

What enchantment there is in the modern electrically lighted Christmas tree. Aside from being perfectly safe from conflagrations, the miniature colored lamps present a pretty picture to old and young. Beside this, they are inexpensive, may be used from year to year and simplify the work of decorating the tree.

It is a pleasant thought to reflect



Fig. 1: Parents Who Wish To "Play Safe" Buy Electric Lamps for Illuminating Their Christmas Tree. The Various Colored Miniature Lamps Also Make a Big "Hit" with the Children

that many last year's or still earlier year's Christmas gifts help greatly in simplifying the work we have to perform during the Holiday festivities. Of course, we get hungry, even on Christmas day with all its pleasant diversions. We also have to receive our customary allowance of clothing, linen, etc., in fact, Christmas and New Years are quite a drain upon the stores Mother has to prepare for the use of the entire household. Electric washers, ironers, cleaners, and the numerous articles of household equipment used in the kitchen and laundry and throughout the home almost universally today surely help mother to join whole-heartedly into the spirit of the occasion. For this reason, if for no other, such articles comprise Christmas presents of the most satisfactory kind, for every member of the household benefits from them. The unusual activity in the Domestic Sales Department indicates that people are more and more coming to see the utility of Christmas gifts of this nature.

The waffle iron shown in our illustration, Figure 2, is both attractive and efficient. Its grids are made of pure aluminum and the handles both raise the upper grid and carry the waffle iron. Add waffles to your menu and see how everybody shows up at meal time. This is only one of the electrical devices which help to simplify the Holiday meals, or the work consequent upon the full enjoyment of this season.

There are electric griddles, toasters, irons, table stoves, cookers, and many other devices to be found in the Domestic Sales Department. There are also many pretty lamps with good looking shades to select from when looking for that particular gift. Why not give an electrical gift this year, wherever possible. If you do so, you will both give and receive the greatest possible amount of pleasure and satisfaction.



Fig. 2: The Company's Electric Appliances and Devices Are Sold on Merit. Seeing Is Believing and, in This Instance, Tasting a Well Browned Waffle Baked Electrically Before Your Eyes Places Waffle Irons in the List of Gifts the Entire Family May Enjoy



New Business			
Net Increase in Consumers in Year Ending October 31, 1924			
	Oct. 31, 1924	1923	Incr.
Gas.....	90,306	86,512	3,794
Electric.....	68,644	57,304	11,340
Steam.....	125	108	17

Total..... 159,075 143,924 15,151

Net Increase in Consumers by Months			
	1922	1923	1924
Incr. in January.....	489	560	855
Incr. in February.....	483	672	866
Incr. in March.....	649	591	961
Incr. in April.....	931	1029	1479
Incr. in May.....	977	1272	1524
Incr. in June.....	1056	1157	1252
Incr. in July.....	879	1091	951
Incr. in August.....	935	1046	1323
Incr. in September.....	1176	1370	1572
Incr. in October.....	1271	1659	1606
Incr. in November.....	1186	1413	
Incr. in December.....	1374	1347	

Stock Sales for November, 1924		
	Subscribers	Shares
November.....	55	1641
Total to December 1, 1924	2142	14661

Statement of Consumers by Departments as of October 31st					
	Gas	Elec.	Steam	Total	Incr.
1914.....	69654	18140	30	87824	
1915.....	70968	21714	39	92721	4897
1916.....	75121	24782	41	99944	7223
1917.....	78634	27460	51	106145	6201
1918.....	79130	28881	75	108086	1941
1919.....	79471	30469	75	110015	1929
1920.....	81149	33976	75	115200	5185
1921.....	81327	39025	100	120452	5252
1922.....	83891	46927	108	130926	10474
1923.....	86512	57304	108	143924	12998
1924.....	90306	68644	125	159075	15151
Incr. in 10 years.....	20652	50504	95	71251	71251

	Mo. of Oct. 1924	Oct. 1923	Increase
Amount of Payroll.....	\$277,152.49	\$260,095.20	\$17,057.29
K.W.H. Generated—Steam.....	6,919,252	12,177,242	*5,257,990
K.W.H. Generated—Hydraulic.....	12,959,274	7,520,390	5,438,884
K.W.H. Purchased.....	2,820,200	2,711,015	109,185
M. cu. ft. Coal Gas Made.....	186,425	184,586	1,839
M. cu. ft. Water Gas Made.....	130,744	125,364	5,380
Tons Steam Coal Used.....	11,896	16,773	*4,877
Tons Gas Coal Used.....	17,458	17,053	405
Gals. Gas Oil Used.....	365,590	332,453	33,137
Tons Coke Made.....	12,211	11,941	270
Gallons Bengas Made.....	88,131	117,560	*29,429

*Denotes Decrease

Miscellaneous Data

	Oct. 31, 1924	1923	Incr.
Miles of Gas Main.....	577	556	21
Miles of Overhead Line.....	3184	2828	356
Miles of Undergr'd Cable.....	1623	1476	147
Miles of Subway Duct.....	1230	1100	130
No. of Street Arc Lamps.....	1397	1415	*18
No. Street Mazda Lamps.....	11595	10749	846
Total No. of Street Lamps.....	12992	12164	828
No. of Employees.....	1817	1786	31

*Denotes Decrease

E. A. B. for November, 1924

Balance, 1st of Month.....	\$11,654.23
Dues—Members, Company.....	2,252.38
Fees—Members, Company.....	48.00
Assmt. No. 61—Members.....	.25
Assmt. No. 62, 63, 65—Members.....	3.00
Assmt. No. 66—Members.....	2.50
Assmt. No. 68—Members.....	330.75
Assmt. No. 70—Members.....	330.50
Assmt. No. 63, 65, 68—Company.....	3.00
Assmt. No. 68—Company.....	330.75
Assmt. No. 70—Company.....	330.50
Group Life Insurance.....	35.93
Members' Add. Life Insurance.....	8.74
Total Receipts.....	3,676.30
Total Receipts plus Balance.....	15,330.53

Disbursements

Sick Benefits.....	\$ 716.41
Accident Off Duty Benefits.....	189.86
Accident On Duty Benefits.....	62.27
Death Benefit No. 68, 69, 70.....	1,200.00
Group Life Insurance.....	65.67
Medical Examiner's Expense.....	13.50
Total Payments.....	2,247.71
Balance on Hand.....	13,082.82

Membership

Date	No.
Members Oct. 31, 1924.....	1401
Affiliated Mo. of November, 1924.....	19
Terminated Mo. of November, 1924.....	16
Gain.....	3
Membership November 30, 1924.....	1404

	Mo. of Oct. 1924	Oct. 1923	Increase
Amount of Payroll.....	\$277,152.49	\$260,095.20	\$17,057.29
K.W.H. Generated—Steam.....	6,919,252	12,177,242	*5,257,990
K.W.H. Generated—Hydraulic.....	12,959,274	7,520,390	5,438,884
K.W.H. Purchased.....	2,820,200	2,711,015	109,185
M. cu. ft. Coal Gas Made.....	186,425	184,586	1,839
M. cu. ft. Water Gas Made.....	130,744	125,364	5,380
Tons Steam Coal Used.....	11,896	16,773	*4,877
Tons Gas Coal Used.....	17,458	17,053	405
Gals. Gas Oil Used.....	365,590	332,453	33,137
Tons Coke Made.....	12,211	11,941	270
Gallons Bengas Made.....	88,131	117,560	*29,429

*Denotes Decrease

An Unique Electric Locomotive

HARVEY J. KLUMB

THE electric locomotive shown herewith is one of five in use by the Chicago, Milwaukee & St. Paul Railroad to haul its passenger trains over the Rocky Mountains. They are known as the bipolar gearless type and have the motor armatures mounted directly on the driving axles; an unusual method of construction.

Another departure from usual practice is found in the field pole construction. The fields in these motors are mounted on the engine frame and since the frame is carried on springs there is considerable relative up and down motion between the field poles and the armature due to inequalities in the road bed. This motion is taken care of by making the field pole faces, flat parallel surfaces, which allows the armature free motion up and down. This is a radical change in motor construction when we consider the care taken in and ordinary motor to get the air gaps as small as possible and to carefully machine the field pole

faces to the contour of the armature. One of the unique features of these locomotives is their ability to return to the power station, part of the energy they receive. When going down grade the motors function as electric generators, sending current back into the line and at the same time acting as a brake (regenerative braking), holding the speed of the train to a constant safe value. The air brakes are only used in emergencies and in making full stops.

These locomotives together with ten more of a different type drive are the most powerful in use at the present time. They weigh 521,200 lbs., having a total output of 3,200 continuous horsepower and will haul a fourteen-car Pullman train up the heaviest of the Rocky Mountain grades at a sustained high speed. Further, due to the regenerative braking feature, they will take this train down these same grades at a safe and constant speed without a



One of Five Electric Locomotives in Use by the Chicago, Milwaukee and St. Paul Railroad. It Weighs 521,000 Pounds and Has an Output of 32,000 Continuous H. P.

single application of the air brakes. They are rated at 65 miles, maximum speed, per hour.

Normal trolley voltage is 3000 volts direct current supplied to the locomotive through a pantograph trolley. The trolley is shown folded down on the cab. This high voltage is handled by means of remote controlled magnetic and air operated switches—the two ends of the locomotive being quite full of this sort of apparatus.

One lever, very similar to the throttle in a steam locomotive, together with several smaller ones, control the entire operation of this monster. There are two sets of controls; one set located in each of the two cabs. Either one set or the other is used depending on which direction the locomotive is traveling. It will operate well in either direction.

In contrast to the steam locomotive the electric becomes more powerful in cold weather and will pull far greater loads in the winter than in summer.

In zero weather when the steam engine is stiff with cold and uses most of its fuel in trying to keep warm, the electric is just beginning to get frisky.

The Chicago, Milwaukee & St. Paul now has sixty-one locomotives in its passenger and freight service, releasing one hundred and sixty-two steam engines for use in the non-electrified portion of the system and effecting an annual saving of 265,000 tons of coal—almost enough to operate our steam station for 2 years—and 3,500,000 gallons of fuel oil. All this and in addition less wear and tear on equipment, no smoke, no cinders, no grinding of brakes on grades and a start from rest so smooth the traveler does not realize the train is in motion.

The illustration is reproduced from a snapshot of the locomotive taken by Mr. Owen Feltham of the Electric Meter Department, while it was on exhibition in this city at the New York Central Station.



Our December Cover

THE scene shown on our December cover was photographed in the home of one of the Company's customers. Its message is one that we are glad to present to our readers, for it is built around the Company's 6% Preferred Stock. The Holiday stock advertisements which have been running in Rochester papers recently will suffice to explain it. This advertisement, which was prepared by Mr. William Gosnell, head of the Company's Investment Department, reads as follows:

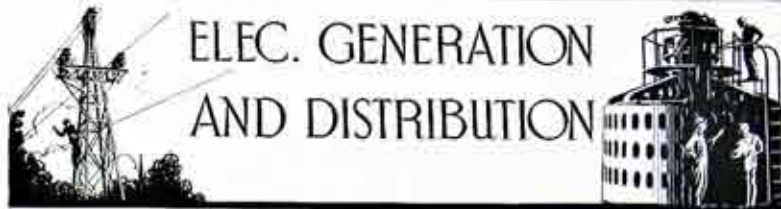
"Do something different this year. Make your gift a continuing gift, an investment giving an assured return in dividends four times each year."

"A share or more of Rochester Gas and Electric Corporation's 6% Cum-

ulative Preferred Stock in the stocking or on the tree Christmas morning would make a very fine present. The recipient would receive a reminder of the giver's thoughtfulness every three months thereafter."

"The price is \$100 per share and accrued dividend, or, shares may be had on the payment plan of \$5.00 per month per share. Interest is allowed on monthly payments at the rate of 6% per annum."

Company stock makes an excellent gift, a gift that will survive the years. Given at Christmas or any other time, it will remain with the receiver always, ever adding to his material comfort and prosperity. Is there a better way to spread lasting material satisfaction.



Station 34 Enlarged

THE new building at the north of our present station 34, is nearing completion. This building is planned to relieve the present congestion in the original building and was erected by the Fero Concrete Corporation. The floors and roof are constructed of concrete, the walls being built of 12-inch hollow tile, finished with $\frac{1}{2}$ inch of cement mortar on the outside only, the main floor conduit layout is shown in the illustration.

This new addition contains, in the basement, six 4,150-volt regulation circuits, three unregulated 4,150-volt spare circuits and 11 of the present unregulated 4,150-volt circuits. Two 5,000 K. V. A., 60-cycle lowering transformers, of the outdoor oil-cooled type are also installed here. They are fed from the 11,000-volt

60-cycle line and stepped down to 4,150-volts, 60-cycles, feeding the 4,150-volt bus. The above oil switch cells are made of white brick with a hard pressed brick wall barrier between copper bus bars suspended above the cells from the ceiling on the insulators and covered with micarata tubing, safeguarding possible danger in the basement.

The main floor has a total of twelve 11,000-volt, 60-cycle oil switches located at the north end of the new building. The south end of the oil switch structure will be enclosed by a 6-inch hollow tile wall with doors provided in each alleyway. This type of structure will separate high tension from the low voltage also any moisture that might escape from the steam turbine. Seven of the oil switches are future circuits, two

(Concluded on page 235)



A Glimpse of the Addition to Station 34 Which Is Nearing Completion. A Section of East Station May Be Seen in the Left Background.



GAS MANUFACTURE & DISTRIBUTION

Screening Coke

ON September 2, 1924 a contract was placed with the C. W. Hunt Company of Staten Island for twelve electric vibrating coke screens. These screens were placed at the coke bins, under the discharge hoppers. Their function is to rescreen the coke as it is loaded into the company trucks for delivery. Their sole purpose is to provide a cleaner product for the consumer. They replace the "bar grizzly" screens which were installed when the bins were built.

About six months were spent in studying this rescreening problem. Several screening plants were inspected, a good deal of correspondence was conducted with other

plants having similar problems, and three different types of screens were tested at our plant, before the final decision was reached.

The Hunt Company is the manufacturer of a screen known as the "Mitchell" screen, named for its inventor. It consists of a frame carrying a woven wire screen cloth, 12 sq. ft. in area, of any desired mesh, and a total enclosed electric motor which by means of an unbalanced device imparts a vibrating movement to the screen as the motor revolves. There are 3,600 vibrations per minute. By this action the coke is thoroughly shaken as it moves over the screen, and the fine breeze and dust is dropped through the screen into a receiving hopper.



Just Before Reaching the Truck, Company Guaranteed Coke Passes Over Electrically Operated Shaking Screens. The 3,600 Vibrations Per Minute Coke Is Subjected to Removes All Fine Coke Breeze and Dust.

The screens are so constructed that they operate at an angle of 35°, and it is possible to get much better head room under the discharge chutes thereby enabling the trucks to load much more rapidly than has been the case.

The screens were installed by the Wm. H. Wilson Iron Works of this city.

New Purifying Boxes at East Station

AT East Station new concrete purifiers have been constructed. These two boxes are identical in size tie lines, Numbers 605 and 606 from and general construction with the eight other concrete purifiers, and are built at the north end of the present boxes, being an integral part of the older installation. The concrete was poured so that each box is monolithic, that is, the concrete for each box was poured continuously until the box was complete.

The steel covers, as well as all the interior steel work for supporting the oxide trays, was furnished by the Steere Engineering Company of Detroit. The covers are of electrically welded construction, the welding being done in the field by employees of the Steere Company.

The piping arrangements are rather complicated. The connections into the piping system of the other concrete boxes are so layed out that two pairs of boxes can be used on Carburetted blue gas and two pairs on coal gas, with an intermediate pair which can be used on either one as load and sulphur conditions may require. The completion of these boxes now makes it possible to abandon four of the old cast iron water sealed purifiers. They thus add a feature of safety to the system. Furthermore, they add capacity in that higher gas pressures can be carried, and thus greater volumes of gas may

be put through them. And they are economies, in that they place a correspondingly greater capacity within the working territory of the mechanical equipment for loading and unloading. That is, by use of the motor crane, outside boxes of 4,000 bushels capacity can be emptied and refilled comfortably in one day, whereas, the inside boxes require at least two days and a larger number of men. These boxes will be in service by the middle of November.

Station 34 Enlarged

(Continued from page 233)

Station 5 to Station 6, and are tapped off in a manhole nearest to the station and feed to station 34 instead of looping in the usual method. This type of construction does away with two oil circuit breakers, and in case of a shutdown for any reason at Station 34, Station 5 and Station 6 will not be disturbed, or vice versa.

The No. 4 Edison Rotary converter at present furnished with 4,150-volt 60 cycle, will be changed to 11,000-volt, 60 cycle. This will add to the efficiency of the Rotary. All present 4,150-volt switchboards in our future layouts will be replaced by up-to-date ones and transferred to a location north of the present D. C. switchboard. The 11,000-volt, 60-cycle switchboard will be added to this station. This arrangement will give the station operator more space around the machines to make necessary repairs.

This station, when completed will add much to the general utility of the Company's system.

The Limit in Thrift

The night before Christmas the meanest man in the world called his children to him; then, dashing out of doors, he fired a pistol, returned again to his family circle and told them that Santa Claus had committed suicide.

OBITUARY



With the utmost regret we announce the following deaths. To the bereaved families we extend the deep sympathy of the officers and employees of this Company.

Mr. Raymond McMahon, a valued employee of the Laboratory, died after a short illness, at his home, 402 Flower City Park, on November 9th.

Mrs. Theresa Newman, mother of Mr. Leon A. Newman, died recently at her home 99 Millbank Street. Funeral services were held at the home and from St. Monica's church. Solemn high mass was celebrated by her nephew, the Rev. Joseph Dissett, the Rev. Andrew Dissett, of Auburn, another nephew, being sub-deacon. St. Monica's church quartet sang. Mrs. Newman was one of the first members of St. Monica's church, and her funeral was attended by many friends. The interment was at Holy Sepulchre Cemetery.

Mr. Edward A. Patten, father of Mr. Raymond E. Patten, of the Meter Reading Department, died on October 29th, the burial being made at Spenceport, N. Y., where Mr. Patten formerly lived.

Mr. Charles Merredew, the father of Mr. Ernest W. Merredew, died some weeks ago in London, England.

The following persons from the Company attended the wedding of Miss Constantine Carreo, sister of Mr. Robert Carreo, on Saturday, December 6th: Messers Bramer, Erbach, Lerch and McMann.

Mr. Lorne Fulton has been transferred from the Service Department

to the Power Statistical Department. Mr. Fulton takes the place left vacant by Miss Kroll, who left the Company's employ to take up new work in New York.

Mr. Frank Perkins recently became a fish merchant, so to speak. Frank purchased 800 pounds of perch from relatives at Sodus, N. Y., and sold them to his friends in this city who are wondering when he will get another shipment.

We are pleased to announce that twin girls recently arrived at the home of Mr. and Mrs. Melvin C. Bruman, who have made arrangements with Santa Claus to be prepared for the filling of two extra little stockings on Christmas morning.

Mr. Howard Stebbins and Messers Roy Riley and Hugh George journeyed to Kazubazua, Province of Quebec, this Fall, on a hunting expedition. No deer or caribou were shot although the party obtained many partridges. The bush in this section of Canada is very dense and it was unusually difficult this season to obtain good shots.

Mr. and Mrs. Phil Thomas enjoyed a very wonderful vacation trip this Fall. Motoring to Keene Valley, they left their car and took a three-day hike into the heart of the Adirondacks, where they climbed Mt. Marcey. They visited the Green Mountains, went into Canada, came back again into the "States" to Albany, went down the Hudson River, through the Delaware Water Gap to Reading and Allentown, Pennsylvania. The homeward trip was by the Susquehanna Trail.

Thirteen men from the Engineering Department recently enjoyed an excellent "feed" at Mr. Miller's cottage, Irondequoit Bay. The repast was furnished by a certain member of the party whose bad judgement in picking Presidents brought considerable joy to his associates.

Mr. "Bill" Harris, formerly of the Right of Way Department, recently wrote Mr. Kelly from Brookline, Mass., where he is attending school. Mr. Harris is greatly enjoying his studies.

Messers Charles Hall and Bert Wickenden, of the Right of Way Department, this Fall enjoyed a hunting expedition. Mr. Hall got his allowance of pheasants the first day. He is said to have a double barrelled gun capable of shooting around a corner. Mr. Wickenden was not quite so lucky. Shooting at a pheasant, he killed a rabbit which, after all, is better than getting neither. He made up for lost time the second day.

Mr. Charles Prothero recently enjoyed a hunting trip to Hilton, N. Y. and came back with a game bag well filled.

Mr. "Clint" Heintzman is getting quite a "rep" as instructor in automobile driving. He recently graduated his lady friend in that course and now he can sit back on the cushions and enjoy the scenery.

Miss Nelly Huddy, head of the Telephone Department, enjoyed her vacation this season at Atlantic City. She was there during the week of the hair dressers convention which, of course, would interest any woman. She spent one week in New York City and had a wonderful time.

Mr. Howe Kieffer attended the football game between Columbia and Cornell, at Ithaca, during November. While there he had a "blowout"—of course we mean the tire—and purchased the needed spare in Ithaca. We suppose it has a college education.

Mr. C. W. Smith, the Company's new Consulting Engineer, recently gave a talk before the Mt. Morris Chamber of Commerce. Mr. Smith told many interesting facts connected with his work as Construction Engineer for the Roosevelt Dam, in Arizona and also answered many questions asked concerning the proposed Mt.

Morris dam, which seems to be the topic of interest in the Genesee Valley right now. Mr. Smith is well qualified to speak on such subjects, being an international authority on power and dam construction.

Mr. James Downs and his men were about to place a pole in a customer's yard and were giving the layout the "once over". "It's about time you fellows took out those ashes", someone called out. The fellows laughed so hard they had to explain the reason for their mirth. This was not hard to do for the lady of the house was just as anxious to have the new pole installed as she was to see the ashes disappear for it meant that electricity, one of the best of servants, had come to her home to assist her.

Miss Pratt, of the Domestic Sales Department, some time ago enjoyed a fine trip to New York, Philadelphia, Atlantic City and other eastern cities.

Mr. Patterson recently made a business trip to Toronto, Ontario. While there he visited the plants of the Canadian Hydroelectric Company.



Mrs. Philip Thomas. Standing on the Top of the World in the Vicinity of Mount Marcey.

Mr. Frank Rich, a former employee of the Company who is now living in Italy, wrote to Mr. Beebe recently stating that he wishes to express his appreciation to the Company for its goodness to him in past years. Mr. Rich also desires to be remembered to all his old friends in the Company to whom he sends Christmas greetings.

Miss Esther Church recently visited friends in Syracuse, N. Y. where she attended a social function at the Syracuse University.

Miss Mable Kramer recently celebrated her birthday at her home, on Alcazar Street, with a party.

Miss Lora Porter visited Brockport on Thanksgiving day where she was pleasantly entertained by friends.

Miss Ruth Ross, of the Pay Roll Department, is now living on Lake View Park where her parents recently purchased a home, moving to this City from Brockport, N. Y.

On Thursday, December 11th, the employees of the Purchasing and General Construction Department offices enjoyed a bowling party, at the Grand Central alleys, on South Avenue.

Miss Electa Alley, of the Auditing Department, is to leave the Company's employ on December 29th, to start for her home, in McAllen, Texas. It has been three years since Miss Alley has been home, and her arrival there, she says, is to be a Christmas surprise for her parents, who are not expecting her.

Mrs. Van Thof, formerly Miss Eva Gaston of the Appliance Department, has returned to that department to assist in the work she knows so well, during the absence of some of the regular employees on account of sickness.

During the early part of November, Mr. Sanderson's Department staged another very interesting and enjoyable party, in the rooms of that Department on the third floor. An eight-piece orchestra furnished music

for dancing and singing, the latter being lead by Mr. Benham, of the Industrial Sales Department, who is a member of the C. of C. Glee Club. Among the interesting diversions furnished on this occasion was a mock wedding in which the following persons took part: The blushing bride Miss Dorothy Stayman; the husband, Mr. "Bob" Kelly; the father, Mr. Huff; witnesses, Miss McIntyre and Mr. Houlihan; the flower girl, Mr. James Nolan and the preacher, Mr. Lilly. Miss Berg played the wedding march. An enjoyable luncheon was furnished and everyone had a very wonderful time.

Mr. and Mrs. Lilly are overjoyed over the arrival at their home some time ago, a fine baby boy.

Mr. Howes, as Chairman of the Water Power Committee of the electric section of the Empire State Gas and Electric Association, recently gave his report to that committee at an important meeting of the Association, held at Syracuse. As part of this report Mr. Howes introduced Mr. Murphy, of Ottawa, Canada, who presented interesting motion picture studies of his research work in connection with the action of frost on racks. Among others who attended this Syracuse meeting are the following persons: Messrs Deffenbaugh, Alling, Davis, Swarthout, Conslor and Fiedler.

Mrs. M. Ludlow, of the Domestic Sales Department, took charge of the Company's Andrews Street store recently, during the sickness of Mr. Russell Howe.

Little Suzannah, "Sanna" for short, is the name of a fine baby girl born on November 29th, to Mr. and Mrs. William Lacey, of 25 Rand Street.

Miss Hillyard, of the Pay Roll Department, recently visited friends in Syracuse and attended one of the big football games of the season, that between Colgate and Syracuse Universities.

Mr. John D. Rockefeller, of the Order Department, is the proud father of a 9 1-2 pound baby girl, named Freda Lois Rockefeller, who was born on October 7th, last.

Below are shown Former President Jas. T. Hutchings, and Mr. Samuel T. Bodine, President and Gen'l Mgr., respectively, of the United Gas Improvement Company, of Philadelphia, Pa. Employee readers of Gas and Electric News will note with pleasure and satisfaction the visible evidences of well being which the photograph shows, especially with reference to their former boss, associate and friend, "J. T." The picture was taken on the Board Walk at Atlantic City, during the convention of the A. G. A. this fall.

Mrs. G. L. Bauman, who was formerly Miss Laura Swanson, of the

Tabulating Department, recently visited her former associates in the Company. Mrs. Bauman is living on Filon Heights, this City, following her honeymoon which included visits with friends at Cleveland, Detroit, Cedar Point.

Miss Morell, of the Electric Distribution office, recently visited friends in Detroit. Last month, through an error, we announced a shower in which the girls of the Andrews Street office honored two of their young women associates, Miss Morell being reported one of them. She says this was somewhat exaggerated and we promised to restore her again to the ranks of our unmarried employees, with suitable apologies.

Mr. Wm. Spears is living in his new home on Thatcher Road. He is now building a garage, working after supper each night with the aid of a 100-watt electric lamp.

Messrs Wm. Gosnell and Charles Schake, of the Investment Department, spent a recent week-end at Mr. Gosnell's cottage, on Canandaigua Lake, and put the place in condition to withstand the vicissitudes of the coming winter. Mr. Schake acted as chef, peeling the potatoes and frying the bacon, while Mr. Gosnell busied himself with numerous other tasks. "Bill" tried his luck at the frying pan but is said to have cooked the bacon till but little was left of it. On the other hand, he says, Charlie made it disappear entirely when he got after it. While experimenting these gentlemen found that fried apples and onions make a very delectable dish.

The October issue of the Rochester Engineer carries a story on "The Gas Industry of Rochester", by Mr. Wm. Whitney, Assistant Engineer in the Company's Gas Department. This article contains many facts connected with gas making and is written in an interesting manner.



Left to Right: Mr. Samuel T. Bodine, and Mr. Jas. T. Hutchings, Pres. and Gen'l Mgr., respectively, of the U. G. I.

Mr. Charles Hamm recently visited friends in Oswego, where he stayed over a week-end.

The Misses Van Gilder and Rossney attended a very pleasant Halloween party which was held at Forest Lawn.

Mr. Walter Scofield made excellent use of his vacation period to start a new home for himself and family.

Mr. Harold Marsh, of the Record Drafting Department, enjoyed a pleasant vacation consisting of a motor-camping trip to the Mountains. Two young men friends accompanied him. A trusty "flivver" supplied the transportation and a well-equipped camping outfit insured the necessary room and board.

Mr. Charles Ayen recently enjoyed an extended motor trip to Bloomsburg, Pa. The trip to and from that city was, respectively, via the Susquehanna and the Lackawanna trails.

Mr. Durfee, of the Electric Distribution Department, attended a committee meeting of the Electric Meter Committee of the N. E. L. A. which was held in St. Louis, the latter part of October. On the return trip, he stopped in Cleveland where he was met by Mr. Conslor. While there they visited the offices of the Cleveland Illuminating Company where they studied the operation of that Company's Service Department.

Mr. Sidney Alling attended the N. E. L. A. meeting at St. Louis, taking part in the activities of the Inductive Coordination and Overhead System Committees.

Mr. George Histed recently visited Cleveland to attend the convention of the American Welding Society. Much progress in welding practise was evidenced by the papers presented and the actual demonstrations made possible. Mr. Histed visited the plants of the White and Lincoln automobile companies and inspected a new 16-inch welded line now being constructed in that city.

Mr. Ayen has been with the Company for 23 years and was for 17 years foreman of the Company's horse barn when horses instead of trucks did most of the hauling to be done. Following the displacement of horses, Mr. Ayen became a driver of automobile trucks and is now employed in the General Construction Department.

Having recently moved into his new home, Mr. Frank Schmitt had no reason for desiring an extensive out-of-town vacation this season. He kept quite busy putting up shelves in his fruit cellar and getting his coke bin ready for winter.

Mr. and Mrs. Cadle availed themselves of the unusually fine weather during November to visit friends in the state of Ohio.

The employees of the Domestic Sales Department gave a surprise party for "Aunt Emmy" Hoffman, at her home on Maple Street, recently. Although it was arranged on the spur of the moment it was a great success.

Mr. P. E. Thomas conducted his Sunday School class through the Company's Gas Manufacturing plants recently.

On December 3rd, a nine-pound baby boy came to Mr. and Mrs. Michael Murphy, of 363 Champlain Street. Mr. Murphy is stock clerk in the Company's Gas Department.

Some of the young men of the Company have organized a basketball team and the first game is to be played some time during the latter part of December. The make up of the team and the result of its first game will be given in our next issue.

Mr. Edward Pye and his partner, Mr. Carl Griffith, who are engaged in the garage business down East during the summer months, have started for St. Petersburg, where they will follow the same line of work during the winter. "Eddie" visited the Garage recently, while on his way south.

Mrs. Hoffman, of the Domestic Sales Department, recently sold an electric heater to the manager of a local theatre. The service she rendered in bringing about a pleasing selection so impressed him that he came back shortly afterward with two theatre tickets which he asked "Aunt Emmy" to accept with his compliments.

Miss Jean Evelyn McChesney is the name of a little daughter born on December 3rd, to Mr. and Mrs. I. G. McChesney.

Born to Mr. and Mrs. Fred J. Elter, at their home on Lux Street, a baby girl which was named Geraldine. Mr. Elter is employed at Station 3.

On Saturday, December 13, the following employees started for Cayuga Lake on a week-end hunting trip, Messrs Gordon Ross, Wilbur Seidell, Harold Noble, Ray Davis

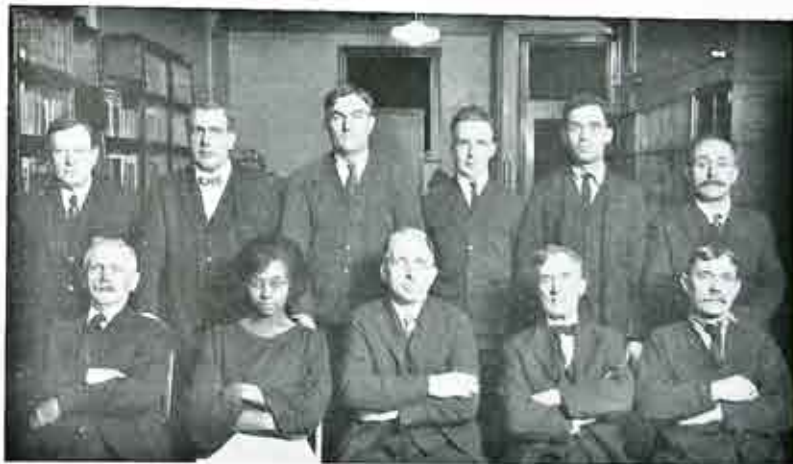
and William Weaver. The weather was so cold and the ice so thick that duck hunting was superseded by card playing. Mr. Seidell was the only member of the party who was provided with a sleeping bag and received a lot of "kidding" for his pains.

Miss Rose Kaplan attended the Michigan-Iowa football game this Fall during her visit to the home of friends at Ann Arbor, Michigan. While there she attended a week-end party given by one of the Greek letter fraternities, of the University of Michigan.

Mr. F. B. Orr, of the Illinois Maintenance Company recently visited the Company's plants, being especially interested in its steam business. Messrs. Wilder and DeWolf took him about and showed him the "high spots" of the Company's steam layout.

Employees of the Janitor Department (Main Office)

"The Men and Women Who Keep the Wheels Turning" Series



Seated: Mr. Jacob Hall, Mrs. Bertha Brown, Messrs. Arthur Guttridge (Sup't), Thomas Goodwin, and Stephen Pierson; Standing: Messrs. H. Garnsey, Fred McDonald, John Aldien, Fred Duckett, Nicholas Sardois and Joseph Francis.

FUMES FLASHES



SAFETY FIRST

Neurich—"Be sure you get a good-looking nurse for my baby."

Mrs. Neurich—"Why?"

Neurich—"I want him to have police protection."—*Meleady*.

PLAIN SEWING FOR SCALP REPAIR

Surgeon—"I'll sew that scalp wound for you for \$10."

Patient—"Gee, Doc! I just want plain sewing, not hemstitching and embroidery."—*Medical Journal*.

WE WALK NO MORE

"I want to reach people in all walks of life."

"That's a narrow audience, old man. Better include all makes of cars."

IT STRUCK HOME

"My sermon on thrift made a tremendous impression on the congregation."

"How do you know?"

"I could tell when I counted the collection."

WELL TURNED OUT

"Did your last employer give you a reference?"

"Yes, but it doesn't seem to be any good."

"What did he say?"

"He said I was one of the best men his firm ever turned out."—*London Telegraph*.

HARD PROBLEM

An American in dear old London was bragging about his automobile. He ended his eulogy by declaring: "It runs so smoothly that you can't feel it, so quietly you can't hear it, has such perfection ignition you can't smell it, and as for speed—boy, you can't see it."

"But, my word, old dear," interrupted the Briton, anxiously, "how do you know the bally thing is there?"—*Blue Baboon*.

TIT FOR TAT

"You simply cannot find a maid who is honest. That one you recommended just left suddenly and took with her nine of my towels."

"What kind were they?"

"They were those Pullman car towels which I brought back from my trip."—*Wall Street Journal*.

THE BETTER CATCH

An Idaho man was fishing in Lake Crescent recently. He caught a big northern pike; the biggest he had ever landed in his long and busy life. He was elated. He was crazed with joy, and he telegraphed his wife: "I've got one; weighs seven pounds and it is a beauty."

The following was the answer he got: "So have I; weighs ten pounds. Not a beauty—looks like you. Come home."—*Idaho Yarn*.

EX—ACTLY

Sam—"What am you doin' now?"

Bo—"I'm an exporter."

"An exporter?"

"Yep, the sleeping car company just fired me."

THE TOOL REQUIRED

"My dear, these cakes are as hard as stone!"

"I know. Didn't you hear her say, 'Take your pick,' when she handed them round?"—*London Mail*.

SOURCE OF THE RACKET

The story that katydids make that noise with their hind legs seems much more reasonable after you observe jazz musicians in action.—*Birmingham News*.

OR MAYBE HARDER

"Hit may be hard fo' a rich man to enter de Kingdom of Heaven," said Rastus to the preacher "but hit's just as hard fo' a po' man to stay on de earth."—*New York American*.

MUNICIPAL IMPROVEMENTS

"One more filling station, gentlemen," announced the president of the board of selectmen happily, "and the village will be able to remove all the lamp posts on Main Street."—*Life*.

OWNERSHIP DOUBTFUL

Traffic Cop: "Hey, you! Is that your car?"

"Well, officer, since you ask me, considering the fact that I still have 50 payments to make owe three repair bills and haven't settled for the new tire, I really don't think it is."—*Motor World*.

The Old Timer's Test

1925, Play Ball!

You may go strong with a wicked curve,
And a fast one shooting through,
But I won't say 'till I know your nerve
That the chances are you'll do.
You may be great with a change of pace,
But I'll watch how you get by,
When it's three and two, with three on base,
And you let that last one fly.

I've seen 'em come and I've seen 'em go,
And many a guy with stuff
Enough to conquer in any show
Went bad when the way grew rough.
It's soft to pitch when there's no one on;
But the test that goes with me
Is the bases full, with two men gone
And the count at two and three.

—James K. McGinness.



A Father's Christmas Gift to His Son

DO YOU know what I am going to give my boy for Christmas?" a wealthy man inquired of a friend a few days ago.

"A nice fat check," the friend ventured.

"No," replied the man, and he handed his friend this note:

"Dear Son: I give you one hour of each week day and two hours of my Sunday, *yours*, to use as you want it without interference of any kind."

Surprised, the friend asked how he happened to decide on that present, to which the wealthy man replied:

"Well, one day a human derelict came to see me. When he told me his name I exclaimed: 'Lad, to see you like this—you with such a father!' and the derelict replied, 'He was a fine man. His friends said so; but business so absorbed him that I met him only occasionally at meals. I never really knew him.'

"My boy is going to know me better" resolutely declared the wealthy man.—*Selected.*