



Vol. 9, No. 6

# GAS and ELECTRIC NEWS

Rochester Gas & Electric Corp.

DECEMBER, 1921

IN SENeca PARK





## Seasons Greetings —

I desire to express my appreciation of your loyalty, cooperation and earnest work. It is an honor and a pleasure to serve with such associates.

A Merry Christmas and a Happy New Year to each and every one of you.

*H. Russell*  
GENERAL MANAGER

# GAS AND ELECTRIC NEWS

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## The Lesson Taught by a Windstorm

THOMAS H. YAWGER

ON Sunday, December 18, 1921, one of the most intense wind storms of years swept through Rochester. This gale which continued for two nights and a day and at its height registered a velocity of fifty miles per hour, sought out every nook and cranny of the Flower City no matter how obscure as if it were on an inspection trip for nature and was bent on testing out the works of man with a thoroughness of which only the elements are capable.

It was, of course, fortunate that this raging, unbridled tempest should have occurred on a Sunday when the city was resting and a majority of its citizens were safe at home where a minimum of danger could be expected. This was sheer 'good luck' and may have prevented possible loss of life. Even had the storm occurred any other day, industry would have suffered little for sixty percent of all local wiring is now carried underground and much of the existing overhead wiring is carried on concrete poles across rear lot lines where possible trouble will cause the least amount of danger or annoyance. But, the damage was great enough.

Signs were blown down rather promiscuously, some sections of the city were rendered dangerous through the flying glass from broken windows or miscellaneous odds-and-ends which the intense wind succeeded in wrenching loose from their ordinarily safe

moorings, and in the outlying districts a number of poles and wires were blown down thereby crippling for a time some of the illuminating facilities. In fact, most of the electrical trouble was concentrated on overhead sections of street lighting circuits. On the whole, the damage was much less than that experienced in other places, the reason for which is gratifying to the officers and employees of this Company who have for years been planning and carrying out a systematic policy of installing underground ducts and cables for power and lighting in all sections of the city. As this was due neither to mere good luck nor to any other circumstance of a transitory nature, let us give a brief history of the farsightedness which years ago inaugurated a plan which produced good dividends when a real test came.

In 1892, the officers of the Company, after conferring with the city officials, planned to spend a certain amount of money each year in placing underground a portion of the ever-increasing network of electric wires necessary to serve the requirements of a growing city. It was realized that the overhead wires with their unsightly poles not only formed a grave source of danger, but were becoming more of an eye-sore as the city grew in beauty under the inspiration of a wise city planning department. In addition to this, the wear-and-tear





Main Street at Four Corners in 1890, Showing 90 Foot Poles.  
None of These Poles are to be Seen in Rochester Now.

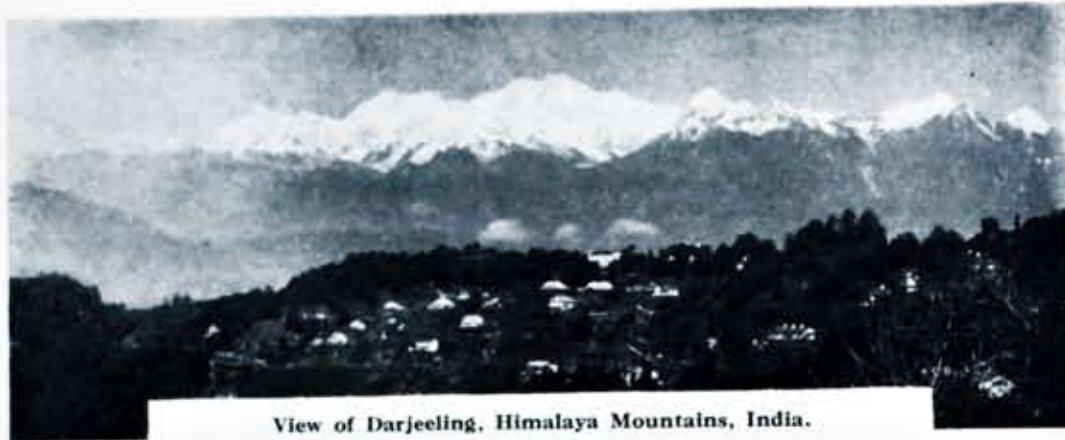
of a system exposed to the elements of nature rendered that system more complex of handling and resultantly more inefficient. Therefore, in 1892, this Company constructed the first man-hole in its now extensive system of underground ducts and cables at East Main Street and University Avenue. This man-hole is still in the service and functioning as planned years ago. Each year since that time much money and untiring effort have been expended to systematically decrease the extent of the overhead wiring in a practical and economical manner, until, today, there are more than 1021 miles of underground duct and over 1224 miles of underground cable installed and giving satisfactory service. Thirty-eight miles of underground cable have been drawn in during the past year and other installations are under way. To do this has taken an expenditure of over \$3,250,000. But who will gainsay that this money has not been well spent when it is balanced against the possible loss of life that might have occurred during this last storm alone, and the great havoc that would have been wrought among the poles and wires of an overhead system such as might have existed but for the anticipation of just such contingencies by the men who are responsible for the successful operation of this Company. Many cities that put off the installation of underground equipment to a 'more convenient season' have done so at a greatly increased cost of construction during the later years and years to come. Storms of the intensity of the one of December 18, bring forth these facts and tend to prove the efficacy of a policy that looks ahead.

The men of the Electric Distribution Department of this Company were most effected as employees by this destructive storm, for most of the work of getting equipment back to normal fell to them. These men worked diligently, handicapped by

wind and cold nor stopped till, hours afterward on Sunday night when everything with the exception of a few street lighting circuits had been put in order. In times like these it is interesting to note the reaction of a city to the inconvenience and damage wrought. The operators on the telephone switchboards of this Company were kept extremely busy answering calls reporting trouble or asking for the aid our specialized departments can render in such emergencies. In justice to the public at large, may it be said that through the excitement and anxiety incident to this big storm, a wonderful spirit of warm co-operation was evident. Customers were prompt to report trouble and equally patient when the remedying of it seemed, under the existing circumstances, often a tedious exasperating process.

As there is no great loss without some small gain, perhaps we can draw a constructive lesson even from a damaging wind storm. If we can, it has not been entirely in vain that it has happened. If it has taught us to be more watchful as property owners for the common safety of mankind, or if it has shown how the public and the utility are linked closely together in the common bond of service, it will have done enough to counteract the financial loss involved. To the employees of this Company who worked hard to bring about normal conditions out of the destruction the elements wrought, there should be genuine satisfaction in the opportunity to be of service in the emergency. To the officers of the Company who have persisted in building for the future there should come a mead of gratification at having been able through a well-formulated policy to substantially lessen the loss of life, property damage and service interruption which nature in a painfully playful mood may bring about without warning in a remarkably short time.





View of Darjeeling, Himalaya Mountains, India.

## A Few Impressions of India

J. L. HARRISON

TO spend three years in India on construction work offers an experience which is very interesting, though at the time aggravating. You come into contact with all classes of Indians both highly educated and illiterate, people of many castes, and fanatical religious and political beliefs. Leaving the latter subject to the Government to settle, it is much more interesting to me to write about the native as I met him in his own land and to recall some of the amusing incidents which happened during my visit of three years.

Arriving in Calcutta after a most enjoyable sea trip of sixty-five days duration (on one boat) I found the weather very warm—around 90° to 100° in the shade—and this was in March, the springtime. After equipping myself with clothing suitable for a tropical climate, I made my way by rail 150 miles to Jamshedpur the home of the steel industry of India.

It was pleasing to find quite a few boys from the U. S. A. employed in different departments of the plant and it made a fellow feel at home right away. Good advice was freely given and graciously accepted. The Company furnished a bungalow at a very moderate rent and, being a newcomer, it was only natural that I should be eagerly sought after by

servants wanting a soft home. Servants are an absolute necessity in India and the amusing predicaments one is up against through lack of knowledge of Hindustani is part of the newcomer's early troubles. The bearer (Butler) wants so much per month, also the cook, sweeper and gardener. They generally have a large family to support with the addition of many relatives. As often happens you are told that you are their master and provider for them all and, should you happen to pay the wages asked for, I wish you could see the smile when they get around a corner. The news soon travels the district that someone "easy" has arrived. Next comes the barber, butcher and laundry man; the latter by the way, breaks stones and blocks of concrete with shirts and sundry other articles of clothing. Then on pay day along comes the "Box Wallah", the house to house merchant with many fine things very cheap, (providing you give him half of what he asks), yet from these men you can purchase real Persian carpets, (and fakes) beautiful silks, embroidery work, brass and ivory articles and jewelry.

It is a hard proposition to get these fellows away from the bungalow without making a purchase, and

if you do happen to bring down the price wherein he makes a decent profit, he always admits it and pays you the compliment of being a hard and clever buyer. The old smile comes over his face when relating to a coworker his sales for the day and, should a person be found "easy", as many are, the whole townfull of "Box Wallah's" are on your veranda next day with "Many beautiful things very cheap, my master."

Having gotten together this loyal band who were hereafter to look after my home comforts, I had the very amusing experience of getting together an organization which under my supervision were to be responsible for the brick mason work on the new by-product coke ovens, blast furnaces, stoves, reheating furnaces and outbuildings. I was fortunate in procuring the services of an educated native clerk, who also acted as interpreter, and next hired a native overseer for the masons; here again I was lucky, as this man, (Tulsi Ram by name) had a wonderful knowledge of blue prints and the handling of men. He had worked on coke ovens before so was a very valuable asset.

Then came the fun of hiring masons and laborers. The latter are easy to get, and the men coolies load the material to be carried on the heads of the women coolies and away they go to whatever place you order, be it a few yards or a quarter of a mile.

A very familiar sight is to see these women each with a stack of 12 bricks on her head and a baby sitting astride her hip, marching along with others happy and content with their lot. The coolie generally brings along his wife and family to work and all who are old or strong enough to help do so, the Mother having to stop work once in a while to feed the baby of the family, who may be only two or three months old and who is placed on the ground in between meal times behind a barrel or any other article which may keep the strong sun off. It often happens that the child is covered with flies during the working hours of the Mother, and how the poor little beggar bears the biting of these pests I cannot imagine. There is no wonder at the amount of sickness under such conditions yet you see them existing on all construction work.

Picking out masons was like trying to pick the moon out of the duck pond. What I had to do was put them to work and await results, and "we got some." Men came with hammer and trowel who had previously been water carriers, grooms, sweepers, gardeners, loafers and of sundry other occupations far removed from the art of mason work, yet with the assistance of Tulsi Ram I managed to get together a very good outfit. The company paid good wages to these men as wages go in India and it was only fair that a man should be paid according to his



Typical Street Scenes of Agra, India.



worth. The third rate men were naturally very jealous of the high grade men who received the highest wages and many were the applications in eloquent English for an increase of salary required as they were possessed of a very large family with many relatives. This increase not being granted, a request was presented to "your Honor for kind consideration and humble appeal, that your Honor would grant a 30 days leave as there was business to transact" in his native village. This from the man who a few days previous had begged, as though for his life, with a tale of great poverty for an increase. Yes, it is a great country with some great people.

It was only natural that a man used to American methods of construction should try to install those same methods in any country, even making allowances for the class of labor, but what a surprise I got and the longer I stayed the more the fact was made quite clear that India was East and the U. S. A. was West. Yet the many primitive methods were improved upon, and the masons taught to do their work with more system than they had been used to.

Progress was very slow and should a person be of a hasty temperament India is a good place for material to work upon.

The idea of a mason squatting down on his haunches with an um-

brella up laying brick and beating a tattoo on the clay box with his trowel caused the writer to have his shoes "toe capped." It was my full intention to give the native the consideration a human being deserves, but this kindness was encroached upon in many ways and taken as weakness, so we cut out some of this consideration business and in return got results and respect. The work

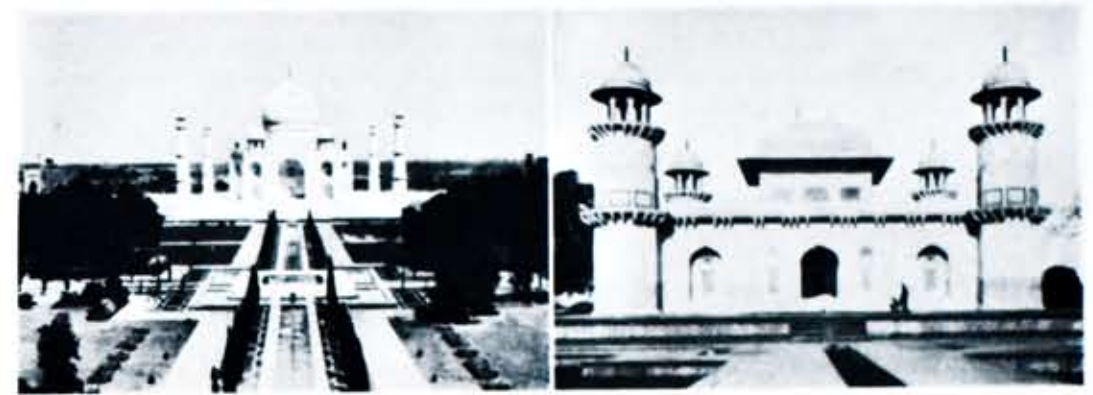
done was a credit to the men who helped me supervise these Indian masons and not a little is also due four or five native overseers who, had they been possessed of the average strength of a white man, would hold their own in quantity and quality of work with the majority of white men I have met.

Show a native tradesman something you want done and he will copy it to a fraction. This applies in every branch of trade I came in contact with in India, but the native has his own

method of arriving at the finished article. You can't get coolies to push a wheelbarrow; no sir, you might instead see two coolies carrying the bowl of the barrow, filled with concrete, on their heads, as I did. Give them a bamboo and a few pieces of rope and they will shoulder more poundage than you would give them credit for. The common jungle coolie is preferred by me all the time. He has his peculiar ways but you are not troubled with breaking his caste



The Shwe Dagon Pagoda with its Golden Spire and Jewelled Top; Rangoon, Burma.



Left—The Taj Mahal at Agra, India, Considered the Most Imposing Structure in the "Cities of the Moguls." Right—The Tomb of Etmaduddaula, at Agra, Built of Inlaid Marble and Completed in 1628.

if you order him to do any task.

To help keep sickness down among the masons, I got the company to purchase three earthenware jars for the purpose of filtering and cooling water for drinking purposes and also had to employ a "Brahmin" (high caste man of India) to distribute this water to the work people, as all classes will accept food or drink from these people of highest standing. Intent that my orders should be carried out, I made an inspection every morning of the water boys quarters. One day I felt of these jars to assure myself that the water was cool and inside of ten minutes a request was presented for three new jars, as I had touched those in use, therefore the evil spell had been put upon the water and it was unfit for further use

as drinking water. I explained that I had only touched the outer side of the jars but the damage was done and inside of thirty minutes there was one less man on the payroll and much broken earthenware in the vicinity of the coke ovens. Someone reported that there was a panic among the natives caused by one mild white man causing castes to be broken continually.

Cholera played a very important part in reducing the population in the district and also taking away from us each year several Europeans. This is a most deadly disease and if ever a person has the opportunity of seeing a cholera stricken village, it will never be forgotten. Natives are at work one day and dead the next, the village being burned to the



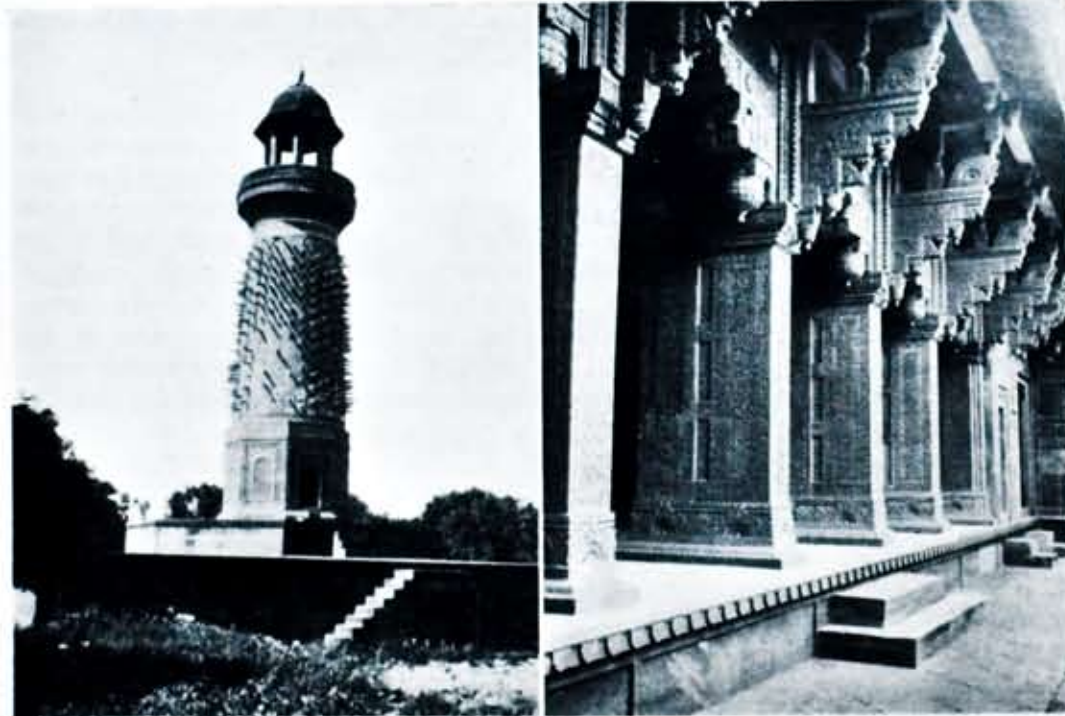
Left—The Building of Sikandra, or Akbars Mausoleum, Built by Akbar the Great in 1613. Right—Tomb of Akbar on Roof of Mausoleum. Note Pedestal at Right Wherein formerly Set the Famous Koh-I-Nur Diamond.



ground to prevent the further spreading of this awful epidemic. The first case I saw was that of a woman who had a baby in her arms and had crept into the brick shed for warmth, while some of her friends had kindled a fire against her stomach. The symptoms of cholera appear to be very violent pains in the lower regions of the body and vomiting.

Dysentery and smallpox are among the other diseases to guard against

for the different castes to be used at festivals. You always receive a visit from the work people displaying those gods and singing, dancing and tom tom playing form the usual introduction for some money. If you give to some of these crowds as soon as they arrive, you miss the fun of the fair, and that would not do as these performances are too interesting to let go by. There is one day set aside when the workmen



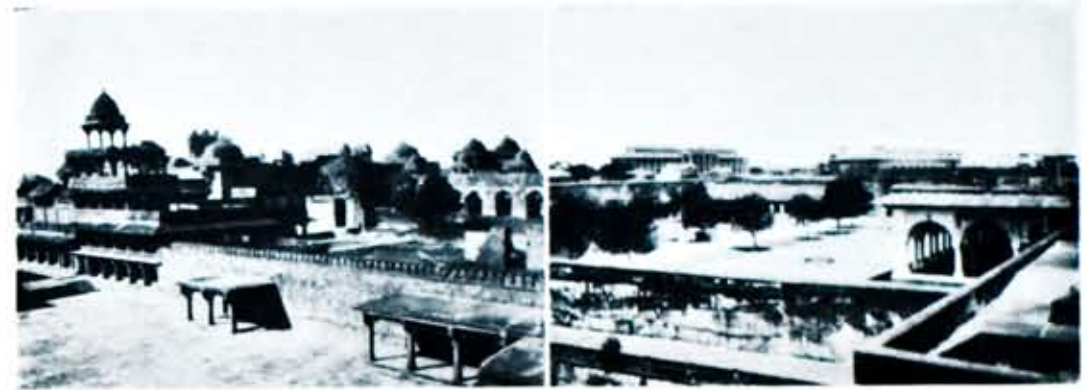
Left—The Hiran Minar, or Elephant Tower, Fatehpur, Sikri, Agra. Elephant Tusks Have Been Replaced by Marble. Right—The Jahangiri Mahal Built of Red Sandstone. Note the Wonderful Carving.

and it is advisable to boil milk and water, scald vegetables and all cooking utensils and earthenware. These precautions are absolutely necessary and are demanded by the medical officers in the different towns and villages where Europeans reside.

I had the pleasure of seeing quite a few different works and was surprised at the wonderful instinct the native clay worker possessed. These people are kept quite busy during the year making clay and mud Gods

decorate the implements with which they earn their living and worship them. A blacksmith's shop looks like a bazaar and the workmen kneel and pray and sing that the evil spirits may be cast away for another year and no harm come to the hammers, tongs, anvils, etc. Many incidents as these make India interesting.

It was my good fortune to spend fifteen days in Darjeeling, (Himalaya Mountains) and there to see the



Left—The Panch Mahal (Five Halls) at Agra, India. Right—General View of Pearl Mosque and Delvan-i-Khas, Agra, India.

beauties of Mt. Everest though 117 miles away as shown in Fig. 1.

Most of the places of interest were visited in and around Calcutta including the Burning Ghat, where the Hindu first has an open air procession displaying the corpse to public view with feet painted red. It is then placed upon a pyre and given a hot reception. I can vouch for the workmanship of the burners because I saw the whole secret of stacking and placing.

At the conclusion of my three years contract I availed myself of the opportunity of visiting a few of the historic cities of India, so along with a chum, (also bound for U. S. A.) we mapped out a little tour. Leaving Calcutta Sunday, March 20th, we arrived Monday evening at Agra, there to see the wonderful Fort

and the Taj Mahal. The following day the old city of Fahepur Sikri was visited, also the carpet works where we found the old hand weaving being done by boys not over ten years old, many being around seven. With an older person calling the design from behind, each boy knew his section of carpet and whenever so many knots of red and blue were to be tied at a certain place in the carpet, his small fingers worked like a flash. This I thought was one of the most wonderful feats of old style weaving I ever saw. Next we visited the gold and silver embroidery works and the products of this art were very pretty. Our next stop was Delhi, there to once more see a wonderful old Fort and the present day new city which is being built.

In visiting many of these temples



General View of Maderia. Also View of Harbor Taken From Inclined Railway.





Left—Cecil Rhodes Grave. Right—Mr. Harrison and His "Chum" Mounted on "Mahomidgadge" at Rajputana, India, Bound for Amber, 11 Miles Away.

a person has to take off his shoes and in place use canvass slippers, but it is worth it so don't mind if any of you have to do it.

Next we traveled along to Jaipur in the native state of Rajputana. This is a very quaint old city with its Hindu ruler and traditions. Outside of riding to the palace at Amber (kind of change over for the Maharaja) on an elephant, we started a new style by riding down the main street on a camel. Seeing we were the only two white men in Jaipur at that time, it was not a hard matter to inaugurate new fashions or a riot. To start the latter all you have to do in Rajputana is kill a cow. No beef is ever eaten in this native state. A visit to the Brass works brought to a close a very interesting two days visit.

Our next stop was Mount Abu (Rajputana), our object being to see the noted Dilwara Temples of the Jains. We saw them, but Bill, my chum, almost lost his trousers. Upon entering the outer gate the guard demands the removal of all leather goods. Well, we thought shoes enough and all was well until Bill



Victoria Falls, South Africa. The Falls Extend  $1\frac{1}{2}$  Miles From End to End, and Drop 400 Feet.

caught the eye of the murderous looking guard of the inner gate, who demanded the removal of Bill's belt, at the same time never noticing the leather on my camera. We saw some of the most wonderful carvings in marble that there are in the world.

Our trip nearing the end, we entrained for Bombay to catch the boats, Bill going via Europe, I going via British East and South Africa. I spent nine very enjoyable weeks in the latter country, visiting among other places Victoria Falls, Livingston, Bulawayo, (stopping over to see the grave of Cecil John Rhodes), Kimberley (for the diamond mines), Johannesburg (where my uncle, whom I had not seen for seventeen years resides,) Durban, Cape Town and several coast towns, finally arriving in England for an eight weeks visit with my Mother.

The "S. S. Fogbound" brought me back to the U. S. A. safe and sound, far more enlightened regarding some other parts of the world than I was before I left. I am glad to be back in Rochester among my many friends and with the Gas and Electric Corporation.

## The Meter Reader

LEON A. NEWMAN

AMONG the uninitiated, the job of reading meters is often classed as 'soft', and many care-free young men make application for work of this kind who would shrink from it could they but follow a meter reader through the trials and vicissitudes of but one average day's work. In reality, such a job is a man's job, in all the sense that this modern expression has come to imply. A meter reader must be somewhat immune from the various and assorted

read 104,304 meters during the past 17 months and has averaged less than 1 error per month throughout this time, while the number of 'skips' for a period of 10 months to date is considerably less than one skip per month per man. By a 'skip' is meant the passing up of a meter without attempting to read it or the failure to read it for reasons other than absence of the patron, or some other unsurmountable obstacle or condition.



The Men of The Meter Reading and Bill Delivering Department.

knocks of the world (real or implied) that beset his hazardous pathway from day to day. He must be no faint-hearted indecisive individual, still, he must be courteous, diplomatic and, above all, have a sense of humor, if he is to be a success at his chosen occupation.

This Company has a competent force of meter readers many of whom have been in its employ a considerable length of time, whose work stands high in comparison with that of similar workers in other parts of the country. These men average about 307 readings per day, and one of this number has read 159,766 meters in the past 22 months. Another has

A pedometer test carried out by the Meter Reading Department showed that the men average about 17 miles per day on their meter-reading meanderings; at least 4 or 5 miles of this distance is 'ups and downs', climbing and descending without the aid of an elevator other than their two trusty limbs. A meter reader would surely make a good mountain climber, and some of them could qualify as balancing experts, tight rope walkers, or animal trainers so expert do they become in walking slippery sidewalks, descending rickety obstacle-strewn stairways, and pacifying vicious canines. One of this Company's men was recently laid up



in a hospital 10 days from a dog bite received while attempting to read a meter. During the winter months, bruises, swollen limbs and ankles and a varied assortment of other painful and unpleasant physical ailments assail the meter reader.

One of the especially unpleasant features encountered in this section by the meter reader in winter is the constant irritation to which his eyes are subjected as he goes from the bright out doors with its snow and sunshine to the darkness of the hundreds of cellars he encounters each day. Yet, through all this, the meter reader gives a good account of himself and, as we have shown, his errors are not unreasonably excessive, in fact, it would appear quite remarkable that he does not make many more of them. In this work, practise and experience count for added efficiency the same as they do in other lines of endeavor. It may here be stated that each meter reader carries as regular equipment a good electric flash light, without which he would be 'in the dark' in more ways than one. This light is a great factor in his high average of accuracy and incidentally saves him much time and many bumps and falls; it is also the safest kind of a light he could use as he is brought often in close proximity with inflammable materials.

The meter reader's whole day, generally speaking, is comparable to what has often been said of our human existence, it is 'just one darn thing after another'. But he overcomes them one at a time and does not let them demoralize him. Of course, there are compensations, which help to lighten his daily burdens. Many people in private residences try to make his work less strenuous by giving thought to keeping their meters reasonably accessible. On the other hand, all day long he plays a game of 'hide and seek'

with the unobtrusive meters on his beat, he seeks them out in dark cellars, many of the 175 odd stairways he must negotiate being strewn with obstacles and hazards. He has often to stop and make friends—whenever this is possible—with the family watchdog, but even after this bit of diplomacy, the 'worst is yet to come' in many cases. Getting into the cellar, he then digs his way meterward, moving countless articles from his pathway, and often having to drag himself across the winter's supply of coal, after which he uses his resourcefulness in raising himself high enough, somehow, to read the figures on the dusty faces of the meter. Of course, this is his job and he does it without grumbling, practising all the forbearance and patience he can summon, for he knows he is paid to read the meters, not to manufacture excuses for his failure to do so. If a meter reader did not practise these virtues, the many tribulations of his job would soon lead him to a nervous breakdown, but a good reader schools himself in this respect, and learns to disregard many annoyances that would bother average persons. This training is a valuable asset to any man, it teaches him to first master himself, then to rise above all difficulty.

This type of meter reader is a valuable asset to any public corporation. By reading the meters correctly he nips in the bud the most obvious chance for misunderstanding as to the correctness of a patron's gas or electric bill. All these readings are carefully preserved from month to month and any possible mistake can be checked and remedied. Also, the personality of the corporation he represents may be reflected by the meter reader throughout the day in the many points of personal contact he encounters. Through him the company may gain much in the way of good will and, in contrast, may

suffer in the same proportion through failure in his work.

This Company strives to maintain, and believes it does maintain a high-grade type of employee in its meter reading department. It assists them in all possible ways to not only become more proficient readers from day to day, but encourages them in maintaining a proper attitude toward the annoyances and aggravations to which their work subjects them. In the interests of that modern force, efficiency, it is hoped that in due time more attention will be given by individuals to the matter of placing meters in reasonably accessible locations. This would help eliminate the present danger to life and limb.

### “Where Will the Limit Be?”

WALTER S. BURCH

THE recent announcement in the “Electrical World” of electrical tests conducted by the General Electric Company at 1,000,000 volts alternating current marks another step forward in the field of electrical research. This voltage is about twice that previously employed on a large scale in electrical research work on power apparatus and is over four times the present highest transmission voltage (220,000 volts.)

The results of the tests are said to indicate the feasibility of going to a much higher transmission voltage than any employed heretofore, making the economic distance for transmission possibly as high as one thousand miles. This possibility makes the *economical* transmission of power from coal mines and remote water powers to distant points of great industrial development a dream almost realized. The establishment of superpower zones such as Mr. W. S. Murray's proposed Washington-Boston zone are placed on a much sounder basis.

So far the indications are that

electric laws established at voltages of one quarter or one half the present value are found to hold true at this higher voltage. These laws have reference mainly to flash-over distances and the appearance of visible corona between conductors. The spark-over distance between points was found to be 105 inches at one million volts which about as calculated.

While this direct checking of results previously arrived at by other means might make one ask what had been gained, it is well known to electrical engineers that there are many intricate problems connected with the insulation of high voltage transmission lines and the protection of the same lightning and other disturbances which should be possible of solution with the aid of this higher testing voltage.

Since it is announced that the Westinghouse Electric & Manufacturing Company is building a million volt laboratory we may continue to look for the healthy rivalry that has always existed between these two manufacturers of electrical apparatus.

### Annual Meeting of the Gas and Electric Corporation

Notice of the Annual Meeting of the Rochester Gas and Electric Corporation has been formally presented to the Stockholders.

This meeting will be held on January 17, 1922, at 10 o'clock A. M., at the Company's Main Office, 34 Clinton Avenue North. Fifteen Directors to serve during the ensuing year will be elected, and any other business as may properly come before the meeting will be transacted.

In accordance with instructions issued by Mr. J. C. Collins, Secretary, the transfer books of the Company will be closed at the termination of business on December 31, 1921, and will remain closed until the opening of business on January 18, 1922.



## New Concrete Chimney at West Station

WILLIAM H. EARLE

**I**N conjunction with the addition under way at West Station, a new chimney has been constructed. This chimney is a new departure in chimney construction so far as this Company is concerned, it being built of concrete. The work has been progressing for a number of weeks, and was finished a few days ago by the Webber Chimney Company, of Chicago, designers of chimneys of this type.

The chimney proper is 225 feet above grade, 4 feet inside diameter at the top, and 7 feet inside diameter at the bottom, and presents a trim, stately appearance. To some, this concrete chimney may not appear as beautiful as her more robust sisters, but to others, her gracefulness and slenderness have an added appeal, and especially when seen at a distance as she shines chalklike in the sunshine, she loses nothing by comparison.

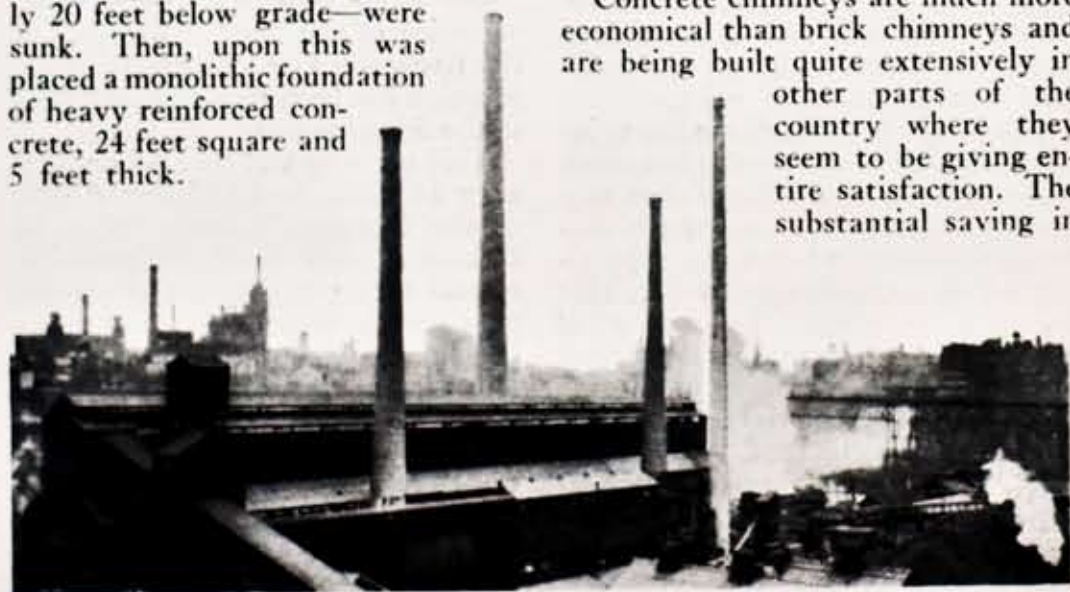
To properly support a chimney of this type, a rather elaborate foundation structure is required, and for this purpose five concrete piers extending to bed rock—approximately 20 feet below grade—were sunk. Then, upon this was placed a monolithic foundation of heavy reinforced concrete, 24 feet square and 5 feet thick.

The shaft was also constructed of reinforced concrete, and its wall ranges from a thickness of 19½ inches at the base, to 4 inches at the top, and was built in sections 4½ feet high, one section drying as the following one was being poured. In order to accomplish this, sectional interlocking wooden slot forms were used, and the graduation in diameter was made possible by decreasing the number of slats and thereby reducing the circumference of the chimney as the structure rose skyward.

Extending up 125 feet from the base, the stack is lined with fire brick, built in two sections independent of each other and separated from the concrete by an annular air space.

The chimney proper was built by four men; one placing the steel, setting the forms and pouring the mix; another operating the electric drum hoist which was used to elevate the concrete, and the other two men operating the mixer and handling the concrete ingredients.

Concrete chimneys are much more economical than brick chimneys and are being built quite extensively in other parts of the country where they seem to be giving entire satisfaction. The substantial saving in



View of West Station and its Chimneys. New Concrete Chimney is Located at Right.

cost of materials and labor required, subtracts nothing from the strength and durability of the chimney, it is claimed, and the departure from

brick in structures of this kind was predicted long ago and comes as an added testimonial of confidence in reinforced concrete construction.

## New Device for Grinding Steam Turbine Valves

IVAN E. POWELL

**T**HE accompanying illustration shows a tool recently made by Messrs John La Force and John Kress, machinists at Station 3, by means of which a very handsome economy is being effected in the repair of leaky throttle valves on our main steam turbines.

When river conditions are good and we have a generous supply of water power our steam turbines stand idle a great many hours during the month with full steam pressure on the throttle valves ready for service, and unless the valves are kept in very good repair a considerable amount of steam will be wasted, since the valves are large and the pressure is high.

Heretofore, when it was necessary to repair one of these valves the turbine was incapacitated for three or four days because it was necessary to grind the valve and valve-seat to a fit by placing powdered emery on the seat and then turning the valve disc back and forth by hand until all the high spots had been worn off. This was a laborious process and frequently required two or three days time in itself.

Now the actual time required to cut and grind the seat is not more than two hours including the time to install and remove the tool. The valve disc can be machined and polished in the lathe at the same time, and afterward the disc and seat can be ground together to make a perfect fit in less than thirty minutes.

The tool consists of a shaft which

is passed through and held in the center of the valve seat by means of top and bottom guides (No's. one and three respectively in illustration) the shaft being free to turn in these guides as bearings. The disc (No. four) is keyed solid to the shaft and holds one or more cutters, set to cut the valve as may be desired. The shaft can be turned by means of



Mr. Kress and the new valve grinding device

a wrench as the amount of actual cutting required is small.

The greatest economy is in the length of time the turbine is incapacitated. The valves can now be repaired promptly when they need it, whereas formerly this was not always possible, because repairing the valve meant that the machine could not be used for three or four days, a very important item.



## Cinder Separating Fans at Station 3

HOWARD HARDING

**D**URING the past year there has been installed and put into operation at Station 3 a rather unique type of apparatus known as a "cinder separating fan". There are two of

these fans now in operation; one is located in the basement of the boiler house directly under economizer Number 11 and the other under economizer Number 12. The suc-



View of the Cinder Fan Wheel Taken Prior to Being Placed in the Fan Casing.

tion side of the first fan is connected to the common smoke flue of Boilers 11 and 22 just beyond the point where the two flues unite. The discharge from the fan is carried out through the west wall and thence to the base of the stack. By a similar arrangement the second fan is connected to the common smoke flue of boilers 12 and 21. Thus each fan is made to serve two boilers.

The function of the fan is to eliminate the cinders that are carried by the smoke on its way to the stack. This is accomplished by the peculiar construction of the wheel, the paddles or vanes of which have a series of deflecting baffles designed to pick up the cinders and sweep them outward to annular passages on each side from which they will fall to a collecting pit below the floor. The whole design is based on the fact that the cinder particles are heavier than air and coming into direct contact with the paddles and moving outward, due to centrifugal force, are diverted by the deflecting baffles into the annular passages.

The fan casing is  $16\frac{1}{2}$  feet high by nearly 7 feet wide. The wheel is 12 feet in diameter, and at the maximum speed of 200 R. P. M. the

tip speed is about 7500 feet per minute. Each fan is driven by a 50 H. P. induction motor through a set of oil immersed spur gears with a 4.33 to 1 reduction. The speed of the motor can be varied so that the fan will run at speeds ranging from 100 to 200 R. P. M. At full speed the fan has a capacity of 100,000 cu. ft. of gas per minute at a static pressure of 1.75 inches of water.

The fans have been in operation for some months but no quantitative tests have been made to determine the degree of their effectiveness. They are a comparatively new development and rough tests made on other installations seem to indicate that they will certainly remove more than 75% of the cinders. It is hoped that they may do considerably better than that and we expect sometime later to devise a scheme by which we can determine just what they are accomplishing. As was anticipated, aside from their function of separating cinders from the flue gases, the fans have been of considerable value in supplying induced draft and making up for the deficiency which sometimes occurred when only the natural draft due to the stack was available.

### Special Meeting Held for Resuscitation Instruction

Many departments of the Company have for some years instructed their employees in and have laid special stress on the use of the Schafer Prone Pressure method of resuscitation from electric shock and gas poisoning. Meetings were held under the jurisdiction of the General Safety Committee in the Assembly Room of the Main Office, on December 13, 15 and 20 for the Gas Manufacture and Distribution, General Construction and Transportation, and the Electric Generating and Distribution Departments respectively, for the purpose of bringing the subject up

to date, particularly for the benefit of new employees.

Mr. F. W. Fisher outlined briefly the investigational work conducted on this subject by the National Electric Light Ass'n, the American Gas Ass'n, The American Electric Railway Ass'n and the National Safety Council. Dr. Walter Calihan explained the principles involved in the prone pressure method, and the various men who attended the meeting were trained in its practice under his supervision. Similar meetings will be held in each department in which the men so trained will instruct others.



## Electricity in the Dairy

HAROLD I. SHAKESHAF

THE modern dairy has developed into a great deal more than a distributing center for the farmers' product—it is now one of the important industries of the city. The process through which the milk must pass before being sent out to consumers means the use of equipment formerly thought unnecessary. Electricity as the most convenient form of energy for operating the machinery was a large factor in this development. As the procedure used by the Brighton Place and the Big Elm Dairy Companies is systematic and typical of the well ordered dairies of Rochester, a brief exposition with reference to them should be of interest.

Fermentation and growth of bacteria in large numbers are the results of exposure of raw milk to a warm atmosphere and unsanitary surroundings. In the right back ground of Fig. 2 is the pasteurizer (P) which

prevents fermentation by raising the temperature of the product to 145 degrees F. This temperature must be closely controlled—a lower temperature failing in results desired and a higher in breaking up the fat globules. To the immediate left is noted the temperature regulator (R) which, operated through the medium of air pressure from the small motor driven compressor, regulates the steam supply to the pasteurizer. A smooth curve on the recording thermometer chart is the result even though the steam pressure varies.

The large tank (T) to the right is simply a holding tank constructed on the principle of a thermos bottle to hold the pasteurizing temperature until the milk is pumped through the cooling coils in the foreground.

Bacteria count is an important item

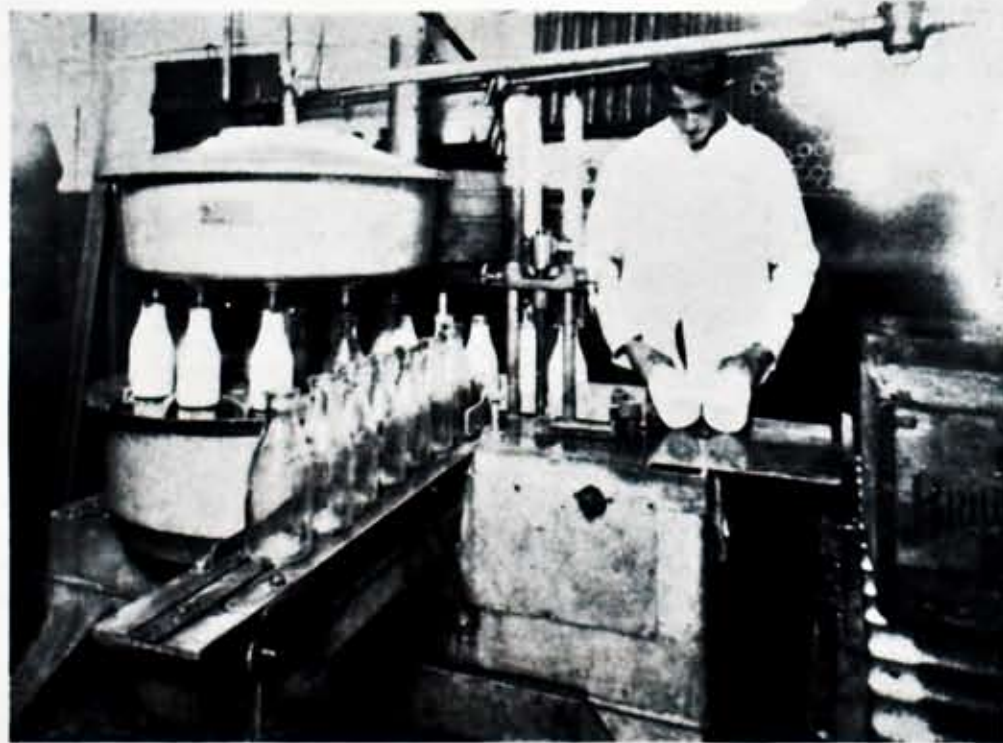


Fig. 1. Filling and Capping Milk Bottles at the Brighton Place Dairy.

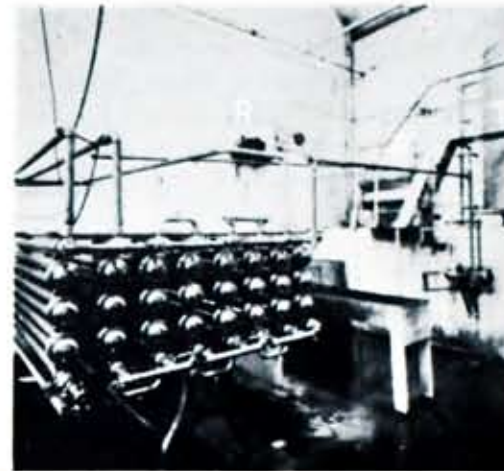


Fig. 2. Cooling Coils at Left; Pasteurizer and Holding Tank at Right.

in grading the product of a dairy and thus the functions of the cooler is to reduce the count to satisfactory limits. The equipment shown is partially operated by a motor driven well water pump which, especially in warm weather, does not give as low a temperature as desired. Consequently the last sections are connected to the refrigeration system, which makes it possible to almost freeze the milk and thus keep down the bacteria content by reducing the multiplication of these organisms.

The milk, after passing through the cooler, flows to the bottler below, shown in figure 1. The motor driven apparatus now used is a great improvement over the former manually operated machine, not only in speed, but in cleanliness as well. The empty bottles are placed in the trough at the front of the machine, and moved along by small arms until they reach the point where they are raised against the valves and filled. This machine, which has a capacity of 60 bottles per minute, can be adjusted to pints or quarts by either raising or lowering the tank above. The capping device completes the operation by inserting the caps as rapidly as the bottles leave the machine at the right as

shown in the illustration. It is then only necessary to replace the bottles, now filled, in the same case which had contained empty ones and run the cases by conveyor into the refrigerator. Here, the entire output of the dairy, from 15,000 to 20,000 quarts per day in each of the two plants cited, is held at 40 degrees until the next day's delivery. The function of the large refrigeration machine, the compressor and motor of which are shown in figure 3, is to maintain this low temperature in addition to supplying the cooling coils previously mentioned.

The use of electricity in the handling and preservation of milk at safe temperatures, is a great factor in eliminating possible causes for its contamination. When it is considered that it is in general use throughout our cities today, not only in the large dairies but also in most of the thousands of smaller ones, it is only natural to give it credit for its share in the progress made.



Fig. 3. Electrically Driven Refrigerating Machine at the Big Elm Dairy.



# GAS and ELECTRIC NEWS

ROCHESTER GAS & ELECTRIC CORPORATION

34 Clinton Ave. N., Rochester, N. Y.

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(Home Economics Bureau, Chamber of Commerce)

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Vol. 9 DECEMBER, 1921 No. 6

## Christmas

ONE of the noteworthy elements in any reconstruction period of magnitude is the "Return to religion", examples of which are multiplying all about us, the period through which we are now passing being no exception to the general rule. Every reader is conscious of the undercurrent of quickened spirituality in the literature of the day. The general trend of the times together with the approach of Christmas induces a more or less general atmosphere of exaltation which only a consciousness of the real significance of Spiritual Forces could produce.

Religion is such a vital element in the world today, that we may well take cognizance of it in business. We are generally more successful in business as our lives are fully rounded out. In addition therefore to occupation, recreation, family and friends the average person secures greater stability, efficiency, and contentment through the observance of religious

and ethical principles. We accordingly welcome the recurrence of the Christmas season, as through it we in general strengthen the moral side of our natures, reaping a temporal benefit also through a favorable reaction on our every day business efficiency.

For the employees of this Company there is special significance in the recontemplation of the Christmas message, as our business is essentially one of "Service". It is no flight of the imagination to construe this watchword to mean an unselfish collective effort for the benefit of humanity.

"The Great Teacher", enunciated The Golden Rule for the spiritual salvation of mankind, and we today are conscious that our individual and collective success in temporal things likewise depends upon its observance. May Christmas Time always find us playing the game in accordance with this rule to the limit of the requirements of solvent business. May we remain ever humble to learn, anxious to serve and "square". Finally is it not desirable to endeavor to keep in tune with the spirit of the Holidays, that Christmas shall mean something to us individually? Let us continue to keep spiritual fires burning and to be interested in each other aside from our purely business contact. Let us hope that every Gas & Electric fireside glows with love this Christmas.

## The Changes in Gas Rates

FORMER articles which have appeared in this magazine very clearly set forth the technical side of the various gas rate changes which have taken place within the past year, showing conclusively the successful endeavor of the Management to keep the Company on a sound financial

basis with absolute justice to its customers.

The latter consideration is of such importance as to warrant special comment, to the effect that the unpopular service charge no longer in effect is scientifically and practically the proper method of charging for certain services rendered to our customers. That it has been withdrawn and may possibly be finally declared illegal does not alter the fact that it stands the two fiercest known tests, i.e., established economic principles and accurate mathematical analysis. We venture to predict that before very many years it will be generally accepted by the public, which now does not fully comprehend it and assumes it to be an unwarranted radical innovation.

The Company has acted as usual in absolute good faith throughout this entire controversy. It has the clear conscience of having been in the very forefront of economic thought for the best interests, all things considered, of its patrons. It abandons the service charge as many another pioneer has abandoned a splendid vision, for a later day when the economics of the business are more generally understood. This without any reflections or insinuations as to the intelligence or good faith of its customers, whose good faith is equal to our own, but whose knowledge, however profound, cannot be as complete about our business as our own knowledge is.

## Overtime

THE recent general order on overtime was framed not only to equalize as far as possible the work of the various departments, but to actually reduce the necessity for overtime and Sunday work to an absolute minimum in the interest of proper periods for rest, recreation and home

life for all Company employees.

Being a twenty four hour business naturally requires night and Sunday work, all of which will be reduced to a shift basis as far as possible. Emergency work will always be required, and provision has been made for suitable compensation for such cases. Of outstanding importance, however, is the definite recognition that regularity of life and reasonableness of the length of the working day mean better work, and a longer period of usefulness, provided that our leisure hours are properly employed.

## The Individual's Part in Satisfactory Telephone Service

IT is an undisputed fact that the telephone is a modern necessity. We use it without restriction, and give it little consideration until something goes wrong. Likewise many give little consideration to the manner of its use, and, "Hereby hangs a tale."

Who has not heard the pithy phrase, "The Voice with the Smile Wins"? How many disregard its simple truth! Since in the use of the telephone the actual smile or kindly bearing cannot be transmitted, how much more care is inevitably required that the voice itself shall carry the message of courtesy and consideration which must enter into every successful telephonic conversation. This is especially true when the voice itself may be somewhat gruff or harsh, because the cheery smile or hearty handshake which minimizes the defect in ordinary conversation, is lost when the telephone is used.

Prompt response to the telephone is an essential courtesy and is necessary in securing general efficiency. If we are doing our work well, we are all busy, and we each owe, as we



expect to receive, prompt service in this respect. Our ability to meet interruption without being seriously side-tracked is an earmark of our mastery of ourselves and of our work. Those who express irritation over telephone interruptions and allow some of this irritation to be sensed by the one at the other end of the line may well reflect upon the needless interruptions which they create for both themselves and others in the use of the telephone and otherwise.

Experience has shown that in answering the telephone it is simpler and saves time to answer with either the name of the individual or the department, rather than with the obsolete "Hello". Likewise, while "Brevity is the Spice of Wit", brevity must not be confused with curtness. In telephonic conversation it is well to keep in mind the "Golden Mean", which so fittingly regulates so much of life. Unusual pains should be taken that the subject under discussion receives proper consideration without unnecessary explanation or irrelevant comment.

The attitude of helpfulness is especially necessary when we answer the telephone for others, when we are obliged to relay calls and when it is necessary to give indecisive answers until we can secure needed information. When answering calls for others it is vastly the easiest, most courteous and incalculably most successful procedure to state that while the person being called is not available, the recipient will be glad to take the message. In relaying calls, what could be more simple than to state frankly that an error has been made, or that another person should receive the message, and to arrange as quickly as possible to make full use of our complicated telephone system, something which an outside party is unable and is not expected to do? Further, when it is

necessary to give an indecisive answer, the only honest thing to do is to promise that the matter will be handled with the greatest possible dispatch, and then to do it.

In connection with the Company's present complicated telephone system, the Management is now having a comprehensive engineering survey made to ascertain feasible methods of improvement, and it is possible that by a rearrangement or by the use of the automatic system a simpler telephone layout can be secured. Any improvements in this direction, however, will necessarily be made at "The small end of the horn". It is the personal factor which assumes by far the largest proportions in any consideration of telephone service within the Company. Courtesy, kindly consideration and common politeness are necessary in themselves, but, furthermore, they will go a long ways in offsetting any mechanical inconvenience which the telephone system may inherently or otherwise create.

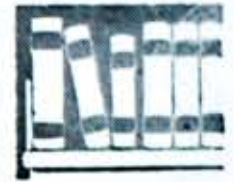
It is always necessary to remember in our dealings with the public, that the individual who represents the the Company is the Company.

The Company is thus judged by the individual employee and, inasmuch as we are all public servants, from whom the public has the right to expect courtesy, a discourteous individual employee brands us all unjustly and may undo in a moment's carelessness a portion of a valued reputation which has been painstakingly built up throughout the years.

There is a tradition that brave men are always polite, and this agrees with observations of the men of modern times. Finally, politeness is an individual as well as a Company asset. Successful men and women are cashing in on their assets all the time. Telephone courtesy facilitates the process.



## Auditing



New Business			
Net Increase in Consumers in First Ten Months of 1921			
	Dec. 31, 1920	Oct. 31, 1921	Incr.
Gas	81241	81327	86
Electric	34742	39025	4283
Steam	81	100	19
	116064	120452	4388

Net Increase in Consumers in Year Ending October 31, 1921			
	Oct. 31, 1920	Oct. 31, 1921	Incr.
Gas	81149	81327	178
Electric	33976	39025	5049
Steam	75	100	25
	115200	120452	5252

Statement of Consumers by Departments as of October 31st					
Oct. 31st	Gas	Electric	Steam	Total	Incr.
1912	60868	12849	20	73737	7099
1913	66133	15772	23	81928	8191
1914	69654	18140	30	87824	5896
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
Incr. in 13 yrs.	40591	32679	100	73370	73370

Net Increase in Consumers by Months			
	1919	1920	1921
Incr. in April	307	509	528
Incr. in May	417	601	611
Incr. in June	440	526	270
Incr. in July	285	427	667
Incr. in August	416	402	578
Incr. in September	470	403	631
Incr. in October	472	531	780
	1996	4331	4388

Amount of Pay Roll	\$187,955.64	\$186,210.63	\$1,745.01
K.W.H. Generated Steam	6,321,760	8,145,891	*1,824,131
K.W.H. Generated Hydraulic	8,594,946	9,517,410	*922,464
K.W.H. Purchased	1,743,426	None	1,743,426
M. C. F. Coal Gas Made	137,215	142,617	*5,402
M. C. F. Water Gas Made	109,236	141,393	*32,157
Tons Gas Coal Used	12,701	11,877	824
Average Coal Gas B. T. U.	578	588	*10
Tons Steam Coal Used	11,121	13,094	*1,973
Gallons Gas Oil Used	404,047	501,411	*97,364
Average Water B. T. U.	618	590	28
Tons Coke Made	8,877	8,300	577
Gallons Bengas Made	106,585	110,124	*3,539

\*Denotes Decrease

Miscellaneous Data			
	Oct. 31, 1921	Oct. 31, 1920	Incr.
Miles of Gas Main	529	521	8
Miles of Overhead Line	2145	2027	118
Miles of Underground Cable	1233	1193	40
Miles of Subway Duct	1021	1014	7
No. of Street Arc Lamps	1625	1615	10
No. of St. Inc. Lamps	9364	9053	311
Total No. of St. Lamps	10989	10668	321
No. of Employees	1359	1307	52

Stock Sales, November 1921		
	Sales	Shares
October	76	300
November	44	120
Total to December 1	3,653	19,633

E. B. A. for November 1921	
Balance 1st of Month	\$4,089.06
Dues—Members	\$798.29
Dues—Company	798.29
Fees—Members	7.00
Fees—Company	7.00
Asses. Nos. 37, 39, 44, 45—Members	460.75
Asses. No. 37, 29, 44, 45—Company	460.75
Int. on Bk. Bal. & Investments	42.50
Total Receipts	\$2,574.58
Total Receipts Plus Balance	\$6,663.64

Disbursements	
Sick Benefits	\$601.36
Accidents Off Duty Benefits	40.44
Accidents On Duty Benefits	116.26
Death Benefit No. 45	400.00
Med. Examiner's Expense	3.00
Total Payments	\$1,161.06

Balance on Hand	\$5,502.58
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Membership	
Members, Oct. 30, 1921	952
Affiliated Month of November	15
Terminated Month of November	27
Loss	12
Membership November 30, 1921	940

	Oct. 1921	Oct. 1920	Increase
Amount of Pay Roll	\$187,955.64	\$186,210.63	\$1,745.01
K.W.H. Generated Steam	6,321,760	8,145,891	*1,824,131
K.W.H. Generated Hydraulic	8,594,946	9,517,410	*922,464
K.W.H. Purchased	1,743,426	None	1,743,426
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## Housekeeping Suggestions



### Christmas Candies

There is nothing nicer during the holiday season, or more fun making, than Christmas candy. Even the children will share great fun and much of the spirit of the holiday by being allowed to make candy and other Christmas dainties.

One of the very pleasant ways of shopping for Christmas, is the making of the Christmas candies and dainties in one's own home, and packing the dainties in boxes for one's friends. A mixture of salted and spiced nuts, fruits and candies make attractive, as well as a delicious remembrance. Very "Christmasy" boxes can be made by covering candy boxes with holly paper or wall paper in attractive designs.

Particularly advisable for children, are the fruit candies. Below you will find recipes for stuffed prunes and dates and Parisian sweets which are simple to make and have the advantage of being a wholesome food, as well as a Christmas sweet.

#### STUFFING FOR PRUNES AND DATES

Prunes, uncooked, Dates,  $\frac{1}{2}$  c  
 $\frac{1}{2}$  cup Nut-meats,  $\frac{1}{4}$  c  
Figs,  $\frac{1}{4}$  c Salt,  $\frac{1}{4}$  tsp.  
Raisins,  $\frac{1}{2}$  c Cloves,  $\frac{1}{4}$  tsp.

Remove seeds from raisins, dates, and prunes. Put fruit and nuts thru the food-chopper. Add salt and cloves and mix well together. Select largest prunes possible for the prunes to be stuffed. Smaller prunes can be ground up for the filling. If you wish a somewhat tart filling, lemon juice can be added. Cinnamon or other spices can be used if desired to give a more spicy flavor.

#### PARISIAN SWEETS

1 lb. figs 1 lb. Eng. Walnut  
1 lb. dates meats  
Confectioners' sugar  
Pick over and remove stems from figs and

stones from dates. Mix fruit with Walnut meat, and force thru a meat-chopper. Work, using the hands on a board dredged with confectioners' sugar, until well blended. Roll to one fourth inch thickness, using confectioners' sugar for dredging board and pin. Shape with a small round cutter, first dipped in sugar, or cut with a sharp knife in  $\frac{3}{4}$  inch squares. Roll each piece in confectioners' sugar, and shake to remove superfluous sugar. Pack in layers in a tin box putting paper between each layer.

#### CHRISTMAS PUDDING NEEDS TO MELLOW

There is a sound reason back of the old custom of making the Christmas plum pudding before Thanksgiving, it was pointed out by the Home Bureau today. They say that the real flavor of the pudding is largely the result of the slow mellowing and blending of the fruit and spice, which can only be obtained by allowing the pudding to stand several weeks before it is served. It is said that such a fruit pudding is quite as good if kept for a period of six months.

#### AN OLD ENGLISH RECIPE

An old English recipe for the unleavened type of Christmas pudding, furnished by the Home Bureau follows: 1 pound currants, 1 pound raisins, 1 pound suet,  $\frac{3}{4}$  pound bread crumbs,  $\frac{1}{2}$  cup grape juice or cider, 1 teaspoon cloves, 1 teaspoon cinnamon, 1 teaspoon allspice, 1 pound sugar,  $\frac{1}{2}$  pound citron,  $\frac{1}{4}$  pound flour, 5 eggs,  $\frac{1}{2}$  nutmeg, nuts if desired.

Beat the eggs, add the sugar, which has been mixed with the spices, and soak the bread crumbs in this mixture for a few minutes; then add the fruit and the suet, both well floured, and the remaining flour. Stir the mixture well. Place in greased pudding molds, or one-pound baking cans may be used. Fill the molds two-thirds full, steam the pudding for six hours. The pudding may be reheated by steaming it in the original mold, or it may be cut in slices and heated in a steamer.

#### AND A SAUCE FOR IT

A foamy sauce made from  $\frac{1}{2}$  cup butter, 1 cup powdered sugar, 1 egg and  $\frac{1}{2}$  teaspoon vanilla is good served with the pudding. The butter should be creamed with the sugar,

a well-beaten egg and vanilla gradually added. Beat the mixture while heating it over hot water.

#### CHRISTMAS CAKES

The proverbial Christmas cake is many times the fruit cake, however, during the holiday, one is apt to entertain at a number of little parties and as an accompaniment to ice cream, following the Christmas dinner, little cakes are many times a welcome substitute for the fruit cakes and heavier butter cakes.

Below are some recipes of Christmas cookies and cakes:

#### FRUIT CAKE (without butter or eggs)

1 c sugar 4 tsp B. P.  
 $\frac{1}{2}$  c molasses  $\frac{1}{2}$  tsp Salt  
 $\frac{3}{4}$  c milk 1 tsp cinnamon  
 $\frac{1}{4}$  c coffee infusion Allspice, cloves, mace  
 $\frac{1}{2}$  c entire wheat flour grated nutmeg,  $\frac{1}{4}$   
1 c white flour tsp each

1 lb. raisins seeded & 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 min.

#### CHOCOLATE BROWNIES

1 c sugar 2 sq. chocolate  
 $\frac{1}{2}$  c shortening  $\frac{1}{2}$  c nuts  
salt vanilla  
1 c flour 2 eggs

#### CHOCOLATE DROP CAKES

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

#### COCOANUT MACAROONS

White 2 eggs 2 c post toasties or  
1 c sugar corn flakes  
pinch salt 1 c cocoanut  
1 tsp vanilla

#### PRIZE CAKE

Yolks 4 eggs 2 c flour  
Whites 2 eggs  $2\frac{1}{2}$  tsp B. P.  
1 c sugar  $\frac{1}{2}$  c milk  
 $\frac{1}{2}$  c melted butter

Put egg yolks and whites into a bowl and beat until thick, using a Dover egg beater; add sugar gradually, while beating constantly. Mix and sift flour and B. P. 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 min. 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.

If one wishes to carry out the Christmas idea in small cakes, little cakes may be baked in tiny individual pans, or a large cake may be baked and cut into tiny square shapes or diamond shapes preparatory to frosting. The frosting may be colored green and the little cakes frosted, and ornamented with red and

green candies which have been cracked, almonds, citron, walnuts, etc. Below are some recipes which are very simple. Confectioners' sugar frosting may be used for frosting these little cakes.

#### CONFECTIONERS' FROSTING

2 tbsps boiling water Confectioners' sugar  
or cream Flavoring

To liquid add enough sifted sugar to make or 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.

#### ORNAMENTAL FROSTING

2 c sugar Whites 3 eggs  
1 c water  $\frac{1}{4}$  tsp tartaric acid

Boil sugar and water until syrup when dropped from tip of spoon forms a long thread. Pour syrup gradually on beaten whites, beating constantly; add acid and continue beating. When stiff enough to spread, put a thin coating over cake. Beat remaining until cold and stiff enough to keep in shape after being forced thru a pastry tube. After first coating on cake has hardened cover with thicker layer, and crease for cutting. If it is too stiff to spread smoothly, thin with a few drops of water. With a pastry bag and variety of tubes, cake may be ornamented.

### Keep Fire Away From the Christmas Tree







## Sales



It may be interesting to motorists to learn that a new type dry storage battery is being manufactured here in Rochester, for automobiles. The Ajax Battery Company, located at 300 Norton Street have recently purchased of this Company two 100 pound and two 1000 pound soft metal furnaces with fan motorblowers, which they will use in the manufacture of these batteries.

Scattered throughout this city are numerous lunch wagons and lunch rooms operated by the Miller-Blum Lunch Company. These havens for the hungry are, in most cases, open day and night, and are not confined to the downtown sections entirely. They are a real convenience to the working man and the business man who wants a 'bite' and wants it quick, along with a splendid cup of 'java'. This company has just purchased another 12 burner short order stove for one of their many restaurants.

The lunch room operated by the Hall Brothers, at No. 6 Front Street is one of the busiest places of the kind in this city. Here the service is excellent, the men at the counters operating like clockwork as they juggle without mishap most anything you may call for from a bowl of soup to pie a la mode. All the pastry, and puddings and most of the other good things to be had here are 'home made' which is one excellent reason for their tasting so good. The Hall Brothers have just purchased an additional section of Garland Hotel Range, which makes a total of five now in use day and night.

A Blodgett Bake Oven has re-

cently been installed in the kitchen of the Washington Club of this city.

The Odenbach Company is now using a fine new Garland Broiler which will certainly feel at home among the many other articles of kitchen equipment installed there by this Company.

Three sections of Vulcan Hotel Range have been ordered for the A. C. Ernst Lunch Company.

One of the specialties of the Haag Fish Market, 184 Joseph Avenue, is their excellent smoked fish. These fish are smoked by the Haag Company which has recently installed gas equipment to facilitate this important branch of their trade.

The Rochester Packing and Cold Storage Company is about to install 50 horsepower in motors which, with their present load, will create a demand of approximately 50 K. W.

A 7½ horsepower motor generating set has been purchased by the Murray Theatre for supplying direct current to the arc machines. At the present time they have a single phase lighting service which will have to be changed to a 3 phase power service.

The electric brass-melting furnaces at the plant of Sarachan and Rosenthal have again been started up after a shut-down of several months. The brass industry is picking up and the present outlook justifies the continuous operation of these furnaces for some time to come. At this plant, a demand is created for 300 K. V. A. on the alternating current system.

## Gas Manufacture

Work on the plant addition at West Station is progressing rapidly. The retort house steel work is finished, and the producer house steel work is nearly completed. The combustion chambers for the benches have been built and the masons are now laying sections of the retorts and the recuperators.

At Canandaigua the new property arrangements have been so far completed that we are occupying the new land and working on the improvements. Under the new arrangements a new right of way is provided for access to the N. Y. S. Rys. property and the old right of way is closed, thereby becoming available for buildings. The land used as coke storage which has heretofore been held on yearly rental has been purchased and will be used as the site for a 100,000 cu. ft. gas holder. This holder has been ordered from the Cruse-Kenyon Company and will be erected as soon as the coke is moved and foundation can be built. In addition another plot of ground has been purchased around three sides of the N. Y. S. Rys. water tower. This enables us to move the coal siding to the other side of the old right of way and clears ground for a boiler and chimney and leaves clearance for a new bench if desired later. The R. R. Siding has been moved and the foundations for the coal unloading hopper are being built. This will provide for dumping coal into a concrete pit from which a bucket elevator will hoist it to a chute which will spill it into the yard. All this equipment is on the ground.

Foundations are also being laid for a 40 H. P. boiler which has been received from the Wicks Boiler Co. Also for a 4' x 100' Steel chimney

now being built by the Hammond Iron Works.

Work at East Station is progressing on the installation of the Crosby Holder Heating System. Under this method, the holders will be heated by pumping into the tanks and cups hot water from the water gas condensers, which now goes to waste, and eliminating the use of live steam on the holders.

Painting on the buildings and holders has been suspended for the winter.

A steel housing has been built around one water gas blower as a safeguard against a breakdown of the blower, due to rupture of the case.

A 20,000 gallon steel tank has been installed at the Light Oil Plant for additional storage capacity. The Light Oil Plant now has capacity for 120,000 gallons of its crude and finished products.

## Electric Generation

The new 60 cycle, 11,000 volt bus structure at Station 6 is nearing completion and will soon be in use as a new unit. The old bus is to be cut loose and taken down. This will give more headroom underneath the East Gallery and will eliminate a switching hazard.

Plans are nearly completed for the installation of a new G. E. 10,000 K. V. A., 25 cycle, 60,000 volt to 11,000 volt, 3 phase, water cooled transformer to be installed at Station 33. This equipment will replace a portion of the present and well worn equipment which has been giving very satisfactory service for the past twelve years.

No. 9 motor-generator at Station 6 which has been out of service for several weeks has been put back in service recently, new coils having been installed in the motor stator.



## Athletics

The girls bowling team of this Company is in second place in the I. A. R. A. league, and is doing some great bowling. It is their aim, to finish in first place. Of course, girls do not always hit where they aim, but in this case we have reason to feel that our girls are dangerous opponents. Let's all boost for them, and encourage them all we can. The girls are making scores of 150 or better. The team is composed of the following: Miss DeBorger, Miss Henehan, Miss Winans, Miss Stanton and Miss Shakeshaft.

The Company's I. A. R. A. League Bowling Team, although somewhat handicapped through the absence of some of their regular men for some of the recent matches, are still holding themselves firmly in second place. Out of eighteen games rolled, twelve have been won.

First place in the League has been held thus far through the season by the team representing the American Laundry Machinery Company. However our team expects to oust them very shortly. Don't forget the time and place. 3:30 P.M. at Elm Hall.

Prospects for a winning combination for the Gas and Electric five appear much brighter with the addition of "Ike" Cohen of the Social Settlements. "Ike" is a versatile player and Manager James Nolan can use him to good advantage in any position.

Regular weekly practice is being held at the Lewis A. C. Two practice games have been played. At the last game the Gas and Electric quintette romped away with its opponent by the score 22 to 8.

The manager is arranging an extensive schedule. He still desires to hear from industrial, bank and out-of-town teams.

## Personals

Mr. Edward L. Wilder attended the meeting of the Executive Committee of the National District Heating Association which was held in Detroit on November 16th, and 17th, 1921, and came back with many new ideas.

Mr. Robert A. Cushman of the Industrial Sales Department, spent Thanksgiving day at his home in Ithaca, N. Y., and among the delectable viands enjoyed were goose, and gooseberry pie. Mr. Cushman states that while goose may be enjoyed promiscuously, one has to go back home to get the right kind of pie.

Some wonderful Christmas presents arrive before Christmas day. A case of this kind that comes within our personal observation is given as an instance and may be cited as a 'do your Christmas Shopping Early' argument. A baby girl, Doris Marie, was presented to Mr. George Myers of the Meter Reading Department by his wife, on November 13, 1921. Although it may seem superfluous, we wish them a very Merry Christmas.

"Why, it's wonderful," said a woman visiting our Employment Department recently, "Four years ago I called here to get work, without success, and today I return and am called by my name, just as if it had all happened yesterday." To the mind of Mr. Charles Royce four years is a mere trifle. How do you do it Charles?

Mr. Edgar Sheldon Meter, Reading Department who was injured some time ago in an automobile accident is doing nicely although still unable to return to his place in the Company.

Fred A. Lovick is again back in the Meter Reading Department after an absence of 2 weeks on account of sickness, and was received with open arms by Mr. Newman who can ill

afford to lose the services of any of his boys as the nature of their work is such as to make temporary substituting impracticable.

Mr. William Lacey, Transportation Department, who broke his arm some time ago, is still carrying the injured member in a cast. He is, however, working every day and it is hoped he will soon be able to use both arms again.

Eighteen men from the Switchboard Department enjoyed a duck dinner at Sea Breeze, Monday evening, December 5, 1921. It was a great success, both as a dinner and as a social event, and will be remembered with pleasure for some time to come.

Every employee who reads these columns each month is respectfully asked to contribute items of interest. When something of real interest is observed by you, jot it down, or telephone it to the library. These little occurrences have a habit of fading from our memories unless we make it a point to remember them. It is a worth while thing to do, for by so doing you will make your magazine more interesting.

If any employee of this Company is not receiving Gas and Electric News, or if he is receiving it at a wrong address, it is requested that he telephone his new address to the library that we may transfer it on the mailing list. It is our desire that every employee get a magazine regularly. If you know of any employee who is not getting his magazine, please notify us.

Miss May Killeen has returned from a two weeks vacation. A large part of this pleasant period was spent at Reading, Penna.

Miss Moyer, Demonstrator for the Eden Washer, is planning to spend Christmas in her home town, Cleveland, Ohio, after having finished a successful demonstrating campaign with this Company. Miss Moyer

has made many friends while here, and they hope she will come again and renew old friendships.

Miss Celia Legler recently enjoyed a week end in Buffalo, N. Y., where she had such a satisfactory time that she is planning to return there in the near future.

Mr. Wm. Rossney, Application Department, lately enjoyed a week-end visit among friends at Caledonia, N. Y. No, he did not visit the fish hatchery for he has been there many times before and knows most of the fish by name. That's not what he went there to see.

Messrs. Alling, Consler, Close, Hague, Powell, Spellman and Swartout, attended the convention of the Empire State Gas and Electric Association which was held at Albany, November 17 and 18, 1921. Mr. C. E. Hague read a paper on "Economic Operation Between Hydraulic and Steam Plants", which proved to be especially interesting. A request was made by the Electrical World to publish the paper in an early issue of their publication.

The "Fanny Club" is the mysterious name of a new venture down on the first floor. This club is social and athletic in nature and its membership is more or less restricted. One of the restrictions, it is rumored, is a clause in the by-laws that says each applicant for membership must 'come across' with a box of Fanny Farmer bon bons before he can be considered seriously. More information about this organization can be had from Mrs. Connelly, Celia Legler or Mr. Rossney.

Miss Cozzolino poured tea at the benefit for disabled soldiers held at Convention Hall recently, an honor and privilege which she gracefully and heartily performed.

The Coke Sales bowling team is gathering speed with each game, and confidence as well. In the near future they are to play a team from the Canandaigua office. If they are



## Employees of Stations 34, 26 and 35

*"The Men Who Keep the Wheels Turning" Series*



successful in this game they may ask for a game with our I. A. R. A. League team.

Born, to Mrs. and Mr. Joseph Matthews, Wednesday, November 16, 1921, a boy, named John Ernisse. Mr. Matthews had a girl's name all picked out this time, and in addition had arranged to buy a turkey dinner for the boys in the event of the new arrival being a girl. However, everyone is satisfied, and although the boys did not get turkey, they all smoked to the health of Mr. Matthews Junior.

We extend our sympathy to Miss Bertha Sauer, of the Telephone Department, whose father, Mr. Charles Sauer, died on November the first, at East Rochester, N. Y.

We learn with regret of the death of Mr. Joseph Furlong's mother, which occurred on Friday, November 4th, 1921.

Miss Lucy Victorine Michel, daughter of Mr. and Mrs. George Michel of LeRoy, and Emmet J. O'Neill, son of Mr. and Mrs. Patrick J. O'Neill of this Company, were married at St. Peters Church, LeRoy, at nine o'clock, Wednesday, November 16, 1921, by the very Rev. Patrick J. Enright.

After the ceremony a wedding breakfast was enjoyed at the home of the bride, covers being set for fifty guests. Beauty of surroundings added much to the enjoyment of a sumptuous wedding breakfast, a color scheme of pink and white being carried out. The happy couple enjoyed a western trip and are now at home at 68 Holmes Street.

It is pretty tough to run a restaurant and still be unable to get a piece of your own pies, but that is what happens regularly at the Commissary to Mrs. Shaw and Mrs. Smith who make such good pastry and prepare such good meals there for the boys in the vicinity of Station Three.

Born, to Mrs. and Mr. George

Myers, on November 13th, 1921, a daughter, named Doris. Doris arrived near enough to Thanksgiving day to help out in the festivities, and Mr. and Mrs. Myers now have another name on their Christmas list.

Mr. Carl Erbach is directing the Phi Phi orchestra this season. The brand of music this aggregation plays is so sympathetic and soothing that it makes a person forget what a commonplace dancer he really is.

If you want to see how your name appears in print, just look in the directory, says little 'Steve' of the Duplicate Billing Department. No matter how hard it is to spell, it's all there.

Mr. 'Chet' Rampert, Credit Department, recently returned from a fishing expedition, with about a bushel of fish. Take notice all you fellows who have been kidding him about his prowess in this regard.

The only thing that prevented Mr. Angus McKay from returning with a big string of fish was the weather. It was so cold that he didn't go.

Mr. Clarence Ryan, Adjustment Department, recently shot a pheasant while out gunning. It is said that the beautiful bird turned on him and he had to shoot in self-defence.

Mary Madeline is the name of the cute 1921 model baby in the home of William Clare of the Purchasing Department. Mary Madeline arrived on November 17th.

A stork entered the home of Mr. and Mrs. Jack Aldridge on Sunday, November 13th., and left a wonderful baby girl whose name is Alice Irene. We hope Santa Claus won't overlook these new babies just because they came so close to his annual arrival.

The marriage of Miss Dehlia Quirt to Mr. Thomas Doyle of this Company was solemnized recently in this city. We wish them not only a Merry Christmas but a life full of happiness and satisfaction.





## Fumes and Flashes



### PREPARING FOR CHRISTMAS

Tommie—"Grandma, if I was invited out to dinner some place, should I eat pie with a fork?"

Grandma—"Yes, indeed, Tommie."

Tommie—"You haven't got a piece of pie around the house that I could practice on have you, grandma?" —*O. B. Bulletin*

### FIRST HUNDRED YEARS THE HARDEST

Lecturer: Statistics show that a married man saves more and lives longer than the bachelor who salary is the same.

Married Man in Audience, sotto voice: It seems longer.

### WHY INDEED

Oh, stop whining, is whining going to mend matters?

"I suppose not."

Then if not, whine not."

—*U. S. S. Arkansas.*

### THE SEARCH OF THE AGES.

"Father" said George, who had just come from school. "I am tired of my arithmetic."

"What makes you disgusted," queried the father.

"Every problem I have," replied the boy, "says to find the common denominator."

"Great Scott," exclaimed the parent, "haven't they found that thing yet? They were hunting for it when I was a boy."

—*Selected.*

### OR DEER HUNTING

When a man rushes off to Canada these days, it is no use to get suspicious; maybe he has merely gone off on a leave of abstinence.

—*Florida Times-Union.*

### CAN'T FOOL 'EM

Two negroes were engaged in conversation when one of them became very much annoyed by the persistent attention of a large fly.

"Sam, whut kin' a fly am dis?"

"Dat am a hoss-fly."

"Whut am a hoss-fly?"

"A hoss-fly am a fly whut buzzes 'roun cows 'n hosses 'n jackasses—"

"You ain' makin' out for to call me no jackass?"

"No, I ain' makin' out for to call you no jackass, but you cain't fool dem hoss-flies."

—*Selected.*

### ORDER IN THE COURT!

Magistrate (*severely*)—"Horsewhipping is the only suitable punishment for you and your kind. The idea of a man of your size beating a poor, weak woman like that!"

Prisoner—"But, your worship, she keeps irritating and irritating me all the time."

Magistrate—"How does she irritate you?"

Prisoner—"Why, she keeps saying, 'Hit me! Beat me! Just hit me once, and I'll have you hauled up before that bald-headed old reprobate of a magistrate, and see what he'll do with you.'"

Magistrate (*choking*)—"Discharged."

—*Tit-Bits.*

### SHE WILL

"Mother, what is an angel?"

"My dear, it is a little girl with wings who flies."

"But I heard papa calling the maid an angel yesterday. Will she fly?"

"Yes, my dear, she will fly away the first thing in the morning." —*Selected.*

### OH, THE DIFFERENCE!

Dora—"How is the new phonograph in the office working?"

Flora—"It would be all right if we could agree on records, but the boss always puts on 'Work for the Night is Coming' when the employes prefer 'Home, Sweet Home.'"

—*Selected.*

### CHRISTMAS SUGGESTIONS FOR GIRLS

Girls, when you hang up your stockings, don't leave them rolled at the knee; Santa Clause is a little near-sighted and might leave you a doll instead of a fur coat etc, etc.

### SAVE THE PIECES

"I wonder how China feels about the Peace Conference?"

"All broken up."

—*Life.*

Algernon (*City Cousin*) "What has that cow got that bell strapped 'round her neck for?"

Bobby—"That's to call the calf when dinner's ready."

—*Selected.*

### PARK YOUR SHELLALEYS, BOYS

Just when she is about to become an integral nation, the peace conference takes the 'ire' out of Ireland.

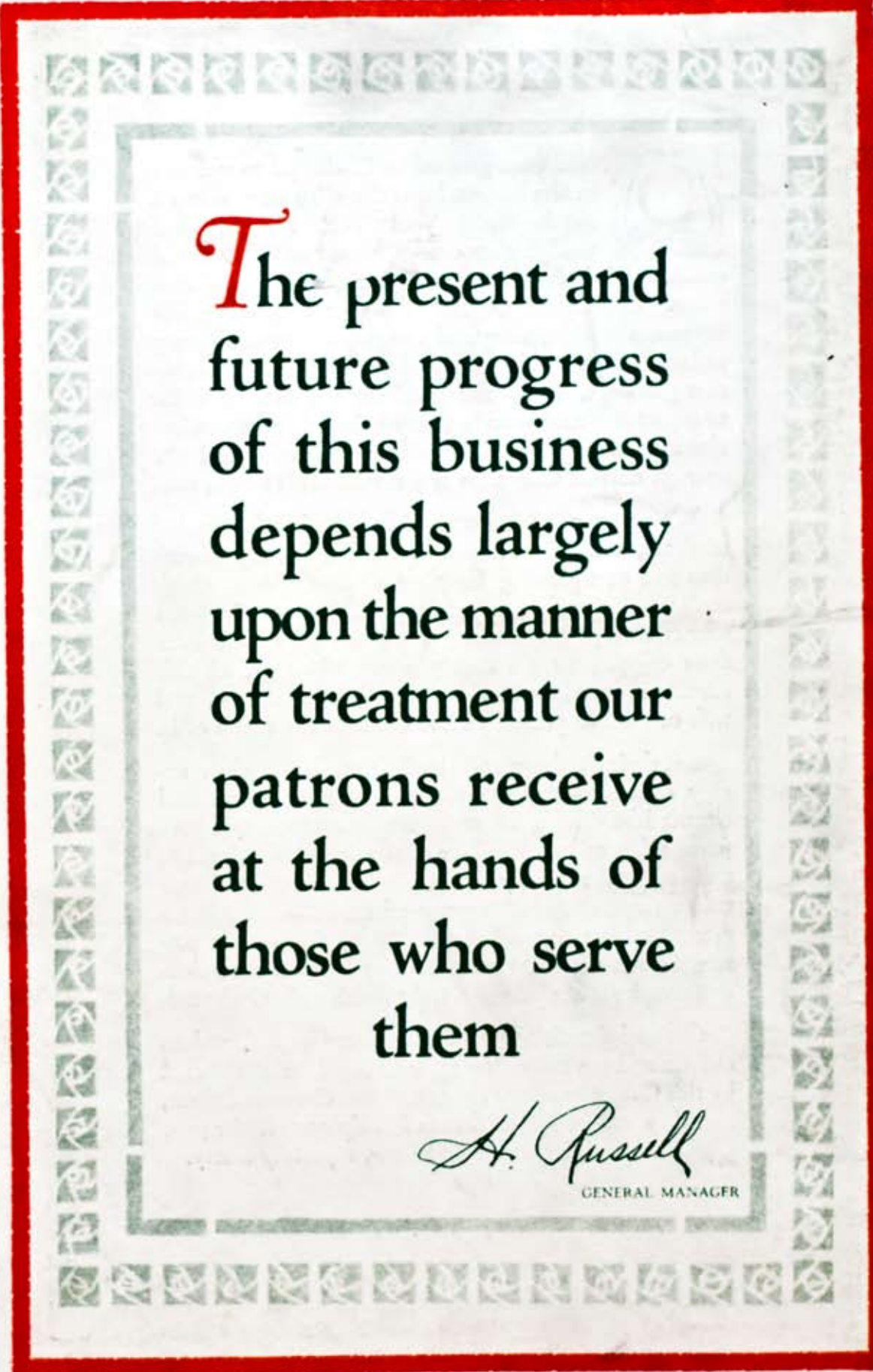
ONCE each year comes Christmas to re-create in the human heart the spirit of "Peace on Earth, Good Will Toward Man," and though all nature be locked in winter's cold embrace, Christmas hearts ever radiate warmth and sunshine. Our fingers tingle to the very tips, our voices are resonant with feeling and our grip is firm and strong as hand clasps hand and we shout our Merry Christmas greetings. In planning for Yuletide, we have come to expect and anticipate not only spiritual happiness but also a portion of material gratification as well, and the average normal Christmas is a combination of the two.

We expect our Christmas to have a cheerful setting of warm, well-lighted homes in which a dazzling Christmas tree or a glowing fire-place well-hung with children's stockings figures prominently. The Christmas dinner, also, takes on the proportions of a bounteous feast enjoyed by old and young. However, all this extraordinary pleasure means work for someone, and wife or mother generally bears the brunt of much of it.

But their drudgery may be lightened and their energy conserved through the use of modern gas and electric labor-saving devices. Father and son will have fewer ashes to handle where coke animates the furnace, and even the family car makes its best response under the tremendous energy of Ben-Gas. Finally, a present of one or more shares of this Company's preferred stock with its regular dividends acts as a reminder throughout the year of a truly worth-while Christmas.

Gas and electricity, steam, coke, Ben-Gas and modern electric and gas appliances manufactured or distributed by this Company are at your service. Command them, and they will be potent factors in helping to make your Christmas and the days that follow, especially merry.





*T*he present and  
future progress  
of this business  
depends largely  
upon the manner  
of treatment our  
patrons receive  
at the hands of  
those who serve  
them

*H. Russell*

GENERAL MANAGER