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Vol. XIX—No. 5.

NEW YORK, MARCH 1, 1902.

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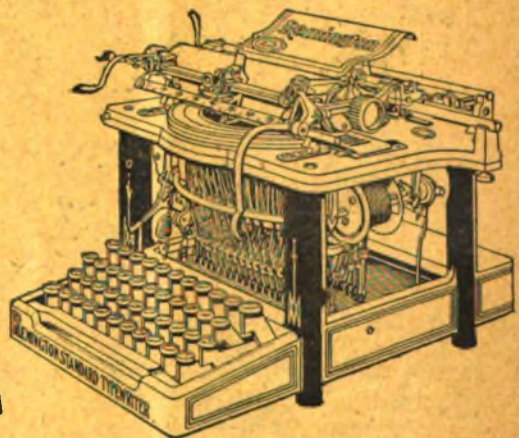
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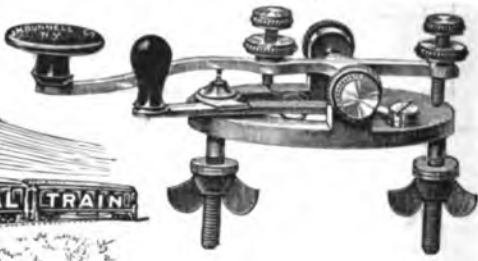
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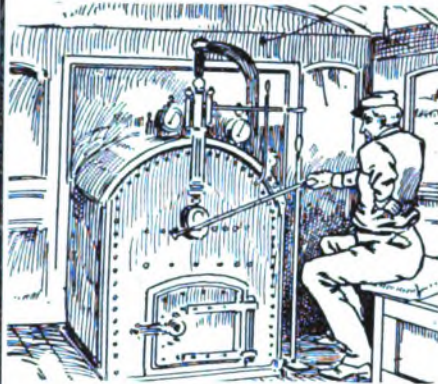
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THE TELEGRAPH AGE

No. 5.

NEW YORK, MARCH 1, 1902.

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this journal during the past three years under the caption of "Some Points on Electricity," will be published, and the book substituted for "Pocket Editions of Diagrams," by Willis H. Jones. Those desiring a copy of the new book should send in their names at once.—Editor.]

THE HORTON REPEATER.

This single line repeater is very similar in action to that of the Hicks-Milliken pattern. Instead, however, of a retractile spring and lever on the extra magnet being required for the purpose of controlling the lever of the main line relay, as is the case with the Milliken device, the lever of the relay in the Horton repeater falls to, or rather remains in a "closed" position of its contact points at the critical moment through gravity.

A glance at the theoretical drawing will show that the base upon which the relay stands is placed at such an angle that the normal position of the lever is always against the "closed" side of the local points, except when the extra magnet performing the work of a retractile spring attracts it. This repeater is well liked by those who have used it and it has been employed quite extensively in certain portions of the United States and Canada. The illustration shows how, by connecting like numbers together, the apparatus may be set up.

THE DEFECTIVE LOOP OR SIDE LINE REPEATER.

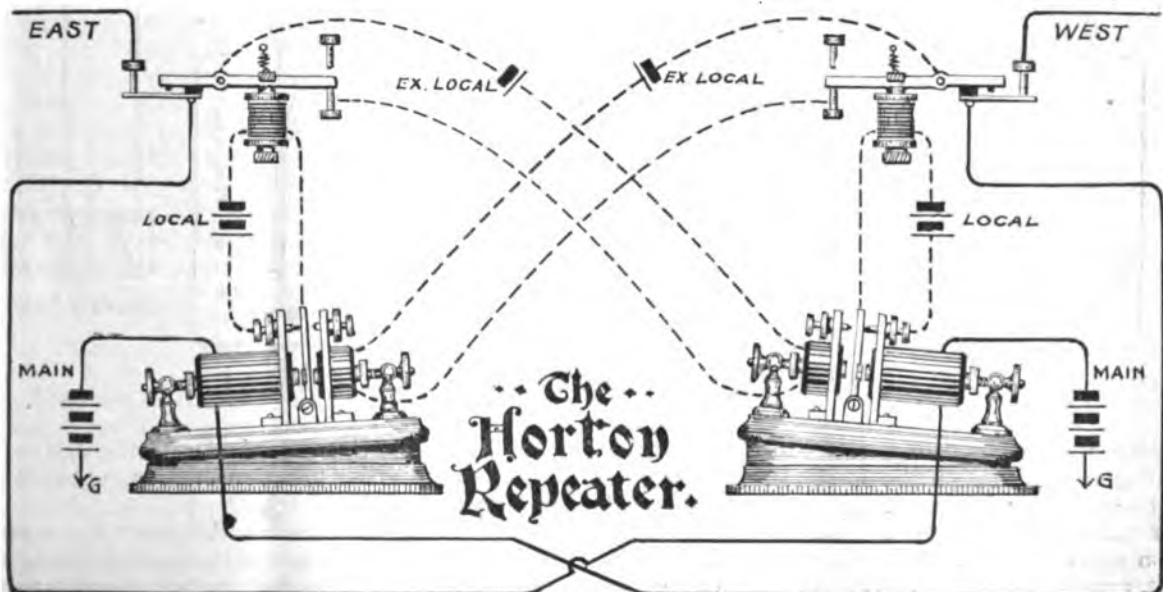
Another device extensively employed for connecting short single line broker circuits to a duplex or one side of a quadruplex apparatus, is

SOME POINTS ON ELECTRICITY.

The Equipment of a Modern Telegraph Office. (Continued.)

BY WILLIS H. JONES.

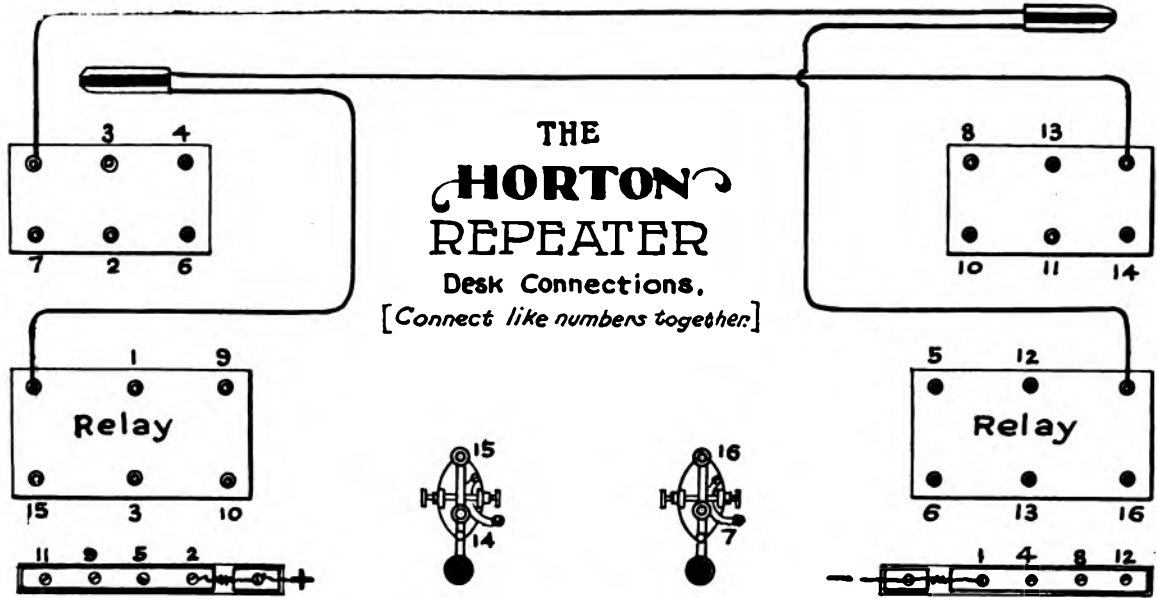
[In a few weeks hence this series, together with the most valuable of the articles appertaining to the duplex, the quadruplex, storage battery and other telegraph matters, which have appeared in



the defective loop repeater, a modification of the Toye repeater. This repeater performs the same service for these short sounder circuits that the half-Milliken repeater does for relay circuits, but is much more simple in construction, and as a rule, employs the same battery that is used for

a nearby branch office to one side of a quadruplex located at a seaside resort.

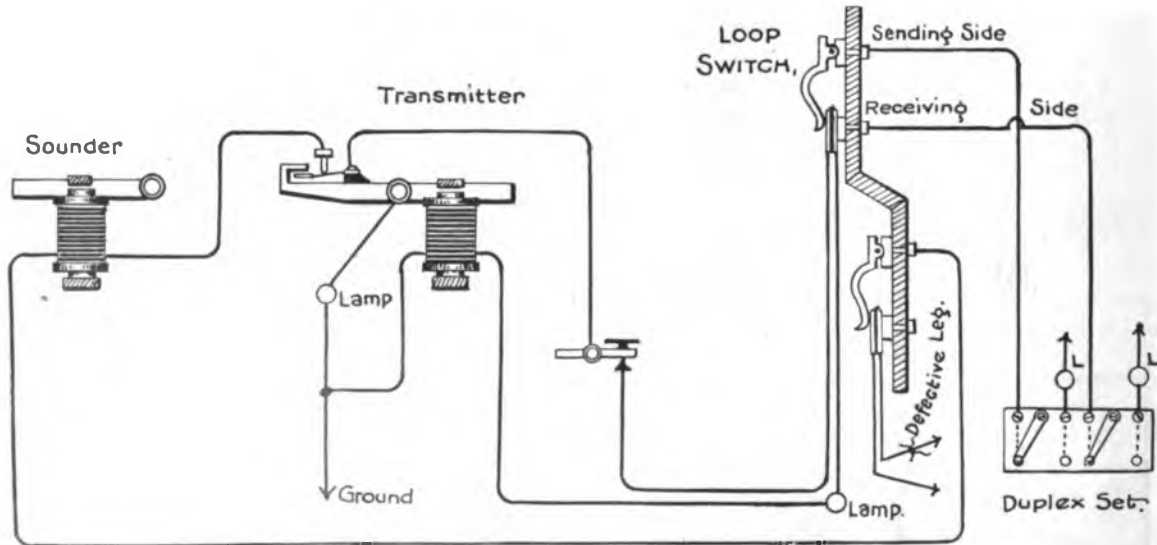
The illustration shows the theoretical connections of the repeater as arranged in modern offices possessing a loop switch. The feature of the device lies in shunting the local battery



the local connections of the multiplex apparatus to which it is attached.

By means of this repeater two branch offices, each somewhat distant from the main office in

through the bar lever of the extra transmitter when the multiplex relay which controls the latter opens it. By this trick the transmitting apparatus of the multiplex is maintained intact,



their respective stations, can control the transmitting apparatus of the multiplex in the main office connecting these points and thus have direct telegraphic communication with each other via a spare side of a quadruplex circuit. The repeater is particularly convenient for connecting

thereby preventing the sender at the distant station from hearing his own signals repeated back to him on his home relay.

The spring jack (herewith shown) is supposed to be a loop switch where the branch leg is located. Repeaters arranged in this manner and ex-

tended to the loop switch are usually designated "defective loop repeaters" for the reason that they are generally employed to utilize the "good" leg of a temporarily disabled multiplex loop. Of course such a branch office could not then work the circuit "double", but a single wire is better than none at all, and as such it must be considered.

As the one conductor is used for both receiving and transmitting, it is obvious that the key must be in the half of the loop employed. Hence should the sending leg of the loop fail, the branch office must reverse his sending and receiving apparatus, so that the key will be in the receiving or good leg. At the loop switch the chief operator merely reverses the wedge of the loop in order that the good conductor will face outward.

A rough and ready repeater of this type is also

sary waste of current when the companion local battery is shunted via the lever bar.

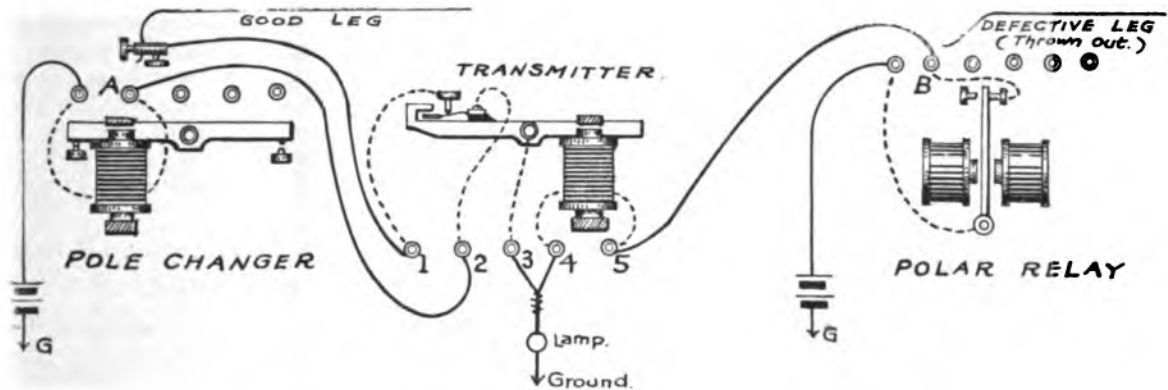
When the regular duplex or quadruplex local battery is not suitable for both multiplex and side line apparatus, that is to say, where relays are inserted in the side line and a higher electromotive force necessarily required, a regular half-Toye or half-Milliken repeater should be employed.

(To be Continued.)

Recent Telegraphic Patents.

An American patent, No. 692,426, has been granted to Luigi Cerebotani, of Munich, Germany, for a printing telegraph system.

A patent, No. 692,967, for a combination typewriter and telegraph transmitter has been issued to Charles E. Getman of Ilion, New York.



A Portable Defective Loop Repeater.

Connect Wire No. 1 to good leg with a Double Binding Post.

Connect Wire No. 2 to Binding Post A.

Connect Wires 3 and 4 to a Ground.

Connect Wire No. 5 to Binding Post B.

shown. Every main office which connects its loops permanently to a multiplex apparatus should keep such a device on the shelf for emergencies. It consists of simply an ordinary quadruplex transmitter to which four short pieces of wire (flexible cords preferred) are attached as shown in the diagram.

In order to temporarily connect the device with the multiplex apparatus remove both the sending and the receiving legs respectively from binding posts B and C, and connect wire No. 1 by means of a brass thumb screw to the good leg. Connect wire No. 2 with binding post B, and fasten wire No. 5 to binding post C. Then connect wire 3-4 to a convenient "ground" and the device is ready for use. Do not fail to observe that binding posts 3 and 4 are metallically connected together in order that each local battery may find a ground via the cord attached thereto. This ground cord should contain a lamp or other artificial resistance equal in value to that of the branch leg temporarily removed, in order to maintain the normal strength of current in the coils of the transmitter magnet, and to avoid an unneces-

Business Notice.

The Sprague Electric Company has closed an order with the Atlas Portland Cement Company for three 400 K. W. engine type split pole generators at speed of 156 r. p. m. for their plant in Hannibal, Mo.; another order is from the De Laval Steam Turbine Company for ten 20 K. W. and ten 75 K. W. turbine generators. The Pennsylvania Steel Company have ordered for their new bridge shop at Steelton, Pa., fifteen wall crane trolley hoists, the electric hoisting equipment of which is built by the Sprague Company.

T. M. B. Association. Assessment No. 390 has been levied by the Telegraphers' Mutual Benefit Association to meet the claims arising from the death of A. S. Farwell at Wells River, Vt.; Patrick Henry, at Truckee, Cal.; M. G. Dwyer, at Cherubusco, N. Y., and R. W. Turner, at Weston, W. Va.

He that is good at making excuses, is seldom good for anything else.—Franklin.

General Mention.

Proposed Congressional legislation seeks to prevent railroad or telegraph companies employing telegraph operators under eighteen years of age.

A large number of telegraph operators and train dispatchers on the Pennsylvania Railroad have had their wages increased from \$5 to \$10 per month.

Mr. F. N. Andrews, for many years wire chief of the Postal Telegraph-Cable Company, Birmingham, Ala., has resigned to enter other business, and his friends unite in wishing him every success.

Mr. T. E. Crosson, at one time connected with the Postal Telegraph-Cable Company, has been appointed manager of The Central District and Printing Telegraph Company, at Pittsburg, Pa., with which he has been identified for several years.

We have been asked what the wireless telegraph operators on the ocean steamships do between ports to occupy their time when their instruments are not in communication with the shore. So far as we can learn most of them are seasick.

At the annual meeting of the stockholders of the Brooklyn District Telegraph Company, held February 13, the following directors were re-elected for the ensuing year: A. B. Chandler, C. A. Tinker, H. R. Heath, T. F. Nevins, J. C. Reilly, G. G. Ward, C. H. Erwin, R. J. Kimball and W. C. Humstone.

The Western Union Telegraph Company will occupy extensive new quarters in Albany, N. Y., at 55 State street, on and after May 1, next. The main office, 23x150 feet in size will be supplemented by a three-story building immediately in the rear, each floor of which is 20x70 feet, to be used for storage purposes and a repair shop.

Mr. T. H. Parish, assistant superintendent of the Commercial Cable Company's station at Waterville, Ireland, has resigned to accept the appointment of superintendent of the British Government Pacific Cable, with headquarters at Suva. Mr. T. R. Blackley, also of the Waterville staff has been appointed assistant superintendent to Mr. Parish. Messrs. R. N. Jenkins and L. T. Nickolds, also of the same staff, have resigned to enter the Pacific cable service, one of them at Fiji Island, and the other at Brisbane, Queensland.

Edwin L. Grauel of Carthage, N. Y., is experimenting with a telephone system on the Rome, Watertown and Ogdensburg division of the New York Central Railroad. His plan is similar to the one in use on the Illinois Central Railroad. It embraces telephone equipment placed in cabooses or other cars of trains, which when stopped can be placed telephonically in communication with the train dispatchers office,

through the medium of a trolley pole or loose wire connecting the car with the telegraph line alongside of the railroad track.

Mr. Thomas F. Rochford, manager of the Postal Telegraph-Cable Company, Brooklyn, New York, has purchased the building at No. 359 Fulton street, in that borough, for the main office of the Postal Telegraph-Cable Company, at a cost of \$75,000. The building is opposite the Borough Hall, and is without doubt the very best stand in the City of Churches for a telegraph office. The building is twenty feet front, four stories high, and ninety-seven feet deep. It will surprise many to learn that a manager could make such an outlay to secure a permanent home for the company's needs. As a matter of fact, Mr. Rochford was unable to secure a renewal of the lease of the company's present headquarters, and as a suitable location could not be found, the enterprising manager, therefore, purchased the property named, and leased it to his company for a term of years. Mr. Rochford is manager of the district embracing the entire Borough of Brooklyn and Long Island, and a man of large means, being an extensive holder of real estate.

Personal Mention.

Mr. C. E. Bagley, assistant superintendent of the Postal Telegraph-Cable Company, Boston, Mass., has resigned to enter other business. Mr. Bagley's friends wish him every success.

Mr. George H. Fearons, general attorney of the Western Union Telegraph Company, New York, has returned from a three weeks' sojourn at Montreal and Quebec much improved in health.

Colonel A. B. Chandler, chairman of the board of directors of the Postal Telegraph-Cable Company, New York, together with his wife, is at Hot Springs, N. C., whither he has gone for the benefit of his health.

Colonel R. C. Clowry, vice-president and general superintendent of the Western Union Telegraph Company, Chicago, Ill., accompanied by his private secretary, Mr. F. J. Sherrer, was recently in New York on business.

A new district has been established by the Postal Telegraph-Cable Company at Portland, Maine, to embrace all of the offices in that State. Mr. A. L. Edgecomb, formerly manager of the Portland office, has been appointed superintendent with headquarters at Portland.

Every man may become his own educator. The man who asks a question and answers it himself, holds his destiny within himself. Inventors have answered their own questions.

Every operator should read TELEGRAPH AGE.

Telegraphing in 1846.

The wonderful news given recently to the world that a telegraph message had been sent without the use of wires from Europe to America makes doubly interesting the following extract from the Washington "Union," published at the National Capital in June, 1846.

A copy of the paper gives the following account of what was probably the first practical test of a telegraph line between the National Capital and New York:

On Saturday evening last, June 6, Prof. Morse, the inventor and superintendent of the magnetic telegraph, and his assistant, Mr. Vail, in their office at Washington, wished to test the integrity of the telegraphic line the whole distance of no less than 260 miles. The better to understand the singularity of the scene we are about to record, the reader must imagine four individuals, one at the office at Washington, one at Baltimore, forty miles distant; one at Philadelphia, 108 miles farther, and one at New York (or rather Jersey City, opposite New York), 112 miles farther.

The telegraphic lines pass through the instruments at the offices at each of these places, and a communication dispatched from any one is written and instantly understood at all the others. We shall designate the operators by the names of the places at which they are stationed.

Washington—Baltimore, are you in communication with Philadelphia?

Baltimore—Yes.

Washington—Put me in connection with Philadelphia.

Baltimore—Aye, aye, sir; wait a minute (after a pause). Go ahead. You can talk with Philadelphia.

Washington—How do you do, Philadelphia?

Philadelphia—Pretty well. Is that you, Washington?

Washington—Aye, aye. Are you connected with New York?

Philadelphia—Yes.

Washington—Put me in connection with New York.

Philadelphia—Aye, aye; wait a minute (after a pause). Go ahead; now for it.

Washington—New York, how are you?

(New York does not answer.)

Hello, New York. Washington is talking to you. Don't you hear him? Why don't you answer?

New York—I don't get anything from him.

Washington—I get that from New York.

Philadelphia—New York, Washington says he gets that from you.

Baltimore—How is it that Washington hears from New York, and New York does not hear from Washington?

Philadelphia—There's where I'm floored.

Baltimore—What is the reason Washington?

Washington—Because New York has not properly adjusted his magnet.

Philadelphia—I've been hard at work all day. I feel like bricks. Had no supper. I have had a stiff evening's work; there have been many messages to-night—one alone gave us \$17. I want to go.

Washington—Wait a little!

Baltimore—Go it, ye cripples.

Philadelphia—Who is writing?

Washington—Don't all talk at once.

Baltimore—Mary Rogers are a case; so are Sally Johnson.

General Jackson are a hoss, so are Colonel Johnson.

Philadelphia—Who is that? I will discuss that p'int.

Washington—Baltimore, keep quiet. Philadelphia, tell New York to ask me to write dots. (That is to adjust his magnet.)

Philadelphia—Aye, aye, sir. Washington, write dots. (Washington begins to write dots.) That's it; O. K. Now I have you; go ahead.

Washington—New York, do you now get what I send?

New York—Aye, aye, sir.

Washington—Did you get Prof. Morse's message for his daughter?

New York—Yes, from Philadelphia; but it's too late to send it over the river to-night. I am all alone, and the two boys are gone.

Washington—Very well; no matter.

Baltimore—Good night; I'm going.

Washington—Good night, all.

Philadelphia—Good night.

New York—Good night.

And so ends a curious scene; not an imaginary one, but one of actual occurrence. Let any one reflect upon the fact that all these questions and answers occurred in a space of time but very little longer than that in which this unique drama has been related.

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Life is not what we would have it, but what we make it.

Consumption.

BY CHARLES H. GARLAND,

THE WELL-KNOWN ENGLISH TELEGRAPHER.

We have dealt at some length with the need which exists for the telegraph department to adopt measures to prevent the spread of consumption among the ranks of the employees. One of the main results which would accrue from such action on the part of the department would be the education of its staff in the causes and modes of propagation of tuberculosis and the necessary preventive steps. But if we cannot induce the department to prohibit spitting, we can endeavor to persuade our men to refrain from indulgence in this filthy habit. If we cannot secure our offices from contamination we can make our homes secure, and last, but not least, we can learn what measures should be taken to counteract the evil influences of our employment. With a view to assisting in this desirable education, I have compiled the following hints. In order to secure brevity, it has been necessary to make dogmatic statements, but every such statement has been verified to the best of my ability. I have divided the subject into convenient parts for easy reference.

Tuberculosis kills from 60,000 to 70,000 persons every year in England. This number is equal to about ten per cent. of the deaths from all causes. The number of persons afflicted must be several times as numerous. The full significance of these figures can be best understood by making a comparison with some others of the most dreaded diseases. Thus, typhoid fever kills only about 6,000 persons annually, and small pox in 1899 caused the death of only 174 persons. Cancer accounts for 26,000 deaths, and diphtheria and croup for some 10,000. So it will be seen that tuberculosis is the most deadly malady with which we have to contend. In both sexes the real liability to consumption begins somewhere between the ages of 15 to 20 years, and attains its maximum at the age of 45 to 55 years. The disease is caused by the tubercle bacillus, which was discovered in 1883 by Robert Koch. The bacilli are minute organisms of the very lowest scale, which are only visible when very highly magnified. They are delicate, rod-like bodies, 1.5 to 3.5 micro-millimetres in length and about .2 micro-millimetres in thickness. (A micro-millimetre is a thousandth part of a millimetre.) The bacilli thrive best at the temperature of blood, or about 98 degrees Fahrenheit. They multiply in the body, and reach the outer world chiefly in the sputum of invalids and in the milk of diseased animals. Koch has recently thrown some doubt on the possibility of danger to human beings from the latter cause. When the sputum dries the bacilli remains alive and are disseminated in the dust of the air. Every person is in danger of taking up the bacilli of tuberculosis during inspiration, or by other means, and many are affected by the disease without their

knowledge. It is stated that in Germany one-fourth of the bodies of persons dying from other diseases show traces of tuberculosis which has been cured. The most efficient agents for the destruction of the disease germs are a high temperature in the presence of moisture, as by boiling or steaming; plenty of sunlight; and several forms of disinfectant, such as cresol water, carbolic acid, formaldehyd, etc. The use of disinfectants should be under expert direction, if safety is to be ensured.

The bacilli are taken up by inhaling them with the air. The air is contaminated by bacilli, derived mainly from the dried sputum of diseased persons. The contamination is brought into the neighborhood of healthy persons by dust, which may be carried for long distances by draughts and winds, or attached to clothes, shoe soles, etc. Dust is thrown into the air in large quantities by dry sweeping, dusting, trailing dress skirts, and other means. Invalids, when talking or coughing, throw out tiny drops of moisture containing infectious material, which is diffused in the air of their vicinity. Tuberculosis germs can also enter the body by means of the food. Such articles of diet as unboiled milk and imperfectly cooked food, especially if derived from tuberculosis animals, frequently contain large quantities of bacilli. Another method of infection is through cuts or diseased places in the skin. Unclean hands, or the handling of unclean objects, are a fruitful source of contagion. Unclean utensils, imperfectly washed jugs and glasses, the joint use of drinking vessels, the sucking of unclean fingers, biting nails, and all like habits are dangerous. Adults are most frequently affected by the inhalation of the bacilli, which results in tuberculosis of the lungs or air passages. Consumption is seldom, if ever, transmitted by heredity. The progress of the disease is usually very slow, but may be rapid, as in galloping consumption.

The first and most important is the prohibition of spitting. The first resolution of the recent congress on tuberculosis, passed in the Queen's Hall on July 27, was as follows:

That tuberculosis sputum is the main agent for the conveyance of the virus of tuberculosis from man to man, and that indiscriminate spitting should therefore be suppressed.

All persons, whether infected or not, should refrain from expectoration in closed rooms, railway or street cars, or in the streets. Spittoons containing a fluid should be placed at convenient spots, and cleaned and boiled at frequent intervals. Keep your hand before your mouth in coughing. Turn away from a coughing person. Do not allow your womenfolk to wear trailing garments. Prevent a tuberculosis person from sleeping with another, and be careful that all bed and body clothes be cleaned and disinfected if they have been used by a tuberculosis person. Abolish dry sweeping. Avoid all places of entertainment, meeting, or refreshment where spitting is allowed. See that all milk is boiled, all food

thoroughly cooked, and guard against flies or other insects. The nails, teeth, and mouth should be kept thoroughly clean. The mouth is a perfect breeding place for all kinds of microbes. It should be washed each morning and evening with some antiseptic solution. Try not to scratch or wound yourself, or to do anything that will injure the outer skin of the body.

Having thus taken steps to avoid contagion, care should be taken to so strengthen the body that contagion is more difficult. The resisting power of the body can be best maintained by the avoidance of all excess—more especially alcoholic excess. Professor Brouardel says: "Alcoholism is the most potent factor in propagating tuberculosis. The strongest man who has once taken to drink is powerless against it." The food should be plain and wholesome; dainties are of little use. The dwelling should be airy and well-lighted, and the best and lightest room selected for the bedroom. Articles of clothing that hamper movement, such as corsets or belts, should be avoided. Warmer clothes are required for sedentary than for active occupations. The whole body should be washed and vigorously rubbed at least once each day. Avoid a stooping posture at work. Inflate the lungs by deep breaths for a dozen times on rising in the morning. Breathe through the nose as much as possible; if you find it difficult, there is something wrong with your nose; have it examined. Plentiful exercise, such as rowing, swimming, cycling, and, best of all, walking, are wonderful allies in the fight against disease, but do not race or train. Go to bed early. Beer, tobacco, tea, and coffee are useful if taken in moderation. They are all injurious in excess. The proper proportion can be easily determined by each person for himself.

If these hints are regarded, and the course indicated followed out, there will be less evil results from the pernicious conditions of our employment, and a fuller enjoyment of the pleasures at our disposal. I do not think our case against consumption is complete without some endeavor on our own part to avoid and counteract the evils which our occupations entail. The telegraph department should, through its medical officers, have led the way. They have failed to do so. We have pointed out their faults; let us now endeavour to correct our own, and by so doing decrease the dreadful annual tribute of lives which we pay to a preventable disease.

The testimony of progressive operators is that Telegraph Age is so thoroughly comprehensive in character as to make it indispensable to those who would keep informed. Its technical articles are of high practical value. Write for a free sample copy.

Harbor no thought, neither do any act, you would be unwilling the whole world should know.—Albert Mathews.

Proves the Theory of Telepathy.

To the minds of a great many people, says an exchange, Marconi the Italian scientist in developing the principle of wireless telegraph has also developed the fact that there is something in his theory akin to telepathy or so called mind reading.

Marconi's theory of ether waves as a conductor of messages is in direct line with the theory that the mind can evolve and send out a silent message that will travel from one end of the earth to the other, and that another mind may be attuned so as to be able to receive and report the message to the organs of the mental machinery and its full meaning be thoroughly understood. It has been demonstrated by Marconi that distance is not to be taken into consideration in sending wireless messages. The requirement, is that the receiver be attuned so as to be effected by the force that is hurled into space from the sending battery or station.

There are numerous instances on record where persons have heard what they believed to have been voices of friends or relatives who were at the time thousands of miles distant and that subsequently it was found that the relative or friend had been dying at the precise time when the voice was heard. There are instances where persons have not only heard the voices but have seen forms which seemed to be exact representations of the absent friends or relatives, and that the original of the forms were found to have been in great peril and had perhaps met death at the time the shapes were seen.

Now, it is perfectly reasonable to argue that the absent one who is in peril and about to die, having an abnormally strong desire to see or speak with the other develops such a strong mental battery as to be able to send a message out into space with sufficient force to make an impression upon the mind, which by effectation or otherwise has been attuned to receive it.

It is a well known fact that with a little practice one person walking behind another on the street, can by a command issued mentally, cause the other to turn and look back. What is that but a wireless message on the identically same line with the Marconi theory?

Tells of Electric Waves.

Professor Fleming, lecturing on "Waves" before the Royal Institution, London, England, January 8, referred to Marconi's Transatlantic communication. He said he had been comparing light waves with electric waves and found they were both waves in the ether, which bent around obstacles they encountered. They travelled at about the same speed of 186,000 miles a second.

Marconi's Transatlantic waves were about 1,000 feet long, which was not very small compared with the obstacles they had to encounter; that is, the hill of water formed by the curvature of the earth, which he calculated was about 110

miles above a straight line joining the Lizard and Newfoundland. The bending required, therefore, was not great compared with the distance, being comparable to a wave one-hundredth of an inch in length bending round an obstacle one-fifth of an inch high.

It was an interesting question, continued the lecturer, whether it was conceivably possible to send an electric wave around the world. He did not presume to answer the question, but he suggested that it was an interesting possibility. He had already shown that water is opaque to the Hertzian waves, and he believed it likely that the upper strata of air, being highly rarefied were also opaque to these waves.

He imagined that by internal reflection between these two opacities a beam of rays could always, as it were, be confined between them, and so, provided the impulse was strong enough, it could be made to pass any distance sandwiched between them independently of the curvature of the earth.

The Mercadier Telegraph System.

What is considered the perfection of multiple telegraphy has just been demonstrated in a series of experiments between Paris and Bordeaux. The operators found no difficulty in transmitting on the same wire sixteen messages at the same time, and received messages from an equal number of operators without the slightest confusion.

The success of the experiments is so unquestionable that the director of the French Post and Telegraph Department have established the Mercadier apparatus for the purpose of transmitting to Havre and Brest cablegrams for England and America.

Before the Academy of Sciences M. Mercadier, the inventor, recently explained his new system. "It is based on the principle of using undulatory currents," he said, "instead of continuous, its well known movements transmitting themselves in undulations that co-exist without destroying one another. Every drawing room illustrates this—the voices of the different talkers, the sounds of a piano and other noises not interfering in the slightest degree because they are undulating as well as pitched in different keys.

"Thus I have used a number of transmitters, each accorded to a different note in the scale, and therefore making a different number of vibrations. The first transmitters were tuned to G, the second to A, etc., each vibration sending a short, sharp current over the wire. A corresponding apparatus is placed at the receiving end, each responding only to the similarly tuned transmitter. In other words, messages fly along amicably and distinctly on a single wire precisely as conversations cross one another in the same room."

Azzentit—"Where do you think is the best place for a wireless telegraph station in New York?"

Azzegotit—"Why, off the 'Battery,' I should think!"

Womens Morse.

Editor TELEGRAPH AGE:

The article on "Womens Morse," by Mr. Hall, proves much more clearly the writer's magical gift of almost superhuman instinct and intuition than anything necessarily derogatory to woman's work, although a world of implied censure seems to lie under his distinction. If this writer referred to were not a man, and therefore a valuable pillar to the institution of telegraphy—as men have a way of being to whatever profession they adorn—we would suggest this person should enter some advanced branch of the jugglery profession.

This wonder in himself who can describe the pattern of clothes worn by those sending dots and dashes to him, whether plaid or striped, also professes unfathomable perception from voices presumably also of character, habits, dress, etc. Thus, by simply having anyone hundreds of miles distant speak to him by telephone he could inform a spell-bound audience whether the speaker's shoes were "King" or "Slater," hat slouch or hard, the name of their tailor and possibly that of their barbor. In short a wonderful future would lie before this monster of acuteness if he were not handicapped by the—for him—unfortunate expertness in the business of telegraphy.

Secure in their exalted position of super-excellence it appears strange that so many of this gifted race use precious time and strength in attacking the less favored female race. From a physical point of view telegraphy would seem more suitable to the latter, and the unfortunate intellectual gulf between the two might, we think, be regarded by the superior mind with silent pity rather than such harsh outcries as we often hear,—particularly by those who have not the selecting of staffs. Let us hope managers are guided more by sympathy for women than indifference to the suffering nerves of men doomed to receive unmusical feminine Morse,—for according to our authority, Mr. Hall, it is unmusical except when sent by a masculine-like woman.

However, let all the thus attacked ones be thankful that it is given to but the few to have the slightest idea about detecting any difference between men's or, only women's, Morse.

AN OPERATOR.

Montreal, February 7.

"Small Accumulators" is the title of an illustrated volume of eighty-one pages, by Percival Marshall, M. E. The book covers the subject of storage batteries, as indicated by its name, as fully as is possible, and it will be found a practical and trustworthy guide of the matter treated, readily understood by non-technical readers. The price of the book is fifty cents, an amount which covers the prepayment of express charges. Address J. B. Taltavall, Telegraph Age, 253 Broadway, New York.

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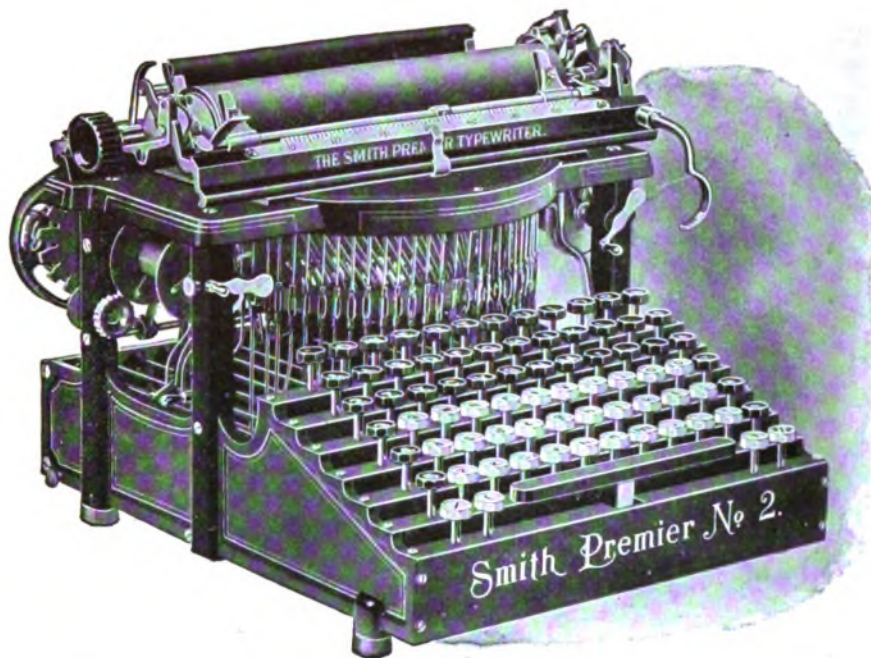
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Entered as second-class matter at the New York, N. Y., Post Office.

Published on the 1st and 16th of every month.

TERMS OF SUBSCRIPTION:

One Copy, One Year, - - - -	\$1.50
One Copy, Six Months, - - - -	.75
Foreign Countries, - - - -	2.00

ADDRESS ALL COMMUNICATIONS TO

J. B. TALTAVALL, - Editor and Publisher,
253 BROADWAY, NEW YORK.

E. H. BOWER, MANAGER ADVERTISING DEPARTMENT.

W. M. GATES, SPECIAL ADV. AGT., 29 EUCLID AVE., CLEVELAND, O.

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NEW YORK, March 1, 1902.

NOTE.—We desire to state that back numbers of this paper, those issued more than six months prior to any current date, will be charged for at the rate of twenty-five cents apiece when they can be furnished. This price is fixed because of the necessarily limited stock we carry, and of the difficulty we commonly have in filling an order. Oftentimes the request is for papers of a more or less remote date, with the expectancy of being supplied at but ten cents a copy, whereas in order to obtain the desired issue we are ourselves frequently obliged to pay the larger sum, or even more. The growing value of complete files of TELEGRAPH AGE should cause our readers to carefully preserve their issues.

Success Obtained by Obedience to Natural Law.

While young men are studying the relation that science sustains to industry they should not forget the relation that exists between science and morals. The advancement and best results of productive industry depend upon the correct use of the comprehensive knowledge of facts and principles that science has disclosed, but the highest civilization and the best results of social organization depend upon the correct understanding and application of the principles necessary to produce right conduct. We look with justifiable pride upon our progress in the industries that are so prolific in production for the convenience and comfort of humanity, but it is most important that we should not forget that human welfare, in the very nature of things, is the only rational purpose of all human endeavor. The highest and

best product of any civilization is individual character, in which intelligence is combined with honesty of purpose.

The struggles of man from his earliest history have been to know; to know more of himself and of his surroundings; more of his fellows and his relations to them. Out of this struggle for knowledge, out of man's desire to lift himself up, has come all science, all art, the industries, all commerce, and every human effort. Knowledge and not powder is the world's great civilizer. Teachers and not soldiers are the advance agents of progress. The messenger whose feet are "beautiful upon the mountain," "that bringeth good tidings, that publisheth peace," is not a military officer in command of a battery. The forces that lift up, develop, and civilize humanity are constructive and not destructive. In the clash and uproar of destructive movements we too often fail to understand, or, understanding, fail to heed the silent forces that are within us and around us, and that "make for righteousness" (right conduct); forces that are part of the conditions of our existence; forces that work quietly and with a persistence that never ceases and an energy that never relaxes. Such forces are the powers of moral movements.—Hon. Flavius J. Van Vorhis in Science and Industry.

New Use for the Telephone.

The experiment, on February 6, of telephoning over telegraph wires was successful on the Southwestern Branch of the Illinois Central Railroad between Kankakee and Kempton, Ill., a distance of twenty-six miles. The test was made by superintendent of telegraph G. M. Dugan, and Assistant Superintendent C. F. Annett of the Illinois Central, and G. C. Kinsman, superintendent of telegraph of the Wabash system, who was also of the party.

The experiments were made with a telephone instrument in the engine cab. A number of stops were made between Kankakee and Kempton along the route, and at several stations a wire was strung from the engine to the telegraph line and telephone communication established with the train dispatcher's office in Kankakee. The tests were successful in every case, and the telephoning done over telegraph wires was without interference with the telegraphic service.

It is not the intention to displace the telegraph by telephones in the operation of the road's trains, nor is it the intention of the company to equip all trains with telephone apparatus. The telephone will be used as an auxiliary service, largely for emergency purposes. For instance, if a train is wrecked, blocked, or stalled between stations, the telephone equipment would be of great service.

The workman who rejoices in his work and laughs away its discomforts is the man sure to rise, for it is what we do easily and what we like to do that we do well.—Andrew Carnegie.

The First Telegraph to Portland, Oregon.

(Concluded from page 79, Feb. 16.)

Singularly enough, the first press dispatch received in Portland announced the death, in San Francisco, of the Rev. Thomas Starr King, "one of the most faithful and useful men on the Pacific Coast." The first press dispatch received in San Francisco after the completion of the line from St. Louis, announced the death of Colonel E. D. Baker, a United States Senator from Oregon, who was killed in the Battle of Ball's Bluff. Both were prominently before the country in their earnest support of the Union cause—the one in the pulpit, the other on the rostrum, and on the battle-field.

While the telegraph instruments were clicking, Portland prepared for a celebration. A committee, consisting of Captain E. G. Randall, W. H. Weed, Colonel John McCracken, A. B. Halleck, Captain Charles Mills, Thomas Young, R. Hendrie, E. W. McGraw, John W. Sutton, S. N. Arrigoni, A. Starr, R. J. Ladd, Charles Hodge and Joseph Buchtel, made the necessary arrangements, and in the evening of March 8 a torchlight procession, in which the militia and fire department participated took place. In front of the telegraph office in the Pioneer Hotel, now a fading memory, was a speaker's stand, decorated with the Stars and Stripes, from which Judge George H. Williams and the Rev. T. H. Pearne addressed practically all the people living in and near Portland. The first four dispatches sent out were read by Colonel McCracken. They were from Governor Gibbs to President Lincoln; Mayor Logan to the Mayor of Portland, Me.; Amory Holbrook to President Bellows, of the United States Sanitary Commission, and Fire Chief Butchel to Fire Chief Scannel, of San Francisco. Two of these dispatches expressed the earnest hopes of a great majority of the people of Oregon, and are interesting even at this late day.

"Our telegraph completed." wired the Governor to the National Executive. "Let the great Pacific Railroad, with a branch to Oregon, soon follow. We want no Pacific Republic; no compromise with rebels in arms; no more slavery."

"The younger to the older sister—one in name," read Mayor Logan's telegram. "May they ever be united in the preservation of our common country and its liberties."

The celebration over, Superintendent Haines settled down to the routine of the office, of which he remained in charge until a permanent manager could be secured. Dr. O. P. S. Plummer, now for many years a prominent druggist of this city, was finally appointed to the position, and arrived in Portland on April 9. During his last week as manager Colonel Haines experienced a series of melancholy days. The wires went down on April 4, and seven trees were blown across the section between Aurora and Salem. For several days newspaper readers were deprived of the fresh dispatches to which they had become accustomed by one month's service, and no doubt Colonel

Haines' daily life was made as burdensome by inquiries regarding the lines as the life of a post-office clerk is by questions concerning delayed mails. On the 8th the San Francisco wires were up and the Eastern down, and on the 9th Colonel Haines' mind was relieved of anxiety, for Dr. Plummer took charge of the office.

During the Summer and early Fall of 1864 Dr. Plummer was the only operator. He had an assistant in the person of a man who served as messenger, battery-man, lineman, and janitor. If a break in the line occurred anywhere near Portland the man of many jobs became a simple lineman, and occasionally he was expected to be in several places at one time. Breaks in other parts of the State—or rather the Willamette Valley, which so far as the telegraph was concerned was the whole State—were repaired by men sent from the other offices, which were Oregon City, Salem, Albany, Corvallis, Eugene City, Oakland, Roseburg, Canyonville and Jacksonville. In wet, stormy weather breaks were frequent, for the line, traversing the abundant timber, would be caught by swaying branches or falling trees and communication would be cut off suddenly. In such cases messages would be forwarded to the office nearest the break, sent by stage or horseman to the next office and so on till it reached their destination. In Winter, to make sure that the message would reach the addressee, copies were sent by stage to Oroville or by steamer to San Francisco. Such expedients would be laughed at in these days of the perfected telegraph, telephone and transcontinental railroads, but then they had to be resorted to because the lines were down from one-fourth to one-half the time in rough weather. In Northern California the dispatches and mails were often carried from office to office by men on snowshoes. The difficulties under which the telegraphers labored may readily be imagined by any one who was in Portland during the great storm of January 9, 1880, for which even that once ubiquitous individual, "the oldest inhabitant," could find no parallel. This storm prostrated the southern wires and for eleven days the "Oregonian" received no dispatches except what could be sent to Yreka, forwarded by stage and rail to Roseburg and wired to Portland. Such a disaster would be impossible where wires are strung along each railroad entering the city, and breaks may be repaired within a few hours after they are reported.

To return to the line of the '60s; Insulation was so poor and swaying timber so abundant that it was nothing unusual in wet weather to repeat the business once and often twice between Portland and Yreka. Now business can be sent direct from Portland to New York City through a few automatic repeaters distributed along the route. Nevertheless business flourished, and in November, 1864, Dr. Plummer was allowed an assistant operator. There was enough work for two, and press dispatches formed no small part of it.

"Dispatches," said Dr. Plummer in speaking

of this portion of the business, "were taken by the 'Oregonian' and also by some other papers, now forgotten, from San Francisco, where they were condensed as much as possible. Each paper paid by the word. The 'Oregonian' was then as now the paper upon which the people of the Northwest depended for news from the outside world. Sometimes it would print a whole column or even more of telegraphic news. It was nothing unusual for Mr. Pittock to pay \$500 or \$600 a month for this small service."

Many columns of news daily may be obtained now at far less cost, but then as now the wants of the readers had to be satisfied.

Not infrequently, of course, news was delayed in transmission. This was due to the heavy working of the wires. The assassination of President Lincoln was not known in Portland until noon on Saturday April 15, 1865, about fifteen hours after Booth had fired the fatal shot. An interesting fact concerning the reception of this news came out in the course of a conversation between Dr. Plummer and B. G. Whitehouse a few days ago. Mr. Whitehouse and Dr. Plummer were having a social chat in the telegraph office and were interrupted by the clicking of the instruments. Dr. Plummer turned to take the message and a few seconds later he sprang to his feet exclaiming, "Whitehouse, Lincoln's killed!"

While Portland was enjoying the advantages of the telegraph, Olympia, Seattle and other northern towns were anxiously awaiting the construction of a line. Work was begun in the Summer of 1864, under the supervision of Colonel Haines. Wires were stretched from the Portland office to the foot of Hoyt street—a point then outside the city limits—where a mast of three sections reaching a height of 181 feet was erected and wire swung to a tall fir on the east bank of the Willamette. The base of the mast occupied the greater portion of two lots which were owned by J. W. Cook. The lots were considered of such trifling value that the company took possession without so much as asking the permission of their owner, and even Mr. Cook did not know that they had been so seized until nearly a year later when some one told him about it. He then demanded that the mast be removed or rent paid for the use of the ground, but expressed a willingness to sell the lots to the company for \$1,600. The company considered this price exorbitant and decided to pay a monthly rental of \$5 per month. A portion of the O. R. & N. Co.'s Ainsworth dock is built upon these lots, and it would take many thousands of dollars to purchase the property which was offered the telegraph company for \$1,600.

From the east bank of the Willamette the line ran to the Columbia, which was crossed by a submarine cable. Seattle was reached late in the Fall, and the work of construction towards Victoria was continued during the Winter months. The workingmen suffered great hardships, for from Seattle north there were no wagon roads

and the wire and insulators had to be carried by the men on their backs. Near the site of the present town of Whatcom a halt had to be called in the dead of Winter, and postholes dug through the ice and in the frozen earth. Even under these difficulties work was pushed, and the northern towns were placed on an equality with the lower Coast cities.

Books on Wireless Telegraphy.

"Wireless Telegraphy" is the title of a new and popular exposition on this interesting subject by G. W. Tunzelmann, B. Sc., the author of "Electricity in Modern Life." The volume has 104 pages, is fully illustrated, and includes chapters on ether and ether waves, the discovery and development of the coherer, the systems of Marconi, Popoff and others. It is a capital book, and affords just the line of information now in such demand regarding the topic treated. It will be sent on receipt of price, 75 cents, to any point in the United States or Canada, express charges prepaid. Address J. B. Taltavall, Telegraph Age, 253 Broadway, New York.

"Wireless Telegraphy," by Richard Kerr, F. G. S., with a preface by Sir W. H. Preece, is a book just off the press, which is meeting a very wide sale, the subject treated being uppermost in the minds of the public at the present moment. This work, which comprises 116 pages, contains a good account of the discoveries in telegraphy without wires. The subject matter is arranged in readable form, the illustrations are excellent, and the descriptions of the experiments are accurate. Copies may be had at 75 cents each by addressing J. B. Taltavall, Telegraph Age, 253 Broadway, New York.

Old Times in Telegraphy.

"Did you ever take time to consider from what comparatively small beginnings the present gigantic telegraph interests in this country have grown?" asked a Washington, D. C., veteran telegraph operator. "Not long since, while looking over some old documents which had not seen the light of day for many years, I discovered one which related to the time when telegraphy as a commercial factor in the United States was in its infancy.

"This document consists of a single half sheet of legal cap, yellowed by age, upon one side of which is written in a neat hand a tabulated statement of the daily receipts of the 'Electro-Magnetic Telegraph of the United States,' in the city of Washington, for the quarter beginning January 1 and ending March 31, 1846, together with the totals for each of the three months and the total for the quarter. These totals are as follows: January, \$67.01; February (twenty-eight days), \$60.58; March \$75.84, the grand total for

the entire quarter footing up the sum of \$203.43. During the three months the minimum receipts for a single day occurred on January 1, when they aggregated the munificent sum of 60 cents. In all probability but one message was sent on that day. The maximum receipts for a single day during the quarter amounted to \$5.87. This big sum was received on March 2, 1846.

"Everybody, of course, is more or less familiar with the fact that the city of Washington was the cradle of electric telegraph science. It was in the little room now occupied by the chief clerk of the House of Representatives, on the ground floor of the House wing and facing the east, from which the first message—"What hath God wrought?" was flashed to the city of Baltimore. This was less than two years before this table of daily receipts was compiled.

"In 1861 there were but two telegraph offices in Washington, aside from the one in the War Department. One of these offices was located at the old Willard Hotel and the other on Pennsylvania avenue, a few doors west of Four-and-a-half street. In the latter part of that year there were but eight wires running out of this city, one of these being operated by the Baltimore & Ohio Railroad. Now the number of wires run up into the hundreds and the aggregate number of offices throughout the city and its suburbs will reach nearly one hundred.

"In a telegraph way, Washington is distinctive from any other city in the world. The business here, instead of being of a commercial nature, consist chiefly of newspaper work, Government telegraphing and political and transient work from people interested in politics. Since our recent foreign acquisitions the telegraph receipts at the Washington offices has greatly increased. Washington is a sort of Mecca for society in this country, and society leaders as well as politicians are using the telegraph as a means of communication to and from this city at a rapidly increasing rate."—Washington Post.

The Carnegie Pension Fund Proposition.

Editor TELEGRAPH AGE:

I was pleased to note in the last issue of TELEGRAPH AGE that the pension plan has the support of two able advocates in Cincinnati. I hope that the good work in this direction will not stop here. It is hoped that the able advocates from the Queen City will inspire others with the courage required to champion a pension plan, a measure that many, unfortunately, seem to think impossible of accomplishment. The old timer should lend his efforts to promote this end just as he has done in years past in order to give to the operator of to-day, one of the most staple, cheapest and reliable mutual benefit insurance associations in the United States. It cannot be doubted that what seems to some as almost impossible now of attainment will, under the guiding hand of a few practical men, resolve itself into a successful outcome. Mr.

Carnegie's reply to Mr. Connolly, of this city, was plainly to the point, for he said that if the telegraphers would form a pension plan somewhat similar to the ones now in operation on the Baltimore and Ohio Railroad and the Pennsylvania Company's lines, he would be willing to contribute a substantial sum to it. Now, Mr. Carnegie never speaks in riddles, nor does he speak merely to be heard. He knows what the telegraph business is, and what becomes of the old operator who stays in the business until he is too old to engage in anything else. And when he advises us to formulate a pension system he does so from the heart. Not only does he feel kindly towards his ex-coworkers and their successors, but he feels for them in a substantial way. So if we would have Mr. Carnegie help us along, we should also be willing to help ourselves by meeting Mr. Carnegie with a substantial sum of our own.

How, then, shall we go about this matter of forming a pension plan? Shall it be by convention, by an expression of opinions through TELEGRAPH AGE, or shall we simply ask TELEGRAPH AGE to name a committee of New York operators to meet, form a plan and lay it before Mr. Carnegie and all of the telegraphers interested? I for one would be satisfied to abide by any action such a committee would take. We cannot expect such a gigantic scheme to be a howling success from the start. Many changes will have to be made before the machinery will work smoothly. However, let us make a start of some kind, and as we move forward the rough places and sharp curves, the deep cuts and long bends will gradually be eliminated and the road to success will be as straight, and the road bed as solid and comfortable to ride over as that of the Telegraphers' Mutual Benefit Association.

P. J. McKEEVER.

Pittsburg, Pa., February 18.

The twentieth anniversary number of the "Electrical Review," New York, Charles W. Price, publisher, made its appearance February 15. The issue constituted a bulky volume and was an interesting compendium of much that is of value to the electrical fraternity. Not the least interesting of its pages were those reproduced from its first number. The advances made in the single feature of illustration were clearly shown by reason of marked contrast. Mr. George Worthington, well known to electricians a quarter of a century ago, founded the "Electrical Review," and the presentation of a full page engraving testifies to his appreciation by the present publisher of that journal.

The "Electrical Age," formerly a weekly publication, devoted to the interest of electricity in general, made its appearance with the New Year as a monthly in new dress and form. It is well printed on coated paper and presents in every way a highly creditable appearance.

The Passing of the Ogden Relay Office.

The abandonment of Ogden, Utah, on December 14, 1901, as a transcontinental repeater station of the Western Union Telegraph Company, and the transference of this special function to Salt Lake City, brings forcibly to mind the peculiar distinction this office has enjoyed for over a quarter of a century, as well as to recall those who have been associated in its management. The managerial heads during these years have been but five in number, and include such well known names as A. J. Pattison, W. R. Williams, J. E. Palmer, J. B. Twiford, the latter serving from September, 1890, to November 15, 1901, when he took charge of the Salt Lake City office, and W. J. Dermody, who now fills the position. And it may be said that many of the prominent operators of the country have served also on the force of this office. For among the old-timers who have worked at Ogden are A. B. Hilliker, W. H. Pratt, J. N. Keller, now general manager of the New England Telephone and Telegraph Company; Theodore N. Vail, retired millionaire; F. D. Giles, now assistant manager, Western Union Telegraph Company, New York; "Jack." Morrison, A. Bruckman, retired; D. S. Spencer, Jules Guthridge, Maurice Brick, "Biff." Cook, G. W. Jones, "Hank." Cowen, H. A. Bogardus, J. E. Berry, "Billy" Foley, and a hundred other notables.

While shorn somewhat of its former importance Ogden still remains, however, the pulse for the overland business, only the local wires and local relaying being transferred to Salt Lake City. The latter place now has direct connection with San Francisco, Montana and Oregon points, Idaho, Wyoming, Colorado, Nebraska and Chicago, avoiding the former relay of local business at Ogden.

Before the days of the Wheatstone, and before any wires west from St. Paul, or from over the south were strung, Ogden used to relay everything for the Pacific Coast. In the early nineties, however, the system of working wires through from Chicago began, so that now all Pacific Coast business from New York and Chicago goes through direct from those points. Business for the inter-mountain country is now relayed at Salt Lake City instead of at Ogden, the latter being simply a repeater station, with repeaters in all of the central overland circuits.

The repeater chiefs now at Ogden are T. McGuinness, wheatstone repeater; A. A. Green, wire chief; O. A. Moyer, night chief operator; J. Hutchinson, assistant night chief operator, and H. W. Todd, split trick operator.

Both Ogden and Salt Lake City are in the district presided over by Col. J. J. Dicky of Omaha, as superintendent, and B. Brooks of Denver, Col., as assistant superintendent.

The personnel of the Salt Lake City office is now made up as follows:

J. B. Twiford, manager; A. W. Long, chief operator; W. B. Munday, night chief operator. Operators: J. W. Booth, Mrs. E. F. Beach, J.

W. Gargan, Miss A. Graham, E. H. Graham, L. W. Harris, C. I. Lawton, J. O'Brien, W. A. Warrensford, W. H. Herr, F. M. Kernan, J. W. Whiteley, C. F. Meigs, A. Nisonger, T. Brophy, S. S. Frank, F. C. Schanz. Miss Julia Phillips is cashier; Mrs. G. Shores and Miss Lizzie McPherson, bookkeepers; Fred. Midgley, delivery and service clerk; J. G. Midgley, Jr., and E. Bullock, clerks; R. W. Bartlett, night clerk and Arthur Hayes, counter clerk.

Seeing By Wire.

About every six months there crops up in the newspapers an account of the achievement by some one of a design for visual communication by wire. Almost invariably the inventor resides at the ends of the earth or in the backwoods.

Ever since Professor A. G. Bell devised the photophone and succeeded in transmitting sound impulses over a beam of light, the idea of transmitting pictures or appearances, or light in some form over a wire, has exercised a peculiar fascination upon inventors. It was thought for a long time that the development of the peculiar electrical and absorptive properties of selenium might show a way for the design of such a system. But the further knowledge which has since been obtained of the behavior of this substance does not bear out this view, and it is not now believed that it can be used in this connection.

A number of more or less intelligent methods have appeared from time to time, but so far none of them has met even with the faintest appearance of success, and the subject remains to-day about where it was when it was first thought of fifteen or sixteen years ago. There is no doubt that such an improvement would be of use could it be made. At the same time it does not to-day appear as if there is any hope for it, and those who put faith in scientific articles in Sunday newspapers are warned to look twice before they believe much in this direction.—Electrical Review.

Fouling the Atlantic Cables.

Five times last year the ocean cables of the Commercial Cable Company were fouled by ships' anchors and severed. One would think that a cable not more than two and one-half inches in diameter where it is thickest, and in most places measuring less than an inch, stretched along the bottom of the sea, would be lost for the ages. Who would sail forth at random to fish for it? And yet it seems that it is found by some ship's anchor often enough to cause considerable expense and trouble. Just how frequently this occurs with the French and English companies is not known, but five breaks from this cause were repaired by the Commercial Cable Company last year.

Be not simply good, be good for something.

The Atlanta Tournament.

The American Telegraphers' Tournament will be held in the ball room of the Kimball House Atlanta, Ga., on March 1. The committee having the matter in charge has already been advised that delegations of telegraphers from Philadelphia, Washington, Baltimore, Birmingham, Augusta and Dallas, Tex., will be present, and inquiries have been received from many other parts of the country indicating widespread interest in the event.

A letter has been received from Andrew Carnegie tendering a Carnegie prize and his hearty co-operation with the telegraphers. The committee has not yet decided in what grade in the contest the Carnegie medal will be placed, awaiting Mr. Carnegie's wishes in the matter. It is probable, however, that the medal will go to the fastest Morse sender in the United States to be held by him until the next annual tournament, thus changing hands annually. Mr. Carnegie's pressing business will prevent his being present on the date of the tournament.

Mr. Thomas A. Edison, the "wizard of the wires," in writing from Orange, N. J., says:

"Although my business interests keep me well employed, I have decided to accept the honor you have conferred on me. I am much gratified to be a member of a committee composed of the honorable gentlemen whose names you mention. Trusting that the tournament will prove a success in every way, and with best wishes to the fraternity, I remain very truly yours,

"Thomas A. Edison."

The following is the programme of the convention:

First Event, 3 P. M. Straight Morse sending—To the fastest and most perfect sender for five minutes, formation of letters and spacing of words being conditions of judgment, championship gold medal and \$35 in cash. Second prize, silver medal and \$15 in cash.

Second event. Message contest—To the fastest sender of messages of not more than ten words for five minutes, messages to be numbered and timed and quality of Morse as conditions of judgment, championship gold medal and \$35 in cash. Second prize, silver medal and \$15 in cash.

Third Event. Special—The Atlanta Constitution gold medal for the most rapid straight Morse sending, to be governed by conditions of first event.

Electric car ride around the city in special cars by courtesy of the street railway company.

First event, 8 P. M. Transmission According to the Philipps Code—To the fastest sender for five minutes of matter by means of the code, letters, grouping of letters and spacing being conditions of judgment, a championship gold medal and \$35 in cash. Second prize, silver medal and \$15 in cash.

Second Event. The Receiving of Messages on Typewriter—To the person receiving the greatest number of not over ten word messages in five

minutes, copy considered, and all messages to be timed, championship gold medal and \$35 in cash. Second prize, silver medal and \$15 in cash.

Third Event. Special—The Atlanta "Journal" gold medal for the "cleanest" copy on a typewriter of five minutes receiving by the Philipps code.

Governor Candler will deliver an address of welcome on behalf of the State and Mayor Mims for the city. The officers of the tournament are as follows:

J. M. Stephens, president; S. A. Duncan, vice-president; H. Van Devender, secretary and treasurer; W. B. Stuart, chairman executive committee; J. E. Scofield, chairman Postal Companies committee; J. H. Smythe, chairman The Associated Press committee; A. V. Curran, chairman private wire committee; O. L. Harrison, chairman committee on railways; B. F. Wyly, Jr., chairman reception and entertainment committee; L. B. Thompson, chief electrician; E. Waldron, chairman committee on programme; T. E. Argo, chairman committee on invitation; W. Broadbent, chairman ways and means committee; P. Holcomb, A. C. Hulse, W. S. Calhoun, R. A. Curran, J. A. Baldwin, timekeepers; Dr. P. E. Murray, C. C. Adams, C. A. Darlton, D. J. Duey, J. S. Scott, judges.

New Postal Office at Newport, R. I.

The new office of the Postal Telegraph-Cable Company at Commercial Wharf and Thames street, Newport, R. I., is a model in every way. Its electrical equipment was completed under the direction of Mr. F. E. d'Humey.

The ceiling and sides of the office are covered with steel, which is painted a delicate shade of green which brightens up the interior of the office. A high wainscoting runs all the way around the room and this is stained in cherry, forming a harmonious, yet striking contrast with the ceiling and sides. The operators' tables are also highly polished cherry, the beauty of which is enhanced by the handsome brass electric light fixtures which are placed at convenient points on standards which rest on the tables. The bright new instruments and modern resonators and audions put the finishing touches to the very neat tables. The convenience of the operator has not been overlooked, for the tables are equipped with sliding sections for use of typewriters, and cleverly contrived lockers are also provided in the tables for the typewriters when not in use. Two of these tables, with accommodations for eight operators, complete this equipment.

The switch-board, which is of the "prison-bar" pattern, and which has twelve wires, is a marvel of neatness and compactness, being built in an iron frame with glass case and in what might be termed skeleton style, all parts of the board being easily accessible from front and side doors. Main wires all cabled to slate terminal heads, which also act as a distributing board, passing from terminal heads to ten ampere fuses to arresters,

thence, to one-half ampere fuses and then to board. All binding posts on terminal heads being numbered in gold figures corresponding with figures on fuses and arresters.

A "bell wire" is also one of the novelties, as well as the most useful of the equipment. Heretofore it was necessary for an operator desiring the New York office to keep up an incessant call until a response was received. By the bell wire all that is necessary to operate it is to ground a wire here and a bell immediately over the head of the wire chief in New York rings and keeps up an incessant ringing until the call of the operator here is answered. This is a new contrivance and only two offices in the New England system are thus equipped.

The district department is quite a feature also, there being two circuits with one hundred and twenty-five boxes. This branch is located near the delivery counter.

This department, Manager G. M. Foote intends to make more effective than ever. No expense has been spared to make the Newport office the gilt-edge office of Superintendent Pillsbury's district.

The winter force is as follows: G. M. Foote, manager; J. F. Sweeny and W. R. Howe, operators; John A. Moore, delivery clerk, while Mr. James Anderson is manager at the branch, 124 Thames street.

The Transpacific Cable.

The actual work of laying the British Government Transpacific Cable connecting Australia with the home country via Canada will be begun toward the end of 1902. The manufacture of the various cables is well in hand. The Telegraph Construction and Maintenance Company, of Greenwich, London, is carrying out the contract. In order to complete the work within the specified time, the company is building a new cable-laying steamer which will be the largest cable-laying vessel afloat. The total length of the cable, including 10 per cent. allowed for "slack," will be about 8,000 nautical miles. The longest span is that from Kelp Bay, on the south coast of Vancouver, to Fanning Island—about 3,561 miles. The shorter sections are from Fanning Island to Suva, Fiji, 2,093 miles; from Fiji to Norfolk Island, 961 miles; from Norfolk Island to a point near Brisbane, Australia, 834 miles, and from Norfolk Island to the northern end of New Zealand, 537 miles.

The time taken by an electrical pulsation to pass through a submarine cable increases with the length of the cable, in proportion to the square of the length. That is to say, as an example, the time not being correct, however, if it takes the signal one second to travel 1,000 miles, it will take four seconds to travel 2,000 miles, nine seconds to travel 3,000 miles, and so on. But the speed also depends on the dimensions of the "core" and its insulation gutta percha, or india rubber. A thicker copper wire and coating

of gutta percha gives a higher speed. The Vancouver to Fanning Island section of the Imperial cable will be "fast," owing to its heavy core, which weighs about 650 pounds of copper and 400 pounds of gutta percha per mile. Such a cable will carry seven or eight paying words a minute, and as it is the longest section, this will be the speed of "through" messages. For the shorter spans of the line smaller cores will suffice. The messages will be received on the "siphon recorder" and "mirror instrument" of Lord Kelvin. The "duplex" system of Dr. A. Muirhead, by which two messages, one from each end, pass through the wire at once, will be employed on the southern sections at least. Although this system nearly doubles the capacity of a cable it is not considered of much advantage for this cable as for others, owing to the fact that there are no business hours in common to Great Britain and Australasia. It is anticipated, however, that there will be a certain amount of telegraphic communication between America and Australasia, over this cable, in which event the adoption of the system will prove very convenient. Dr. Muirhead has recently improved his system by applying a "self-induction shunt," to the receiving instruments, which has the effect of "curbing" the signals, making them easier for the operator to read, and increasing the speed of messages. Lord Kelvin has recommended the utilization of this appliance for dispatching messages, for the same purpose. Two repairing ships will be retained to maintain the cable in working order. There is some fear of earthquakes or landslides breaking the cable in the direction of Fiji.—Scientific American.

Wireless Telegraphy Does Not Pay in the Hawaiian Islands.

The wireless telegraph system which has been in commercial use on the Hawaiian group of islands for the past two years has come to grief. The telegraph operators have had to sue the company for their pay. As the receipts did not meet the expenses the company had to go out of business. It may be added, however, that the failure was not owing to any deficiency in the Marconi wireless telegraph system, but rather mismanagement of the company's affairs. The company was run on a go-as-you-please plan, and the commercial community of Hawaii could only be persuaded to trust its business but once to the Inter-Island Telegraph Company.

A. B. C. of the Telephone costs but \$1 per copy, express charges prepaid. It contains 352 pages, and is profusely illustrated. Address J. B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York.

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LETTERS FROM OUR AGENTS.

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PHILADELPHIA, PA., POSTAL.

The departure of Superintendent Charles C. Adams to assume his new and more responsible position as General Superintendent at Atlanta, Ga., was made the occasion for a testimonial by the branch office managers of this city, who assembled, undeterred by a terrible storm, on the evening of February 21 in Mr. Adams' office, and presented that gentleman with a beautiful group picture, consisting of the photographs of the different managers surrounding that of Superintendent Adams, all oval-shaped, mounted in an artistic manner on a white background and encased in a handsome black frame.

Mr. W. S. Sullivan, who acted as spokesman, made an appropriate presentation speech, to which Mr. Adams responded with much feeling and earnestness.

The following evening, Saturday, a farewell banquet was tendered to Mr. Adams at the Stenton Hotel, by representatives from all over this district. The affair was decidedly unique; one special feature being the menu, which was printed on a "Complaint" form, with the announcement that the addressee was to give the subject his very special attention; the instructions printed on the bottom were so altered as to be appropriate to the occasion.

After coffee and cigars Mr. Adams was presented with a large and beautiful hall clock on behalf of the various officers in the third district. This clock, in addition to the usual automatic lunar announcement dials and strike bell, is also supplied with three sets of beautiful chimes—the Westminster, Whittington and Tubular.

Another surprise to Mr. Adams was the presentation, nicely framed, of the original document of Receiver Farrell, of the old Bankers' and Merchants' Telegraph Company, appointing Mr. Adams superintendent; and also the original announcement of Cashier Glenn to this effect to the various employees of the company.

The committee having the matter in charge were W. S. Sullivan, Philadelphia, manager of the Postal, chairman; Benjamin H. Moore, manager, Baltimore, and George W. Ribble, manager, Washington, D. C.

Among the Postal representatives were the following: George W. Ribble, manager, Washington, D. C.; Benjamin H. Moore, manager, Baltimore, Md.; Clark E. Diehl, manager, Harrisburg, Pa.; H. E. Hesse, manager, Reading, Pa.; T. R.

Ricker, manager, Easton, Pa.; C. W. Phillips, manager, Atlantic City, N. J.; W. S. Sullivan, manager; C. A. Stimpson, chief operator, George W. Dunn, traffic chief, and George G. Glenn, cashier, all of Philadelphia, Pa.; J. W. Dyer and J. J. Donaldson, respectively manager and secretary of the American District Telegraph Company, Philadelphia, Pa., and W. J. Slater, chief operator, Washington, D. C.

Mr. L. Lemon, the successor, was unable to be present on account of being detained in a railroad wreck. He wired his regrets.

In deference to the earnest wishes of his wife, Mr. Milton Connell requested a transfer from night to day duty and was assigned a place on the first Chicago local.

The position of night traffic chief, relinquished by Mr. Connell, was awarded to Elmer E. Locke.

Day Traffic Chief George W. Dunn, enjoyed a few days' visit to his home at Stroudsburg, Pa.

Mr. C. C. Figgs has been appointed manager of the 5th and Market streets branch office, relieving Mr. Richard Sterling, who temporarily fills Mr. Figgs' former position at the 7th and Market streets branch office, prior to his return to the main office.

The Lincoln's birthday holiday brought a number of visitors to this office, among whom we noticed Messrs. Champ Brown and William Connell, former employees here, and Mr. Charles Spindler, of the Parkerville test office.

Working the New York bonus wire nights is proving quite a source of revenue to Mr. J. J. Fournay, the latest appointee to that circuit.

A very desirable position on the floor of the Stock Exchange was secured by Mr. J. J. Beasley.

Mr. Earl W. Miller is now at the Record, nights, vice J. K. Hagan.

A severe accident to his mother caused Samuel F. Higo to make a hurried trip to Reading.

Mr. J. A. McKain has resigned to accept a position in the office of the Phoenix Iron Company, located in this city.

Mr. E. P. Amig, at the Press, nights, has been absent nearly the whole month of February, a very sick young man.

Apropos to the Telegraphers' Tournament at Atlanta, Ga., a number of our receivers have been tested with a view of entering the Receivers' Class. The Messrs. Horace Holtzinger, William J. Furman and George B. Morris have been put on their mettle copying messages which, during the first trial, came to them at the record-breaking pace of 14 in 5 minutes.

Mr. E. A. Goshert, special messenger for the Associated Press from New York city, took occasion to visit us while here.

SAN FRANCISCO, CAL., WESTERN UNION.

Another new wire has been completed to Chicago via Los Angeles, Denver and Omaha, making five direct duplexes to Chicago and New York, which are all taxed to their full capacity at times.

The installation of a plant of eighteen Crocker-

Wheeler dynamos marks a new era in the history of the San Francisco office. The addition of several new quadruplex and duplex sets, as well as a number of sextet single wire tables, practically doubles the capacity of the office for handling business. The great increase in business since the Alaska gold discoveries and the acquisition of the Philippine's has necessitated the addition of several direct wires to Chicago.

Assistant Superintendent McKisick has been on an extended business trip in southern California and Arizona.

Chief Operator Hatch of Los Angeles, made this office a short call several days since, when it was noticed that there were then present in the office six former chief operators of the Sacramento office, viz.: Messrs. Baldwin, Jones, Egan, McKisick, Hatch, and McCormack.

Night Chief Gillette's wife and daughter are visiting relatives in Michigan.

Mr. C. H. Finley, assistant chief operator of the Chicago office, lately spent a few days in this city, having come west to accompany his wife home. Mrs. Finley came to California several months ago for her health and visited her brother, Mr. E. Summerel of this office.

Hugh Holmes of this office surprised the force recently by becoming a Benedict, Miss Mattie Benton, sister of Miss Ethel Benton, of the Wheatstone, being the bride.

Base ball is all the rage now, and to judge from the number of game fingers, some of the would-be professionals have been playing with "buzz-saws."

Mrs. Jennie Hall has the sympathy of the members of this office in the death of her father, aged 76 years.

Rose G. Hall, formerly manager of the Carson City, Nev., office, a sister of Mrs. Jennie Hall of this office, was married February 6 to W. W. Thomas, weather bureau operator at Point Reyes, California.

William Hearst, who has been on the sick list for the past month, has recovered and is able to be at his post again.

W. L. Otte has returned from an extended pleasure trip to Santa Barbara and southern California, where he has been visiting relatives.

Departures: Messrs. McKay, Pedley and Bibb.

BOSTON, MASS.

Typewriters for sale, to rent and repaired. Remington, Smith, Densmore and all makes sold or rented on easy monthly terms to telegraphers. Send for samples, catalogues and full information to E. M. Bennett, Manager, The Typewriter Exchange, 38 Bromfield Street, Boston, Mass.

WESTERN UNION.

Appointments: E. Glidden, vice L. A. Flynn; E. C. Austin, vice Harry Tate; J. F. Nihen, vice Mr. Perks.

Arrivals: W. S. Chapman, N. S. Muscal, from the Postal Telegraph-Cable Co., this city.

There was a merry gathering of some of the older operators of the night force of the main office February 8, it being the fiftieth birthday anniversary of Mr. P. H. Flaherty. The meeting, which was held at Grand Army headquarters, was called to order at 1 A. M. by Mr. Charles A. Norton, who acted as presiding officer and who in a few well chosen words presented Mr. Flaherty with a handsome gold-mounted, hand-painted loving cup, as a mark of esteem in which he was held by his brother workmen. Mr. Flaherty feelingly responded and related some interesting experiences happening during his thirty-five years in the telegraph business. Mr. Flaherty for the past eighteen years has been connected with the "Herald" telegraph force, and during the yachting season had charge of their important telegraph business. He is personally acquainted with many yacht owners, both in this country and abroad. The meeting broke up at 5 A. M. with all the boys singing "For he is a good jolly good fellow."

PHILADELPHIA, PA., WESTERN UNION.

H. W. Sharp, of the "Evening Telegraph" office, is the proud and happy father of a son.

H. H. Pressler, a late arrival from Cebu, P. I., has resigned to accept a more lucrative position with the Pennsylvania Railroad Company at Harrisburg, Pa.

H. V. Emanuel, of this office, who holds the championship medal for fast receiving, is again striving for fresh honors in the tournament at Atlanta, Ga. Odds of 3, 4 and 5 to 1 were freely offered (with no takers) that he would win. D. A. Mahoney accompanied Mr. Emanuel and will chaperone the Philadelphia contingent.

D. J. Deasey, a well-known Baltimore Central Railroad operator, is located at Matachin, South America, for the Panama Railroad Company.

F. M. Summer, formerly of Chambersburg, Pa., is now pleasantly located as night chief for the Baltimore and Ohio Railroad at Pittsburg, Pa.

BALTIMORE, MD., WESTERN UNION.

The third annual meeting of the Telegraphers' Mutual Saving and Purchasing Association of Baltimore City was held on February 17. A dividend of fifteen per cent. for the past six months was declared. All of the old officers were re-elected as follows: S. T. Shutt, president; William Taylor, vice-president; F. F. Basye, secretary, and J. C. Hawkins, treasurer. Executive committee: The president, vice-president, secretary and Messrs. A. Grape, H. G. Montgomery, J. C. Wagner, and G. J. Rhein.

Departure: J. M. Bullinger to the American District Telegraph Company.

Arrival: L. J. Lapsley, a Baltimorian, but lately employed in Pittsburg.

ST. LOUIS, MO., WESTERN UNION.

C. W. Groos, chief of the New York division, is now at Hot Springs, Ark., where he is acting manager vice Colonel D. S. Ryan, who is ill with pneumonia but who is now reported convalescent.

On February 15 as Frank Spencer, son of Chief Operator W. H. Spencer, was coming to the office he had his left leg broken by being thrown from a moving car.

NEW ORLEANS, LA.

The carnival is attracting many visitors to this city. Among telegraph people present may be mentioned Mr. G. W. Gustafson and his bride, nee Miss Nora Burke, both of the Memphis, Tenn., office force; A. V. Curran, of Atlanta, Ga.; A. V. Ratcliff, agent, Leland, Miss.; Miss Gussie Olsen, of the Postal, Lake Charles, and Mrs. M. F. Wagner, of Meridian, Miss.

Mrs. Clarke, wife of Captain George B. Clarke of Virginia, sister of Mrs. Pillow, accompanied by her son, Jesse C. Clarke, of Gainesville, Fla.; Mrs. John B. Lubbock, Jr., and daughter, of Houston, Texas; Mr. and Mrs. R. L. McKibbin, of San Antonio, Texas, and Mrs. A. G. Lobdell, Jr., and daughter, of Beaumont, Texas, are guests of Mr. and Mrs. W. A. Pillow. Mrs. Lubbock is the daughter of Mr. B. S. Pillow, Postal Telegraph-Cable Company, Austin, Texas. Mesdames McKibbin and Lobdell are Mr. W. A. Pillow's daughters.

T. P. Cummings, Jackson, Miss.; Thomas Compton, Nashville, Tenn.; A. F. Potter, Hattisburg, Miss.; Miss Lulu Madison, Ocean Springs, and J. Simmon, Kenner, La., are also in town.

CHICAGO, ILL.

Typewriters bought, sold, rented and repaired. Renting a specialty. Also Agency for "Telegraph Age." Telegraphers' Typewriter Co., Room 5, 122 La Salle St., Chicago, Ill. Be sure to mention TELEGRAPH AGE.

WANTED, A FIRST CLASS OPERATOR. Typewriters make numerous first class operators that are always in demand. To be first class requires both quantity and quality of work; can't keep up the quality with dirty, blurred type, nor the quantity if you spend 15 minutes daily, cleaning type. Get one of our brushes that cleans your type while you work. Postpaid, 50 cents each. Eacutt & Cawthorn, 2704 N. Lincoln St., Chicago, Ills.

KANSAS CITY, WESTERN UNION.

The Kansas City Telegraphers' Mutual Aid Association has been duly organized with officers as follows: S. W. Atkinson, president; C. F. Beeson, vice-president; L. M. Dunlap, secretary; George Long, treasurer. The society starts out with a charter membership in excess of one hundred, and has for its purpose the rendering of a little pecuniary aid in cases of sickness or death of its members.

Mr. and Mrs. John Dowd have the profound sympathy of the entire force in the loss of their baby boy.

Mr. Isidore L. Printz, of this office, and Miss Edith Fritz, manager of the branch office in the New York Life Building, were recently married.

Mr. Paul A. Juvet, also of this office, and Miss Lillian Laux, of Guthrie, Oklahoma Territory, were married February 1.

The homes of Mr. and Mrs. Charles Beery, and Mr. and Mrs. H. M. Swartz, have each been made brighter by the arrival of daughters.

A new section has been added to our switch board, the same being necessary to accommodate several new wires that have lately come to our office. It is now of 300 wire capacity.

Messrs. Hildebrand and Vestal have been assigned to the New York day local, and Spencer at night. It is needless to say the business is well handled.

Mr. W. E. Allen has returned from a month's visit at home.

Mr. John J. Shelley, who began as a check boy in this office some twelve years ago, and who, by his ability and close application to business has gradually worked up to the position of assistant quad chief, was married on February 11 to Miss Mary E. McCaffrey. The couple were the recipients of many useful presents and sincere congratulations from their hosts of friends.

Mr. E. A. Depue, and sister, Miss Alice M. Depue, have accepted positions with brokers.

Messrs. W. B. Goshorn and A. L. Stock left for Chicago, where they have engaged with the same company.

MONTREAL, QUE., CANADIAN PACIFIC.

Friday, January 21, was the occasion of an enjoyable sleigh ride participated in by a large number of the ladies and gentlemen from both this and the Great North Western office. The route taken was around the two mountains and back to Westmount, where the party halted at the house of Night Chief W. Atchison. Songs and instrumental music were the order until supper was announced, after which dancing was indulged in to the wee sma' hours.

The Telegraphers' Hockey team played a game recently with the Rubber Company's team, resulting in two goals to nothing in favor of the Telegraphers. John Morrissey the trainer and manager of the latter team received congratulations for the efficient manner in which his team was able to handle their sticks and score on strange grounds.

Catarrh Cannot be Cured.

with LOCAL APPLICATIONS, as they cannot reach the seat of the disease. Catarrh is a blood or constitutional disease, and in order to cure it you must take internal remedies. Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces. Hall's Catarrh Cure is not a quack medicine. It was prescribed by one of the best physicians in this country for years, and is a regular prescription. It is composed of the best tonics known, combined with the best blood purifiers, acting directly on the mucous surfaces. The perfect combination of the two ingredients is what produces such wonderful results in curing Catarrh. Send for testimonials, free.

F. J. CHENEY & CO., Props., Toledo, O.
Sold by druggists, price 75c.
Hall's Family Pills are the best.

Mr. W. Currie received by mail on February 7 a large cocoanut weighing about three pounds sent by Mr. David Duff, formerly of this office, and who is at present at Palm Beach, Fla.

MONTREAL, QUE., GREAT NORTH WESTERN.

Walter Graham, chief operator and wire chief, installed duplex sets in our office in the House of Commons, Ottawa, for the betterment of the service, during the session. This will greatly facilitate the handling of the enormous quantity of press matter.

Miss Malvina St. Pierre, who has been seriously ill, was a recent visitor. She will probably be able to resume work about March 1st.

The birthday of Thomas Rodgar, circuit manager, occurred on February 14 and the occasion was observed by the force presenting him with a handsome gold watch and chain. The presentation was accompanied by an illuminated address, with the names of his staff inscribed thereon.



THOMAS RODGAR.

Mr. Rodgar is held in high esteem for his many excellent qualities of mind and heart, and is an exceedingly popular official. His entire telegraph career has been confined to this single office, in which he entered as a check boy in 1874. It was then under the control of the Montreal and Dominion Telegraph Company, since absorbed by the Great North Western. His promotions were rapid. In 1884 he became night chief, wire chief in 1886, and in 1887 succeeded Mr. McFee as circuit manager and wire chief.

Operator W. J. Daley spent a pleasant vacation at his home in Brockville.

Miss Agnes Brunet has returned from a month's vacation.

Miss Mabel Palmer is away on her annual vacation.

Miss M. L. De Bellefeuille was in Quebec and took part in the Grand Winter Carnival.

We regret to chronicle the death of Mrs. Cornelius Murphy, wife of Repairer C. Murphy.

Frank Hall lately spent a few days vacation in Cornwall, Ont.

Owen O'Neill, an old telegrapher, died at his home in Lachine. He started here in 1883.

QUEBEC, QUE., GREAT NORTH WESTERN.

George Alexander has returned from a trip to the Saguenay and Chicoutimi.

Business is very brisk at the Parliament House office. Nearly all the Montreal newspapers, both French and English, use our wires.

WASHINGTON, D. C., WESTERN UNION.

Mrs. Norris R. Young, wife of our night press chief, died in this city on December 27. Her remains were taken to Lexington, Ky., for burial. Mr. Young has the sympathy of his many friends in his sad bereavement.

Mrs. James E. Hayes died in this city on January 29. A number of operators from this office attended the funeral.

Mr. Henry Virts, Manager Marean's stenographer, was married to Miss Florence Somerville on January 29. Office friends presented them with a handsome clock.

Miss Rose Callan, of the Commercial News Department, lately visited friends in Baltimore.

Mr. L. R. Hereford has accepted a position as operator in the general offices of the Seaboard Air Line Railroad at Portsmouth, Va.

NEW YORK CITY.

"My Old Virginia Home Upon the Farm," one of the sweetest songs published; "God's Will Not Ours be Done," (McKinley's last words) strong descriptive song with martial music; "Left on the Battlefield;" "Down Where the Cotton Blossoms Grow;" "I'll be With You When the Roses Bloom Again;" "Any Old Place I Can Hang My Hat is Home Sweet Home to Me;" "Heirloom Waltzes;" Zenda Waltzes;" "Utopian Waltzes;" "Metropolitan March and Two Step;" 18 cents each. If you want any other sheet music write to me about it. I can save you money. PIANOS SOLD ONE DOLLAR PER WEEK. Address, B. L. Brannan, 195 Broadway, New York.

WESTERN UNION.

Mr. C. F. Patterson, general superintendent of the American District Telegraph Company, Chicago, and Mr. Addison C. Thomas, superintendent of The Associated Press, Chicago, were recent visitors.

During the late sleet storm miles of poles and wires were down between New York and Philadelphia. Many messages were sent via Chicago for points in New Jersey and Pennsylvania.

Resigned: J. S. Patterson, R. I. Courtenay, J. E. Welch, J. F. McGillivray and J. A. Talton. New appointment: W. W. Wright.

W. M. Cooke has resumed duty on the Syracuse wire, and old timer John Rathbone has taken charge of the Savannah wire.

Mr. Charles L. Chase, chief operator of the Commercial News department has returned to the office after a week's vacation, during which he was married to Miss G. E. Conner, of Philadelphia.

POSTAL.

The recent severe storms swept everything before it, even almost obliterating your correspondent's notes, but he hopes to recover in time to be in good shape for the next issue.

Most all of the force showed up in good shape every day. Messrs. C. P. West and G. O. Heath have returned to duty after severe illness.

Mr. Bert Roloson received an appointment in the United States Service in the telegraph department at Governor's Island, and reported there for duty four weeks ago. He was a recent visitor to this office.

This company with its customary enterprise established a branch office at the foot of West Thirty-fourth street, where the German Imperial yacht Hohenzollern is docked, for the accommodation of Prince Henry, and his party. A branch office was also established on Shooters Island, to handle the press matter growing out of the launching of the Meteor, the Emperor's new yacht, which took place on Feb. 25.

DENVER, COLO., WESTERN UNION.

Ray Gould was appointed manager of Leadville, Colo., office, vice C. P. Melton, deceased, appointment effective February 1. Mr. Gould is very popular with the fraternity and will make a good manager.

Mr. A. M. Fisher, formerly manager at Salt Lake City, Utah, has been appointed traveling auditor for the company out of Denver. Mr. Fisher's numerous friends congratulate him on his promotion.

INTERNATIONAL MUNICIPAL ELECTRICIANS—The executive committee of the International Association of the Municipal Electricians met at Corning, N. Y., on February 22, and transacted routine business.

The committee met in New York on February 24, where much additional business was transacted, and examinations of fire alarm and police telegraph apparatus were made.

Among the members present were: F. P. Foster of Corning, N. Y.; W. Y. Ellett of Elmira, N. Y.; W. H. Thompson of Richmond, Va.; J. Murphy of Cleveland, Ohio; C. E. Michaels of Peoria, Ill.; A. S. Hatch of Detroit, Mich., the president of the association; Frank C. Mason of Brooklyn, N. Y.; Adam Bosch of Newark, N. J.; M. G. Canfield of Grand Rapids, Mich.; J. P. Barrett of Chicago; M. M. Petty of Rutherford, N. J., and W. W. Mead of Pittsburg, Pa.

Subscribe for TELEGRAPH AGE, \$1.50 a year.



THE OPERATOR AND HIS VALENTINE.

Profits in Raising Trees.

It has been estimated that the telegraph lines of the country require nearly 600,000 new poles every year. The cost of these is more than \$1,000,000.

It is also estimated that there are more than 620,000,000 cross-ties in use by the railroads and that 90,000,000 ties are required every year for renewals.

The telephone and light companies use nearly as many poles as the telegraph companies, and the street car systems of the cities use nearly as many cross-ties as the steam railroads.

To awaken the farmers of the West to the need of raising plantations of wood to supply these needs of telegraph, telephone and railroad companies, the forestry division of the Agricultural Department has issued a bulletin to show that such work is profitable.

The prices of pole and tie timber have gone up nearly 50 per cent. in the last ten years. J. Hope Sutor of the Ohio and Little Kanawha Railroad, an expert on the tie question, told the Central Association of Railroad Officers in Louisville a year ago that in ten years more the prices of ties would be 50 per cent. greater than at present. He also said:

"No material has yet been found as a substitute for the wooden tie, and no satisfactory economical method of preserving the life of the wood or prolonging its durability has yet been discovered; and, excepting the minor questions of properly seasoning and piling, the use of the tie plate, suitable ballast and perfect drainage, and incidentally climatic conditions, no serious consideration of the future tie supply has yet been had."

It is for this reason the experts say:

"From every reasonable point of view it appears that great profits are to be made in the

growing of forest trees in the next twenty-five years."

It is declared that operations should begin in the middle West. There has already been a great deal of tree planting on the treeless prairies of the central West, especially in Kansas and Nebraska. The forestry experts have found one plantation near Hutchinson, Kan., planted with catalpa trees, which in ten years has produced a net value of \$197.55 to the acre.

In Iowa, near Menlo, a twenty-five-year-old plantation of red cedar showed a net value of \$200.54 to the acre. Osage orange, locust and hardy catalpa are the best trees to grow for these commercial purposes.

Recent New York Visitors.

Mr. W. Y. Ellett, superintendent of fire alarm telegraph, Elmira, N. Y. Mr. Ellett was the guest of Postal Telegraph-Cable Company officials.

Mr. E. B. Baker, general manager of the Southern New England Telephone Company, New Haven, Conn.

Mr. W. J. Lloyd, assistant superintendent of the Western Union Telegraph Company, Chicago, Ill.

Mr. A. Stevens, superintendent of construction, Baltimore and Ohio Railroad Company, Baltimore, Md. He was the guest of Mr. W. L. Dryden of the same company in this city.

It is one of the most cheering facts of our day that under present conditions the wages of labor tend to rise, and the price of the necessaries of life tend to fall. There never was a nation so splendidly situated as ours is at this moment in

regard to labor. Those who are so fortunate as to be married know how much depends upon a wife who can manage their household affairs and themselves also, and those who are not yet married will find that out. There is nothing that success and happiness of a workingman so much depends upon, next to his own good conduct, as a good managing wife.—Andrew Carnegie.

Concentration is the confidence we place in our judgment—letting it go—trusting it.

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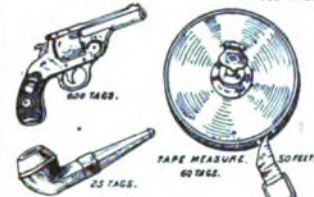


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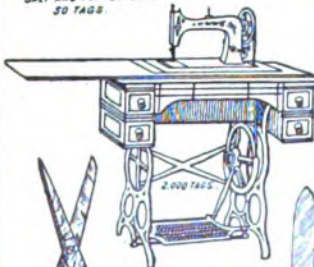


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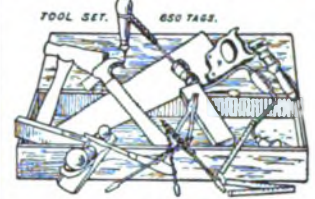
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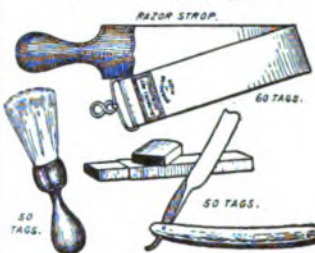
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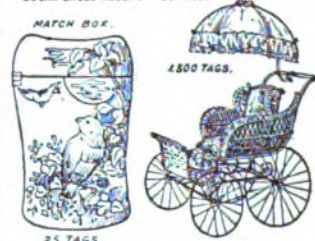


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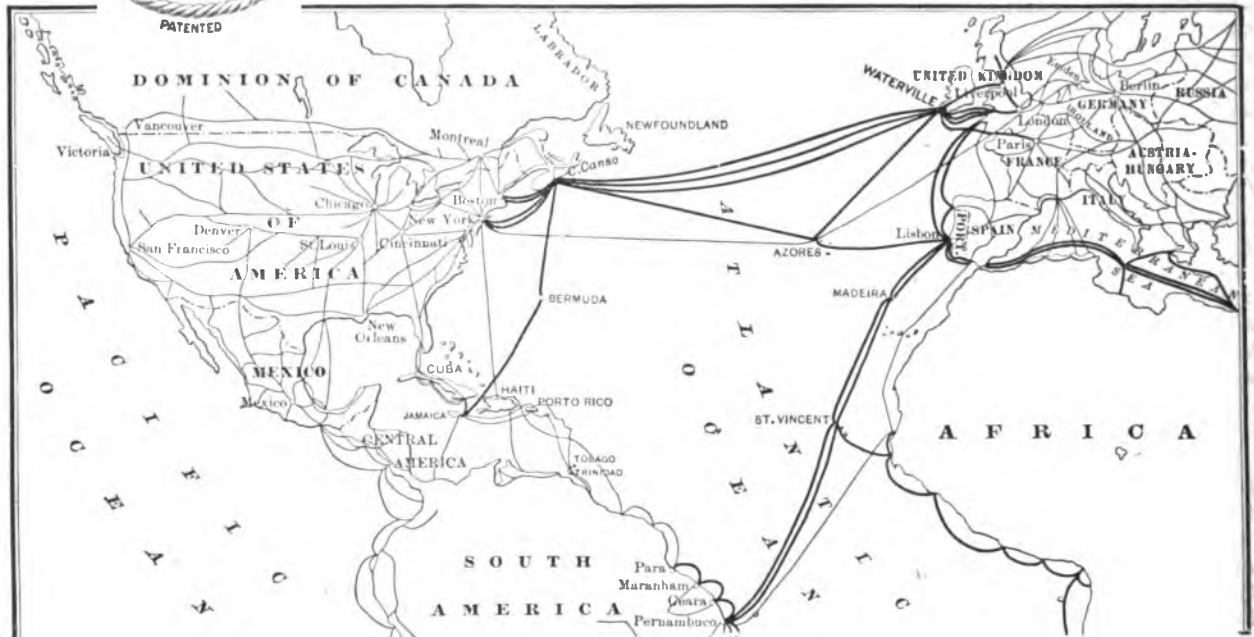
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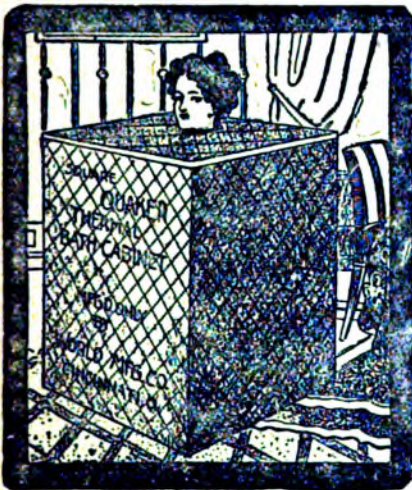
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with one bath, and for breaking up symptoms of lagrippe, fevers, pneumonia, congestion, etc., it is invaluable—really a household necessity. Gives the most

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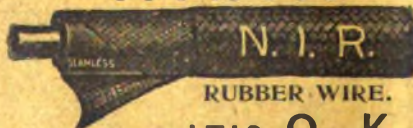


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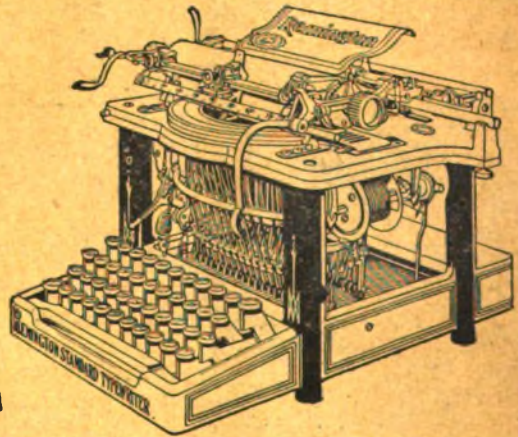
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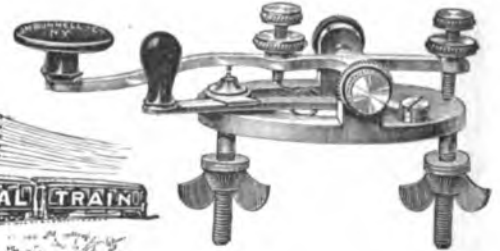
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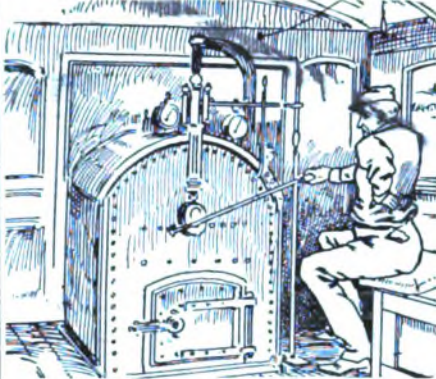
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THE TELEGRAPH AGE

No. 6.

NEW YORK, MARCH 16, 1902.

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other telegraph matters, which have appeared in this journal during the past three years under the caption of "Some Points on Electricity," will be published, and the book substituted for "Pocket Editions of Diagrams," by Willis H. Jones. Those desiring a copy of the new book should send in their names at once.—Editor.]

DOUBLE LOOP REPEATER.

A problem which confronted chief operators until a few years ago was to devise a means by which two duplexes, or grounded loops, could both be connected to one multiplex apparatus in such a manner that any office on either loop could control the transmitting apparatus of the multiplex at the main office, and at the same time be able to hear each other break, should it be necessary for another office to temporarily use the circuit. The device consists of three transmitters, one repeating, and one ordinary sounder. The transmitters control the sending legs of the loops, while the repeating sounder performs a like service for the receiving side. At the loop-switch are two springjacks, one for each of the branch loops, and a two-wire conductor, extended from the repeater and ending in a flexible cord and wedge.

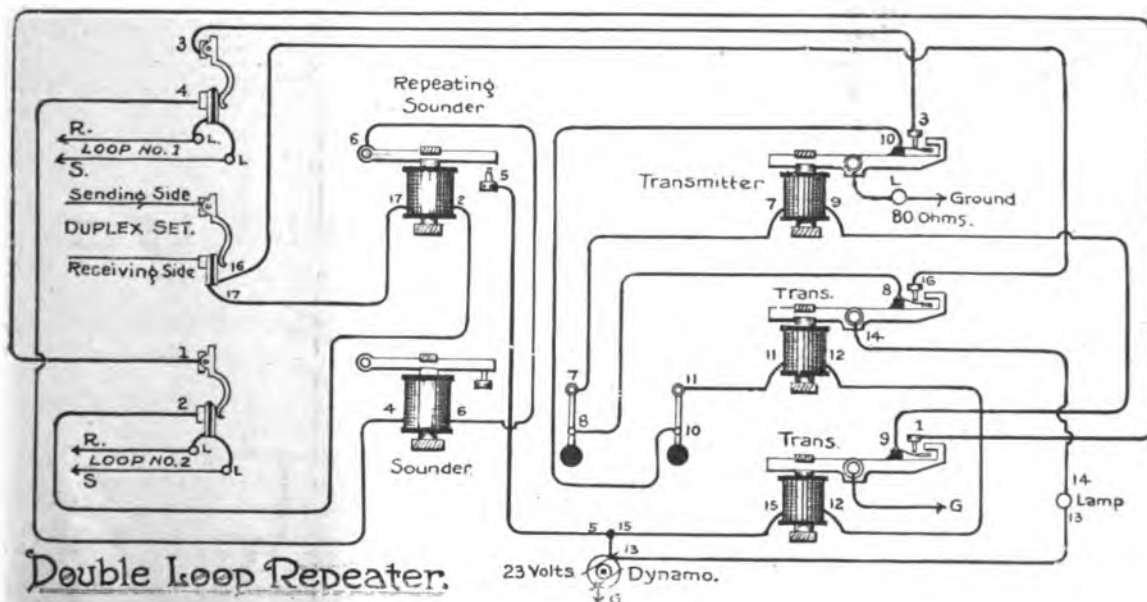
When this wedge is inserted in the springjack designated for any particular multiplex set, the two loops are practically made one. The receiving apparatus of the repeater consists of the repeating and the ordinary sounder. As there is no "breaking" on the receiving conductor of a

SOME POINTS ON ELECTRICITY.

The Equipment of a Modern Telegraph Office. (Continued.)

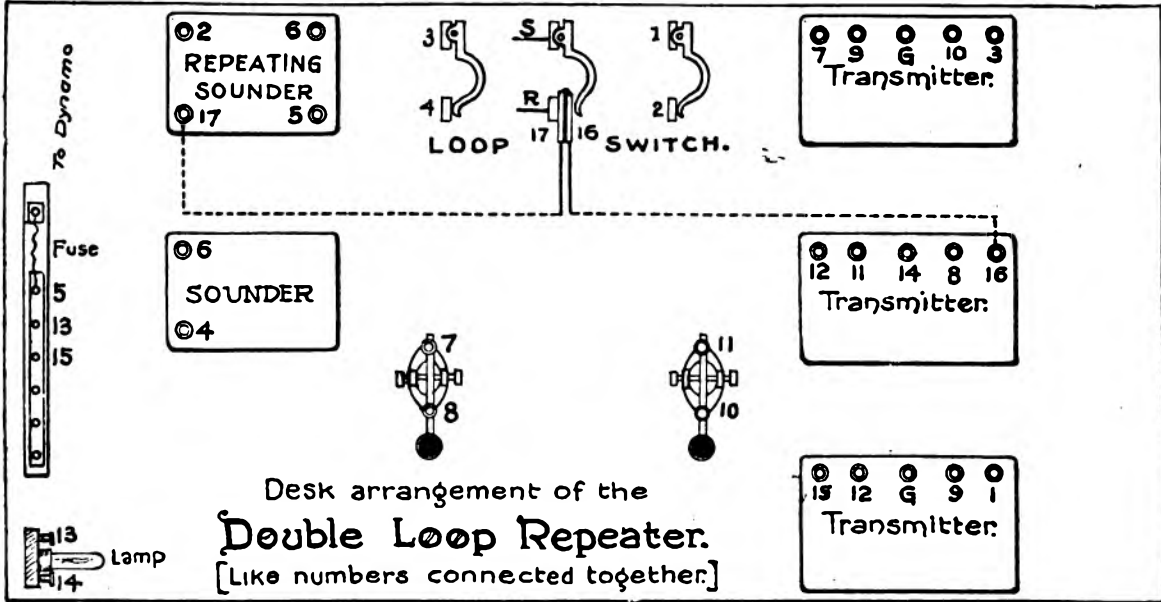
BY WILLIS H. JONES.

[In a few weeks hence this series, together with the most valuable of the articles appertaining to the duplex, the quadruplex, storage battery and



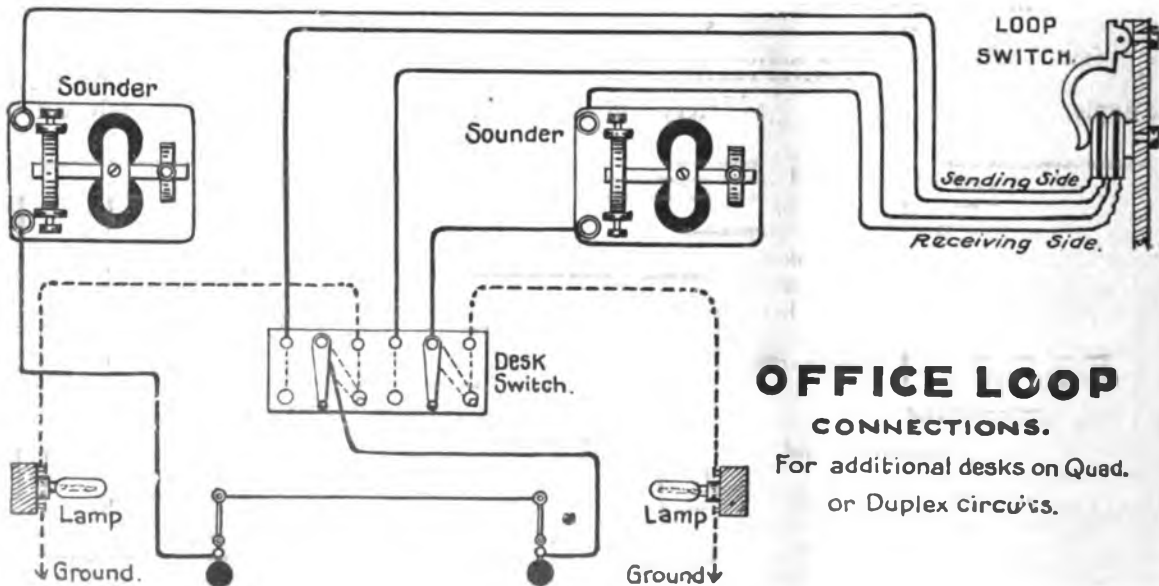
loop, the arrangement is very simple. The repeating sounder is connected in series with the coil of the receiving apparatus of the multiplex set, which is controlled by the loop in the left-hand springjack. The receiving leg of the loop in the other springjack runs through the contact

battery which controls the latter is kept intact through an extra path to the earth via the upper contact point of another transmitter, the opening of which tends to interfere with the former. An inspection of the theoretical diagram of this repeater will make this point clear.



points of the repeating sounder, which thus repeats the signals to its companion. The arrangement of the sending apparatus is more complicated, as the same rule holds good with this as with

It will be seen that the local battery of the multiplex only feeds one of the loops, hence it is necessary to employ an additional battery for the second loop, as shown in the diagram. The



single-line repeaters—the sending circuit must be maintained intact in the repeating apparatus. The principle employed, however, is practically the same.

To prevent the contact points of a certain transmitter from opening, the circuit of the local

employment of lamps, or resistance coils, as compensating resistance is necessary, in order to equalize the lengths of the shunt and the loop conductors.

This type of repeater should only be used where the resistance of all loops are approxi-

mately equal. Where such is the case the repeater is ready for instant operation the moment two loops are inserted in the respective spring-jacks, and it seldom requires the attention of an attendant to readjust it. To set up this repeater arrange the apparatus on the desk as shown in the diagram and connect together by wire each pair of binding posts bearing like numbers.

OFFICE LOOP CONNECTIONS.

In large telegraph offices it is customary to locate many of the duplex and quadruplex sets, upon which broker loops work regularly, in a department or section of the room by itself, where they receive the special attention of a detailed attendant. In order, however, to economize in space and concentrate the work as much as possible, each corner of every quartet table contains all the apparatus for a complete multiplex circuit. For this reason it is impossible to use these circuits for commercial business after the brokers' close for the day without a means of extending the apparatus to the operating department where it may be spread out and given full desk room for the accommodation of the operators.

In order to accomplish this a device called an office loop is employed. It consists of two four-ohm sounders, two keys, two resistance lamps, one double three-point switch, and, of course, the necessary wire for making the connections. The sending and receiving sounders each occupy their usual space and position on the table, which latter may be a spare one, or they may be placed on one side of a quadruplex table in the operating department which is not used much.

By referring to the third illustration it will be seen that when, say, the left hand lever of the switch is turned to the left, the sounder in the sending side circuit is in a little loop by itself, the two conductors of which end in a flexible cord and an insulated wedge at the loopswitch to which point the connections are extended.

If now this wedge be inserted in the spring-jack of a multiplex set at the loopswitch in such a manner that it lies between the upper lip of the jack and the outer face of the broker loop wedge, as shown in the cut, the said sounder is merely placed in series with the broker loop, as a relay becomes part of the main line circuit when a desk is cut in at the switchboard. There being no lamp resistance in the sounder circuit when the lever is in the present position, the addition of 4 or 5 ohms resistance to the broker circuit is hardly perceptible.

However, should we desire to cut off the broker loop and use the office loop alone, the lever must be turned to the right. This opens the return leg of the double conductor in the three-point switch, but connects the companion leg with a "ground" beyond the 100-ohm resistance lamp, which circuit then occupies the position of the broker loop thus detached. The action of the right hand lever, of course, controls the receiving sounder circuit in identically the same manner.

(To be continued.)

Business Notices.

The Standard Underground Cable Company announces the removal of its Boston, Mass., office to larger quarters at 101 Milk street. This is made necessary by increasing business.

We have had placed before us the thirteenth annual revised catalogue of W. R. Ostrander & Company, 22 Dey street, New York. Our readers who contemplate purchasing speaking tubes, electrical bells and batteries, electric-light material, telephone and telegraph instruments, and general electrical supplies, should send for a copy of this very complete book of 300 pages. The work gives all details of the goods mentioned, showing many of them very clearly in illustration.

Recent Telegraph Patent.

A patent for a multiplex telegraph system, No. 693,530, has been granted to Laurence A. McCarthy, of Brooklyn, N. Y. The circuit has a main and an artificial line, a controlling instrument, the coils of which are inserted in the main and artificial lines, a local circuit, and magnets in the local circuit, with a rheostat having an automatically rotated brush-arm, the rheostat forming the artificial line.

Appointments and Resignations.

Mr. H. W. P. Swisher, formerly manager of the telegraph department of the Standard Oil Co., 26 Broadway, New York City, has accepted a position as confidential clerk to Mr. W. W. Splane, superintendent of telegraph for the same company located at Oil City, Pa. As a testimonial of the high esteem in which Mr. Swisher was held, the force presented him with a handsome scarf-pin before leaving for Oil City.

Mr. Sidney H. Flagler has been appointed manager in Mr. Swisher's place, Mr. Fred. W. Gottschalk filling the vacancy created by Mr. Flagler's promotion.

Obituary.

James J. Fagan, a telegraph operator of Pittsburg, Pa., died of pneumonia, March 2d.

William P. Harner, operator for Swift & Co., East St. Louis, Ill., died suddenly on February 25, having been stricken with paralysis while at work.

B. F. Ramsay, aged 30 years, manager of the Western Union Telegraph Company, at Tipton, Ind., died February 19th in New Mexico, where he had gone for the benefit of his health.

Mrs. E. H. Mason, the mother of Frank C. Mason, superintendent of police telegraph of the Borough of Brooklyn, New York City, died at New Hartford, N. Y., March 1. She was 72 years of age.

Whatever is worth doing at all, is worth doing well.—Chesterfield.

Personal Mention.

Mr. Thomas A. Edison, the well-known inventor and operator, is enjoying a vacation in Florida.

Mr. C. Bradbury, late of Northampton, England, has been appointed assistant superintendent of government telegraph at Sandakan, British North Borneo. Mr. R. Scott-Atkinson is the superintendent.

Mr. George G. Ward, vice-president and general manager, accompanied by Charles Cuttress, electrical engineer of the Commercial-Cable Company, New York, left for San Francisco, on March 11th, to be absent about a month.

Mr. John Markle, president of the Sprague Electric Company, New York, and Lieut. Frank J. Sprague, technical director of the same concern, were included in the "Captains of Industry" who gave the magnificent luncheon in honor of Prince Henry at Sherry's on February 26th.

Mr. Emory Cobb, of Kankakee, Ill., a forty-niner of the telegraph, and in the early fifties superintendent of telegraph at Chicago, Ill., called on the Western Union officials in New York a few days ago. Mr. Charles A. Tinker, general superintendent of the Western Union Telegraph Company in New York, was an operator under Mr. Cobb in Chicago in 1857.

Mr. C. H. Gaunt, who has been connected with the telegraph department of the Northern Pacific Railway in St. Paul for fifteen years, and for the last few years filling the position of assistant superintendent of telegraph, has resigned to become superintendent of telegraph of the Santa Fe system with headquarters at Topeka, Kan. Mr. Gaunt assumed the duties of his new position on March 1, succeeding C. G. Sholes, who has resigned.

General Mention.

J. C. Carmody, manager of the Postal Telegraph-Cable Company, Fitchburg, Mass., is at his office again after a long and severe illness.

James P. Finan, train dispatcher on the Great Northern Railway at West Superior, Wis., has just returned from a trip to southern California, where he had taken his wife for the benefit of her health.

Messrs. Fred. Catlin and Horace G. Martin have associated themselves with Mr. Walter P. Phillips in the work of introducing the scheme of accelerated Morse hand key sending, known as the Phillips System of Telegraphy.

Wireless telegraphy suddenly sprang into use between New York, Philadelphia, Baltimore and other places, at the end of February, when the wires went down during a heavy sleet storm. The system was worked for all there was in it via the United States mail and special messenger.

In remitting to cover his subscription to this journal for another year, Mr. S. A. Duncan, assistant general superintendent of the Postal Telegraph-Cable Co., Atlanta, Ga., writes: "I hope each year may add to its prosperity and usefulness."

Mr. W. L. McLellan, a well-known telegrapher, for the past few years manager of McIntyre and Marshall, bankers and brokers, at the Waldorf-Astoria Hotel, New York, is representing this concern at Palm Beach, Florida, during the present season.

A plant of thirteen dynamotors has been installed in the Western Union Telegraph office at Milwaukee, Wis., by Mr. J. C. Barclay, electrical engineer of the Western Union Telegraph Company, Chicago, Ill. Over 6,000 cells of gravity batteries have been displaced by this modern equipment.

In remitting to cover his subscription to TELEGRAPH AGE for another year, Mr. W. S. Cunningham, manager of the Postal Telegraph-Cable Company, Greenwood, Miss., writes: "TELEGRAPH AGE continues to improve, and if a man is interested in his profession he cannot afford to be without this valuable journal."

Both the Delaware, Lackawanna and Western Railroad Company and the Reading Railroad Company have within the past two weeks announced that beginning with March 1 pensions will be allowed to all employees who have been in the service of these roads for thirty-five years or more. The employees are not called upon to contribute to the pension fund.

Recent New York Visitors.

Mr. Leo Miller, Postal Telegraph-Cable Company, Philadelphia, Pa.

Mr. W. W. Splane, superintendent of telegraph, Standard Oil Company, Oil City, Pa.

Mr. W. C. Swain, chief operator of the Postal Telegraph-Cable Company, San Francisco, Cal.

Mr. Charles Selden, superintendent of telegraph of the Baltimore and Ohio Railroad Company, Baltimore, Md.

The board of directors of the Albany, N. Y., Academy Alumni Association has appointed a committee to report at the annual meeting in April plans for securing \$30,000 with which to erect a Joseph Henry memorial building. Professor Henry invented the electro-magnet which made telegraphy and the other electrical arts possible.

It is suggested that a pension will not be needed for telegraph operators if the telegraph companies will establish a few more bonus wires. When an operator begins to feel his age, it will then only be necessary to assign him to work one of these circuits and the grave will do the rest.

The Commercial Cable Company's Annual Meeting.

The annual meeting of the Commercial Cable Company was held in New York on March 3. The general situation was discussed, and Chairman G. G. Ward, touching upon the Marconi system of wireless telegraphy, said:

The shareholders of the company will no doubt expect some expression of opinion from the officials of the company in respect to wireless telegraphy. While we do not intend to belittle the credit due to Mr. Marconi for the advancement he has made in that field, we have every confidence in the ability of submarine cables to maintain their commercial supremacy in competition with wireless telegraphy, even should it ever extend beyond its present experimental stage as regards transatlantic or other long-distance transmissions.

"Our shareholders must not overlook the fact that it has taken the Commercial Cable and its land line system (Postal Company) some seventeen or eighteen years to perfect their organization for the distribution and collection of telegrams throughout the United States and the rest of the world. Assuming that the Marconi system should become perfected so that it could really compete in a commercial sense, and commercial requirements are very exacting, it is fair to say that it would take as many years to put the Marconi system in a position as would enable it to serve the public.

"Messages are now transmitted across the Atlantic and answers received in two and three minutes. A message experiencing a delay of ten or fifteen minutes means the defeat of the object of the sender. A most important point is the fact that 95 per cent. of the Atlantic messages are expressed in code or cipher language, the words or ciphers having no connected meaning. The words or cipher groups frequently only differ from each other in single letters, yet they have widely different meanings, and an error in the transmission of one of their letters might have disastrous consequences. These are some of the commercial exactions or demands made upon the telegraphs.

"No one has yet even pretended that the speed with which messages may be transmitted by wireless apparatus even approaches the speed of the aerial or submarine wire, and among submarine wires those of the Commercial Cable Company stand pre-eminent, not only for speed, but for accuracy and reliability of communication."

The annual report of the company, which was for the year ended Dec. 31, shows gross earnings of \$3,371,063, an increase of \$74,913 over last year, and its net earnings \$2,259,897, a decrease of \$19,770, due to an increase in expenses of \$94,683. After interest charges, dividends, etc., a surplus is reported of \$130,603 as compared with the previous year's surplus of \$221,066. The gross figures, it is pointed out, include the gross of cable and the net earnings of land lines, while the expenses are of the cable lines only.

The general balance sheet shows as follows:

Assets—Cables, land lines, electric plant, office fixtures, etc., \$35,539,220; supplies on hand, \$352,714; patent rights, \$564; investments in stocks and bonds, \$4,449,796; sundry debtors, \$733,688; cash in hands of agents, \$88,909; cash in banks, \$675,745; total, \$41,840,638.

Liabilities—Capital stock, \$13,333,300; bonds, \$20,000,000; credit balances, \$649,050; dividend, \$366,665; revenue applied for extension of cables prior to 1895, \$2,250,000; reserve fund, \$4,421,208; reserve for insurance, \$689,809; surplus, \$130,604; total, \$41,840,638.

The report notes that the general reserve fund now amounts to \$4,421,208 and the insurance fund to \$689,809. A cable has been laid between Fayal, Azores Islands, and Waterville, Ireland, completing a fourth route across the Atlantic Ocean. An additional cable has also been laid between Waterville, Ireland, and Weston-Super-Mare, England. There have been added to the company's land line system 307 miles of poles, 14,966 miles of wire, and 96 new offices.

The Board of Directors has been increased from thirteen to fifteen members by the addition of Dr. W. Seward Webb and Edwin Hawley. The other members are John W. Mackay, James Gordon Bennett, Lord Strathcona, C. G. Howland, C. R. Hosmer, Col. William Jay, Thomas Skinner, George G. Ward, Clarence H. Mackay, Sir William C. Van Horne, A. B. Chandler, Edward C. Platt, and Dumont Clarke.

The old officers were re-elected as follows: John W. Mackay, president; George G. Ward, vice-president and general manager; Charles R. Hosmer, Albert B. Chandler, Clarence H. Mackay, vice-presidents; Edward C. Platt, treasurer; Charles E. Merritt, assistant treasurer; Albert Beck, secretary, and John O. Stevens, assistant secretary.

The Association of Railway Telegraph Superintendents Change of Meeting Place.

The Association of Railway Telegraph Superintendents, whose annual convention was announced to be held in June next in Boston, Mass., will meet instead at Chicago, Ill., on June 18. This decision to alter the place of meeting was reached by a nearly unanimous vote, the central location and consequent accessibility of Chicago being a determining factor in the case. Another reason for deciding on the Western city is the fact that the Eastern railroad companies have entered into an agreement to refuse to exchange pass privileges with Western railroads. An official circular announcing this change is now being prepared, and will soon be furnished to the members of the association.

The association was organized in Chicago in 1882, and no meeting has since been held in that city. It seems peculiarly fitting that the twenty-first anniversary of the association should be held in the place of its birth.

Swearing to Secrecy Not Necessary.

Editor TELEGRAPH AGE:

Since reading your editorial article in the issue of October 1, last, entitled "Suggestions Wanted for Office Management," I have been watching eagerly to see something in this line appear. In the article referred to you signified your intention of "inviting contributions covering a series of questions which shall be propounded from time to time."

To start the ball a rolling, let me propose a subject for discussion, namely, the swearing to secrecy of operators, clerks, etc., in the large telegraph offices. Is it done now, and if not, why not? If not done now when was the practice discontinued and for what reasons? Or, was it ever done? Perhaps you, Mr. Editor, can tell us the custom in New York, and some of your correspondents, what practice is followed in outside points and the reasons for same. Yours truly,

OPERATOR.

St. Johns, N. B., March 4.

[Telegraph officials do not deem it necessary to swear their employees to secrecy. Common sense, which every telegraph man is supposed to possess, is considered sufficient to dictate to him the advisability of respecting the obvious proprieties of his position.—Editor.]

Timely Books on Wireless Telegraphy.

"Wireless Telegraphy" is the title of a new and popular exposition on this interesting subject by G. W. Tunzelmann, B. Sc., the author of "Electricity in Modern Life." The volume has 104 pages, is fully illustrated, and includes chapters on ether and ether waves, the discovery and development of the coherer, the systems of Marconi, Popoff and others. It is a capital book, and affords just the line of information now in such demand regarding the topic treated. It will be sent on receipt of price, 75 cents, to any point in the United States or Canada, express charges prepaid. Address J. B. Taltavall, Telegraph Age, 253 Broadway, New York.

"Wireless Telegraphy," by Richard Kerr, F. G. S., with a preface by Sir W. H. Preece, is a book just off the press, which is meeting a very wide sale, the subject treated being uppermost in the minds of the public at the present moment. This work, which comprises 116 pages, contains a good account of the discoveries in telegraphy without wires. The subject matter is arranged in readable form, the illustrations are excellent, and the descriptions of the experiments are accurate. Copies may be had at 75 cents each by addressing J. B. Taltavall, Telegraph Age, 253 Broadway, New York.

Nothing can make a man truly great but being truly good, and partaking of God's holiness.—Matthew Henry.

First Telegraph Line to British Honduras to Be Opened.

Work has begun on the first telegraph line which British Honduras has ever possessed. The line will extend from Belize to Rio Hondo, a distance of 100 miles. At the latter place connection will be made with the overland line through Mexico and communication with the world will be effected. Though Belize is only 850 miles from New Orleans, it has never had the benefit of a telegraph service, and a message from Europe or the United States, if forwarded on a given Thursday, could not be delivered at Belize until ten days later. The line will probably be completed by the first of May.

CABLE LAYING IN THE PACIFIC.—The cable steamer *Scotia*, having on board 1,700 knots of cable, to be laid between Glenelg and Fremantle, Australia, and the cable steamer *Anglia*, loaded with 2,500 knots of cable for the southern portion of the Colonial Pacific cable, to be laid over the three sections, Brisbane, Queensland, to Norfolk Island; Auckland, New Zealand, to Norfolk Island, and Fiji to Norfolk Island, are already at work laying these sections of the British Government Pacific Cable.

NEW CABLE STEAMER.—The cable steamer "*Colonia*" has been built for the Telegraph Construction and Maintenance Company of London, England. The new steamer has a tank capacity for about 3,000 nautical miles of cable in four large tanks. The "*Colonia*" is the largest cable ship afloat, being about 500 feet in length by 56 feet in breadth and 39 feet in depth, and when completed will carry 10,000 tons deadweight at a speed of eleven and one-half knots. When completed the "*Colonia*" will take in her supply of cable at Greenwich, and proceed to the Pacific to lay the Vancouver-Fanning Island section of the Pacific cable now being manufactured by the Telegraph Construction and Maintenance Company for the British Government.

We are in receipt of a copy of the sixth annual report of the International Association of Municipal Electricians, bound in flexible leather cover, printed on coated paper and showing excellent half tone engravings of the officers of the association. The work covers the proceedings of the Niagara Falls convention, which was held September 2, 3 and 4 of last year. It is a very complete compendium of the occasion, as may be judged from the fact that about 200 pages are devoted to a verbatim report of the meeting. The book will find a place in every electrical library.

In these days when technical knowledge is of such value to the telegrapher who would master his profession, its acquisition becomes of supreme importance. A subscription to TELEGRAPH AGE will supply the information every operator needs.

Fifty Years Ago.

In the Toronto, Ont., "Globe" of January 24 last a paragraph appears which has reference to a well-known gentleman who was right in the front line and the active head of a new enterprise in that city fifty-two years ago, and who has been connected with that enterprise and a resident of Toronto all that time and has seen the concern with which he is identified grow from a very small beginning to one of the most important and far-reaching educational and commercial institutions in that country. Reference is made to Mr. H. P. Dwight, president and general manager of the Great North-Western Telegraph Company. We reprint the extract from the old "Globe." It is as follows:

"From the 'Globe' of 1852, Jan. 24th.

(Latest from Quebec.)

"By the kindness of Mr. Dwight, the operator on the Quebec Telegraph line, we are in possession of some late news from the Capitol."

"It will be observed," says the "Globe," "that the extract speaks of Mr. Dwight as 'the operator on the Quebec Telephone line.' The Montreal Telegraph Company's line extended only as far east as Quebec at that time, hence the expression the 'Quebec Telegraph line.' The resurrected paragraph means that Mr. Dwight had come into possession of some late Quebec papers, and, believing that they would be of interest to the 'Globe,' sent, or handed, them to either Messrs. George or Gordon Brown, and it was for this kindness and these papers that the 'Globe' returned thanks. One of the papers handed to the 'Globe' by Mr. Dwight was the Quebec 'Gazette,' a paper that very few of the present generation have probably heard of, and an extract from it, republished in the 'Globe,' informed us that 'the Hon. Messrs. Hincks, Tache and Young (Hon. John Young) had left Quebec for Fredericton, N. B., to confer with the Government there on matters relating to the railroad question.' The building of railroads was no doubt a moot question at that time, yet the Intercolonial Railway was not opened until 1875, or twenty-three years later on.

"The telegraph was then in its initial stages. Canadian Associated Press despatches or 'specials from our own correspondent' had not yet been thought of. In fact, it was not until some years later that the 'Globe,' which was the first paper in Canada to receive special despatches, inaugurated a regular special despatch service between Toronto and Montreal. This was considered a wonderful stroke of enterprise at the time. Mr. Thomas Sellars, familiarly known as 'Tom' Sellars, was the first man in Canada to send special reports, and he was the 'Globe's' Montreal correspondent. Mr. Sellars published a little paper in Montreal called 'The Echo,' and was a well-known newspaper man in those days. By-and-bye, when specials became more common, Mr. Sellars took a pardonable pride in claiming for

himself the honor of being the pioneer in the special report business in Canada. His brother, Mr. Robert Sellars, the editor of 'The Huntingdon Gleaner,' was at that time, 1860 and thereabout, employed in the 'Globe' office.

"As already intimated, Mr. Dwight has been a resident of Toronto for fifty-two years and has borne the storm and stress of an unusually active life, which ranks among the most honored and successful in the business history of Toronto. Although the years keep crowding on him, his eye is not dimmed, and we might safely add but for an unfortunate accident which lately happened to him, nor his natural strength abated. He has scarcely yet reached that interesting period in one's life which comes to those who have been blessed with health and strength beyond their fellows, described by Carlyle as the youth of old age. Mr. Dwight is at present confined to his house with a fractured bone in his right leg, but the injured limb is making rapid progress towards recovery, and if it continues to improve as at present he will soon be about again as brisk as ever, eager to have and to hold personal supervision over his multifarious duties and interests, and, let us hope, greatly benefited by his enforced rest.

"Mr. Dwight is one of those men who did not wait for advancing years to become generous, chaste and wise. Loyal to his friends and to himself, of good report, steadfast and upright in business, he always possessed in a marked degree all those admirable traits of character, and this accounts for the firm hold he has on the affections of his fellow-citizens to-day. It is a true saying that a man's worth is estimated in this world according to his life and conduct."

The recent storm of heavy snow and sleet accompanied by high winds, followed by unusually heavy rains, caused the greatest amount of damage to the telegraph systems that they have experienced since the invention of the telegraph. In some sections as fast as new poles could be conveyed to places where needed, they were washed away by the floods. The telegraphic wreckage along the Pennsylvania and parallel railroad lines was complete, not a pole, wire, cross-arm or even insulator was left intact. Telegraph pole lines, ranging from fifty to ten miles in length, were entirely destroyed, and the work of reconstruction will require months of time.

We received during the past three weeks over 1,000 descriptions of the storm which so demoralized the telegraph service. Almost every operator who found himself without a wire within the storm center, embraced the opportunity to tell us all about it.

If wireless telegraphy supplants the present aerial telegraph structures, what will become of the lineman?

Telegraph Situation in South Africa.

EDITOR TELEGRAPH AGE:

I would advise American operators to give South Africa a wide berth and for many reasons.

Probably Americans will hardly believe it possible that the British authorities in the Transvaal have retained a great number of ex-Boer officials (renegade Englishmen, Cape rebels, etc.) in the various Government services, especially in the army telegraphs and in the railway telegraphs. These are men who worked faithfully for the Boers up to the British occupation and then were kept on by England's "magnanimous" Government. Even the heads of the departments are ex-Boers, the director of telegraphs, chief operator, etc.,—in addition to a great many operators. The ordinary loyal Britisher does not get a look in, and the treatment of loyalists in general is so severe that loyalty is dying out pretty rapidly; especially among colonials. I fear the latter will not be in much of a hurry to fight for England in the future, nor will a great many Englishmen (myself included), as it appears to pay better to fight against England than for her; she kicks her friends and crawls to her enemies.

I cannot picture the Americans occupying a country and leaving the enemy to man the telegraphs, which is what has been done in the Transvaal and Orange Free State. No wonder the war continues when our wise Government keeps the enemy's spies in employment and pays them well for supplying information to the enemy. Boer operators have actually come in straight from commands surrendered, and have been immediately employed by the army telegraphs. The whole of the Transvaal telegraphs are still under the control of the military, that is nominally, really they are controlled by ex-Boers who should be prisoners of war.

There is always one of those useless things, a British officer, as nominal head, but the actual heads and managers are ex-Boers; in the railway telegraphs the same.

A SUBSCRIBER.

Johannesburg, S. A., January 22.

J. Frank Morrison on the Development of the Telegraph.

Mr. J. Frank Morrison, of Baltimore, Md., an old-time telegrapher, but for the past twenty-five years prominently identified with electric light and power industries, in a letter to the editor of the *Electrical Review* on reminiscences of the development of electricity, has this to say on the evolution of the telegraph:

"During the lifetime of the *Electrical Review* (twenty years) in telegraphy, we have had the process of evolution from the duplex, installed by D'Infreville in the old Bankers and Brokers Telegraph Company's office, opposite the Stock Exchange in New York City in about 1860 or 1870, to the duplex and quadruplex, begun by Edison and completed by Joe Stearns and Gerritt Smith.

You have the work of P. B. Delany along broader lines, and finally the culmination of multiplex telegraphy by Professor Rowland, of Baltimore, which latter invention promises greater capacity than as at present used. I say nothing of Marconi."

Dominion Government Will Consider Measure Which Allows Control of Telephone and Telegraph.

The Dominion Government bill regulating telephones and telegraphs, provides that the lines shall be so constructed as not to interfere with the public use of roads and highways or impede free access to any building. Tolls may be fixed for either the whole or any particular part of the company's line, but such tolls are to be uniform to all persons, and are to be approved by the governor in council. No company is to make any secret rebate to any customer.

After two months' notice, the government may assume possession of the property of any company, and, in the event of a difference as to compensation, reference is to be made to three arbitrators. A clause makes it compulsory upon a telephone company to supply telephone connection to any applicant upon the payment of lawful tolls.

Power is vested in the railway committee of the privy council to determine any complaint respecting tolls charged by telephone or telegraph companies, unjust preferences by any company, and anything which the act requires or prohibits.

His Excuse Seemed Insufficient.

Not long ago Capt. George Blakely, of the United States Army, professor of mathematics at West Point, went to Philadelphia, his native city. Desiring to renew old friendships, he telegraphed to Prof. Robert Hart Bradbury, of the Manual Training School, requesting him to call at his hotel at his earliest convenience. Prof. Bradbury wrote a reply, instructing the maid to have it telegraphed to the Captain at once.

The message reached Capt. Blakely, who after reading it, sent Prof. Bradbury the following despatch:

"Why don't you buy some?"

When this reply reached Prof. Bradbury he was nonplussed. He hastened to the hotel and found the Captain.

"Jack, what the deuce do you mean by such a reply as this?" he asked.

"What do you mean by this?" said the Captain, handing the professor his message. It read: "I'm out of socks and can't come!" Prof. Bradbury had written: "I'm out of sorts and can't come!" The error was the operator's."

True politeness is perfect ease and freedom. It simply consists in treating others just as you love to be treated yourself.—Chesterfield.

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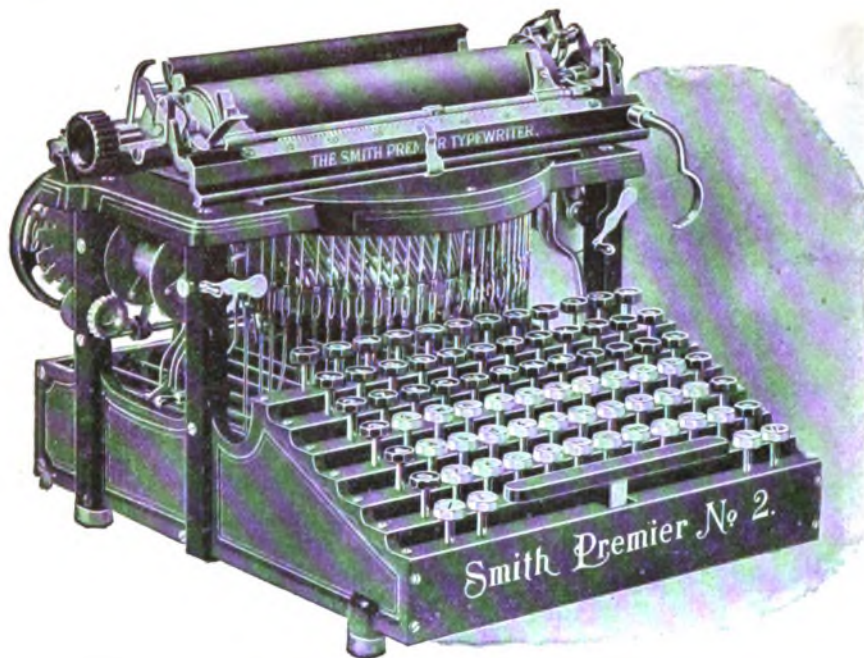
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The Telegraph Age.

Entered as second-class matter at the New York, N. Y., Post Office.

Published on the 1st and 16th of every month.

TERMS OF SUBSCRIPTION:

One Copy, One Year, - - - -	\$1.50
One Copy, Six Months, - - - -	.75
Foreign Countries, - - - -	2.00

ADDRESS ALL COMMUNICATIONS TO

J. B. TALTAVALL, - Editor and Publisher,
253 BROADWAY, NEW YORK.

E. H. BOWEN, MANAGER ADVERTISING DEPARTMENT.

W. N. GATES, SPECIAL ADV. AGT., GARFIELD BLDG., CLEVELAND, O.

CABLE ADDRESS: "Telegraph," New York.

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NEW YORK, March 16, 1902.

NOTE.—We desire to state that back numbers of this paper, those issued more than six months prior to any current date, will be charged for at the rate of twenty-five cents apiece when they can be furnished. This price is fixed because of the necessarily limited stock we carry, and of the difficulty we commonly have in filling an order. Oftentimes the request is for papers of a more or less remote date, with the expectancy of being supplied at but ten cents a copy, whereas in order to obtain the desired issue we are ourselves frequently obliged to pay the larger sum, or even more. The growing value of complete files of TELEGRAPH AGE should cause our readers to carefully preserve their issues.

A Word Regarding Postal Telegraphy.

A reader of TELEGRAPH AGE wishes to know why it is that this journal does not endorse the present movement looking to the absorption of the telegraph by the Government. While TELEGRAPH AGE is already on record in regard to this matter, a proposition, by the way, that crops out with more or less energy every few years, the present time seems opportune for a further brief reference to the subject, particularly as government telegraphy is engaging considerable attention in Congress, where arguments appear to be embellished with the usual inaccuracy of statement.

The reason, then, briefly stated, for our neutral position regarding Government control of the telegraph along the lines advocated by those who would effect a change of this character, is that

all arguments thus far adduced have in view the placing of the telegraph system in charge of the Post Office, to be conducted as a subordinate part of that department. We believe such a disposition of the telegraphs to be unwise, as the merger would not, in our opinion, bring about the improvements in the service that some telegraphers affect to believe. In confirmation of this opinion we have but to look abroad and study the unsatisfactory workings of the English and other European systems, which, strangely enough, with all their shortcomings, are everlastingly held up as fitting examples to be followed in this country.

In the face of such evidence to turn the great telegraph systems, the electrical pulse of the nation, so to speak, over to the control of the post-office, with its changing, political and non-expert heads, would be the height of folly. The telegraph cannot be managed effectively except by competent telegraphic executives; this is so self-evident that it should go without saying; and to substitute the average postmaster, city and country, for the trained telegrapher, as would be the case in the event of Government control, and as is actually the case in all foreign countries to-day, should be almost too grotesque a proposition to receive serious contemplation.

It will be noted that the labor unions frequently seek opportunity to advocate postal telegraphy, not because it appeals to them from any wise, economic standpoint, but simply because it affords an occasion to get in a rap at corporations with which they are not in sympathy. The ignorance and shortsightedness shown by such utterances finds illustration in the fact that while the Government now has a considerable mileage of its own of telegraph wires in United States territory, and many hundreds of operators on its payroll, the average wages paid are only about nineteen dollars a month besides the usual army rations, a meagre sum and one that is but very grudgingly granted by Congress.

It may be argued that the Government would not be able to employ permanently large bodies of operators at this small wage; but the fact remains, nevertheless, that that is the standard pay. If, then, the general telegraphs should become Government property to-morrow, forming an incorporated part of the post office, as it is being urged should be done, the vast systems would be subordinated to that department with all that that implies.

General Greely, the head of the Government telegraph department, which is now an adjunct of the army, has repeatedly called attention to the fact that it is with the greatest difficulty he can retain operators in the Government service at the small rate of pay in vogue. Yet Congress has never once seen fit to consider General Greely's appeal in behalf of the underpaid telegraph corps. Congress is proverbially callous to all claims of this nature, and as the English telegraphers have maintained an incessant agitation in Parliament for fair play since the absorption of the telegraph by the Government in that coun-

try, it is proper to assume that the American operators, once under Government jurisdiction, will likewise have to wage an incessant warfare in Congress to secure therefrom just recognition of the few rights and privileges which they now enjoy under corporate control. In the event of the telegraph system becoming an integral part of the post office, and Congress should grant \$50 or \$60 a month pay to the operators, the supporters of Government telegraphy in the National Legislature would undoubtedly consider the act an extremely liberal one. If the telegraph should come under army control, \$19.50 a month and rations will be the limit of pay for operators, truly not a pleasing outlook.

The Age Limit.

Now that pension schemes are becoming the fad among the railroads and in many large corporations, a very serious question has arisen in connection therewith. This is the age limit, and railroad companies have stated that if they must pension employees, it is absolutely necessary for them to place the age limitation of persons entering their employ at 35 years. This has been declared to be the "dead" line. And such arbitrary judgment governing employment is not confined to railroads alone, for it is becoming a widely prevalent idea in other corporate organizations. Many worthy applicants over 35 years of age are being refused work simply because from this view point they are deemed to be too old to enter the service sought.

The question is becoming of vital import to telegraphers, and it is anxiously being asked if a system of pension be established by the telegraph companies will they also find it necessary to recognize and enforce a proscription of this kind?

The tendency of the times is to give employment to young men, especially in mechanical pursuits. Yet it cannot be denied that the man of 45 by reason of skill, experience and judgment, is worth more to the employer, just as the employer of like age is worth more to himself, than the comparative beginner of 25, or, for that matter, the man of 35 either. In most trades and in the professions the years from 40 to 65, not infrequently to 70, if health be not impaired, are the best years for successful work because endowed with superior strength of mental resource.

The United States Supreme Court, Washington, D. C., on March 3, affirmed the decree of the Supreme Court of the State of Illinois in the case of Alfred G. Booth vs. the State of Illinois, involving the validity of the State statute in the imposition of a fine for dealing in futures.

Politeness is to goodness what words are to thought. It tells not only on the manners, but on the mind and heart; it renders the feelings, the opinions, the words moderate and gentle.—Jou-
bert.

Reminiscences of an Old-Time Telegrapher.

BY HENRY A. REED, OF NEW YORK.

(Written for the "Electrical Review" for its twentieth anniversary number.)

On this, your twentieth birthday, you can boast of having witnessed and recorded for a score of years the wonderful development and achievements of the science for which you were named.

Your memory goes back to the time when the streets of our cities were fairly littered with poles and wires for both telephonic and telegraphic purposes, and also with those for the more dangerous currents for electric light and power.



HENRY A. REED.

Now as you ride through Manhattan or other of our principal cities in elegant cars, heated, lighted and propelled by electricity, which is conducted and applied by invisible agents, and consider that all the energy necessary for these various functions, and also much of that used for lighting the streets and great buildings is being extracted from coal which is burned miles away, you and most thinking people say, not as did the first public telegraph message, "What hath God wrought?" but what hath the inspiration of God enabled man to accomplish?

If some "old-timers" should repeat the familiar saying, "This is not so wonderful as what they did when I was a boy," you would think him an old fossil. Yet he might be more than half right. You were born in an electric age, after telegraphic lines and cables compassed the earth and people had become quite familiar with the telephone another thing had taken place of equal importance. The commercial world had gone wild

with the idea that there was money in anything which was electrical.

How different two score years earlier. Then, as now, New York was the first city of the land, but its streets were lighted by whale oil lamps. Its water was obtained from cistern which were supplied from dirty roofs and street pumps which were in dangerous proximity to various sources of contagion, and there were no sewers.

The trucking was done by single drays without springs, and the only public conveyances for the people were three or four lines of omnibusses, all of which started at South Ferry and each ran about three miles to various points on the north-limits of the city. The fare was one York shilling.

Faraday and Morse were both born in the year in which Washington was first inaugurated president of the United States. Daniell was then about one year old. Henry was born six years later.

The first recording telegraph, which was the result of the combined labors of these four great men, although for more than half the number of years that measure your life it was enduring its birth throes, did not become a publicly acknowledged child of science until 1843.

In that year, with difficulty, an appropriation of \$30,000 for building an experimental line was obtained from Congress, it being then impossible to engage private capital.

Colonel Tom Benton, as he voted aye said: "Give the crank the money to get rid of him." Hon. Cave Johnson, who two years later became Postmaster-General, suggested that part of the appropriation should be used for experiments in mesmerism, and the Hon. Sam Houston thought Millerism should be assisted with it.

The acquaintance of the common people at that time with electricity was well illustrated (if you will pardon a personal allusion) by a neighbor of my mother's who enquired of her what Henry was doing. Being sure that the enquirer had never heard of electricity, she replied, "He is sending messages by lightning," to which the reply was, "Ah! that must be a mistake for nobody but God Almighty can control that."

Such was the field in which the first telegraph was being established in 1844. Its first public exhibition in New York was in the winter of 1844-45 when Ezra Cornell (the founder of Cornell University) and Mr. O. S. Wood (who is still living), having paid Professor Stillman \$50 for an opinion that the amount of electricity for their experiments would not endanger the buildings, were allowed to run a wire over housetops from the corner of Chambers street and Broadway several blocks northward and to amuse the people for the purpose of getting subscriptions to a stock of \$15,000 to build a line from Fort Lee to Philadelphia.

Even at that date they watered the stock and gave \$200 scrip for \$100 cash. By this inducement they got from New Yorkers about half the subscription and the owners of the patents made up the balance.

The first record I find of electricity earning

money was on April 1, 1844. The only line then existing was the government line from Baltimore to Washington. As the government had no use for it, consent was obtained to charge for private messages, the Postmaster-General fixing the tariff at one cent for four characters.

A certain politician was willing to take the risk of being the first fool, but claimed to have only one cent in change. The Washington operator said to Baltimore for him, "4," which was an agreed signal for "what time is it." The reply came back, "one o'clock." This customer seems to have paid the first cent ever earned by this great industry. This was the only revenue for four days. On the fifth day twelve cents were earned.

Soon after, however, people began to smell money in it, and in 1845 lines were built from Philadelphia to New York, to Harrisburg, to Baltimore and Washington.

In 1846 the woods were full of people hunting poles and a surprisingly large mileage of lines was built.

Starting from Utica lines were built each way, and New York and Buffalo were connected in the fall of 1848. This was the first line working from New York, although messages had been previously sent from Fort Lee, South, the messages having been taken across the river in boats.

When Professor Morse first announced that he had invented a recording telegraph people thought him a crank, if not a lunatic. When he first demonstrated the truth of his claim beyond a possible doubt most people looked upon it as an inspiration, as though it had been handed down to him as were the tables of the law unto Moses.

Later, and still, men wonder that this great invention should have been perfected by an artist instead of by such scientists as Faraday and Henry, or others whose work was largely along the lines leading up to it.

May this not be explained by the fact that the scientist is engaged in developing, or rather discovering, and explaining certain principles, whereas the great artist must be trained in the science of combination? He studies to combine his colors and thoughts for certain effects.

The portrait must not only be true in outline, but must show character, the portraiture of which requires that a large amount of brains be mixed with the colors. As Morse had to paint a landscape by combining the strength of the mountain crag with the beauty of the shaded brook and the sentiment of the lover's bower, so he was able as an inventor to make his alphabet from ideas suggested by semaphoric signals, to use the dynamic force of electricity which had recently been discovered by Faraday and developed by Henry, and the constant-current battery of Daniell, as well as the mechanical genius of Vail. By the combination of these he succeeded in perfecting the Morse telegraph, practically as it is now used for ordinary commercial purposes on nearly every land line in the world.

The Atlanta Tournament.

The American Telegrapher's Tournament met at Atlanta, Ga., on Saturday, March 1. The event was one of the most successful and representative of its kind ever held in this country. And this, notwithstanding the fact that the previous severe and almost unprecedented storms which seriously crippled the telegraph wires and caused many railroad washouts, prevented attendance from a number who expected to be present.

After a pleasant ride about the city of Atlanta, generously tendered the telegraphers by the street railway company, the meeting was called to order, at 3.30 in the ball room of the Kimball House by W. B. Stuart, chairman of the executive committee. Mr. Stuart, who is a graceful speaker, said in part:

"When Miss Ellsworth sent the first message, 'What hath God wrought,' she had little conception of the future usefulness of the telegraph. From forty miles of telegraph wire in 1844 the telegraph has grown in keeping with the progressiveness of the age, to a total of several millions miles of wire at the present time. These wires convey messages of joy and gladness, sorrow and sadness, to every hamlet dotting the smiling valleys, broadening plains, and swelling hills of our native land, as well as across the mighty deep from shore to shore throughout the civilized world."

After stating the object of the meeting and according the telegraphers a hearty welcome to Atlanta, Mr. Stuart introduced Mr. W. T. Gentry, who, as the representative of Governor Candler, welcome the telegraphers on behalf of the State, the Governor being ill and confined to his bed. Mr. S. A. Duncan, assistant general superintendent of the Postal Telegraph-Cable Company, welcomed the telegraphers on behalf of the local fraternity. Mr. I. N. Miller, superintendent of the Western Union Telegraph Company, Cincinnati, O., responded to the address of welcome on behalf of the visiting members. Messrs. Duncan and Miller were at their best and received generous applause. Mayor Livingston Mims, of Atlanta, then greeted the visitors to the city. He said among other things: "If any of you happen to violate the city ordinances and are 'pulled' just telephone me and I will pardon you." Mr. J. M. Stephens, the president of the tournament, was suffering greatly with rheumatism and in consequence reached the meeting a little late, but when he walked up the isle he was greeted with applause. There were, perhaps, in addition to the telegraphers, one thousand people in attendance, consisting of representative business men and society women of the city.

On the platform was seated J. M. Stephens, superintendent of the Western Union Telegraph Company; C. C. Adams, general superintendent of the Postal Telegraph-Cable Company; S. A. Duncan, assistant general superintendent of the Postal Telegraph-Cable Company, and Dr. P. E. Murray, manager of the Western Union, all of

Atlanta; G. L. Lang, superintendent of telegraph of the Queen and Crescent Railway, Chattanooga, Tenn.; I. N. Miller, superintendent of the Western Union Telegraph Company, Cincinnati, O.; J. B. Norris, manager of the Western Union, Chattanooga; L. B. Thompson, chief operator Western Union, Atlanta; Horace G. Martin, a well-known expert telegrapher and representative of the Columbia Phonograph Company of New York, and J. L. Scott, of Atlanta, representing private wires.

The object of the tournament association was more for the purpose of raising the standard of the telegraph than for speed, and success was apparent on every hand. New records were established and the fine quality of Morse was clearly manifest in every contest. Andrew Carnegie, himself an old telegrapher, and one of the most enthusiastic ex-telegraphers of this country, furnished a "Carnegie Medal," valued at \$400, which stimulated the greatest interest among telegraphers. This prize was offered for a ten-minutes test to see who was the best all-around telegrapher, both receiving and sending to be considered. F. M. McClintic, of The Associated Press, Dallas, Tex., was awarded the Carnegie medal for turning out the cleanest press copy, receiving ten minutes and afterward sending ten minutes, and establishing a new record of 517 words of straight Morse. This was a test of endurance as well as speed and ability, for the contest did not occur until two o'clock in the morning, after the tournament had been in session eleven hours. Punctuations were not counted in the matter, although sent and received—only the words and figures were counted. Aside from Mr. McClintic, those who qualified for this contest were C. W. White, of Richmond, Va.; F. G. Johnson, Louisville, Ky., and W. C. Murray, of The Associated Press, Atlanta. McClintic was first, White second, Johnson third and Murray fourth.

The matter used in the contest for the Carnegie medal, being new for this occasion, was as follows:

General Joseph E. Johnston, commanding the army of Northern Virginia on the 15th of October, 1861, fell back to Centreville, a small village with about five or six houses, and three or four miles from Manassas junction. General Toombs' brigade was all night going three miles. Sleepy, I would have given the world to drop down by the roadside and go to sleep. About sunrise we passed through Centreville and crossed Rocky Run, pitching our camps to the right of the road. We drew new tents known as the Sybley or Bell crown tent. They were round and about 15 feet in diameter at the base, and 12 inches at the top, supported by a center pole placed on an iron tripod. Fifteen men could occupy one tent by lying in a circle with their feet to the center. They were warm and comfortable when we built fires in the center, the smoke going out at the opening above. While on post one day I saw every tent in camp blown down except Colonel Magill's. The wind was on a rampage and cold enough to chill to the bone. Skirmish, company, and battalion drill was the order of the day. We had some splendid drill officers and the regulars were as proficient in the maneuvers and manual of arms as soldiers get to be. Dress parade when correctly performed is one of the most interesting maneuvers in military tactics. When on parade we would be in full uniform with white gloves, bright buttons, polished shoes and accoutrements. It was nothing unusual for 2,000 or 3,000 soldiers to turn out to witness one of our parades at sunset. Discipline was

rigidly enforced and a great many of the boys caught it hot and heavy. On the coast of Georgia the boys had no opportunity to be bad, but after going to Virginia where they had room and temptations combined, they tried to see how mean they could be. There was various modes of punishment in the army. The highest being extra or double duty. Bucking and gagging was often resorted to. To buck a soldier he would have to sit down with his knees drawn up to his breast, his wrist would be crossed, tied and pulled down over his knees with a stick placed between his legs and arms. If he had too much to say a bayonet was placed between his teeth with strings on either side to tie behind his head. Digging stumps was a very popular mode of punishment, and sometimes the soldier would be chained to the stumps while digging. Sometimes a soldier would have to play ball. Not nine on a side, but all by himself. He would be given five balls, four of them placed about ten feet apart forming a square. He then had one to spare which he would put down and pick up another carrying it to the next one and so on, around the corners for two hours. The balls were 32 pound cannon balls, and you can imagine how his back felt when released. The barrel shirt, or the Jeff Davis uniform, as the boys called it, was another mode of punishment. One end of the barrel would be knocked out and a hole made in the other, so a man's head would pass through, which would be placed over his shoulders, and then a two hours, tramp in front of the officers' quarters. I have seen placed on the barrel a piece of pastboard with "thief" in large letters. I saw an Irishman in Company G one day refuse to wear one and he was bucked down and the barrel placed over him. Tying up by the thumbs I thought was the worst punishment inflicted on the soldiers.

The receiving test of thirty minutes for the largest number of messages on the typewriter, neatness of copy considered, brought forth a new record by H. V. Emanuel, of the Western Union Telegraph Company, of Philadelphia, Pa., who received first prize for receiving fifty and one-half ten body word messages in thirty minutes. The former record was fifty messages in thirty-two minutes, seventeen seconds, also held by Mr. Emanuel. E. E. Bruckner, of the Postal Telegraph Company, of Texas, Dallas, Tex., received the second prize for receiving messages. The fifty and one-half messages were sent by C. W. White, of the Western Union Telegraph Company, of Richmond, Va., who broke the record for sending messages.

The "Atlanta Journal" gold medal for the cleanest copy of Phillips code, receiving, was also won by F. M. McClintic, of The Associated Press, Dallas, Tex., with but three errors. W. C. Murray, of Atlanta, had four errors and F. G. Mathews, of Atlanta, thirteen errors. The copy used was that known as the Senator Allison matter, a reproduction of which is included elsewhere in this report.

The Atlanta "Constitution" medal for the fastest straight Morse sender was won by F. M. McClintic, of Dallas, who sent 251½ words of perfect Morse in five minutes, with a single error. E. E. Bruckner, of the Postal Telegraph Company, of Texas, Dallas, Tex., was second, and C. W. White, of Richmond, third. The copy used being the same as in previous contests, was as follows:

The command of Gideon and the assurance that Jehovah had sent him was distinctively a mission. He, among many other great names, felt he had a mission in life, and faithfully filled it. And finding the secret of his success, we unfold it as the secret of all success. Herein is the secret in profane and sacred history of every well-wrought work—of every successful life. Fixed in mens memory, and written in the Book of Life, are the names of those men and women who, using the

talent God has given them, have allied themselves to omnipotence and so become strong and great.

There is no problem greater and that stares us so continually in the face as this, viz: What is the real purpose of life? Just as you give an answer to that do you make life great or small. Men have thought and worked at many an answer to this problem. The stoic, the epicurean, the philosopher, the miser, the man who seeks for pleasure, the deeply religious soul, have each given his answer.

They are all aiming at this, viz: "How to be happy." And the answer at first seems very easy and natural. Get what you want and you will be happy. But experience teaches us that when we have gotten what we wanted we discover that it is not what we thought it to be. And no sooner is one want satisfied than another comes clamorous to the front.

We want to make life longer, broader, deeper. We want to see in it a mission of some kind. Life is a gift, but with that gift comes a charge, the sacred charge of duty, and the duty is this: "Go in this thy might; have not I sent thee?"

It is the climax of human wisdom to estimate aright our duty and our ability to do. It is the climax of divine revelation—the promise: I am the shield, and thy exceeding great reward. Happy is the man who has a sense of his own might, and who at the same time feels the Lord has sent him to do His work, and is ever with him. If you cease to strive, and cease to learn and cease to do for others and know not God, you may as well cease to live. No man can do a truly great work without being virtuous, and no man can be virtuous without God on his side.

In the message sending class of five minutes E. E. Bruckner, of Dallas, Tex., won the championship medal and prize money for sending nine complete messages of ten words each. In this contest the judges were uncertain as to a decision and requested Mr. Bruckner and F. G. Johnson, of the Western Union Telegraph Company, Louisville, Ky, to compete again. This was about 4 o'clock a. m., and Mr. Bruckner won a second time, sending nine complete messages of ten words in five minutes. The judges complimented Mr. Johnson for excellent Morse. Mr. Johnson sent eight and one-fourth messages.

The championship for fast straight Morse sending, five minutes, was one of the closest contests of the day, Mr. Bruckner of Dallas, and Mr. McClintic, of Dallas, each having 248 words to his credit, the only question being one of errors, Mr. McClintic having two and Mr. Bruckner one error. The official record shows Mr. Mr. Bruckner 248 words, one error; Mr. McClintic 248 words, two errors; Mr. White of Richmond, 239 words, three errors. Mr. Bruckner was awarded first prize and Mr. McClintic second.

In the Phillips code championship for sending five minutes there were three entries. F. M. McClintic, Dallas, Tex., of The Associated Press won, with 326 words, F. G. Mathews, of Atlanta, second; W. C. Murray, Atlanta, third. The purity of Mr. McClintic's work was highly commended. Walter P. Phillips, of New York, a well-known ex-telegrapher, and author of the Phillips code book, donated one of his automatic transmitting instruments to Mr. Murray as a consolation prize.

The matter used, being the same as in previous contests, was as follows:

WASHINGTON———Senator Allison reported the War Revenue bill to the Senate at 3.55 p. m. He sub-

mitted an amendment on behalf of the Republican members, which will be offered as a substitute for the provisions authorizing the coinage of the seigniorage and the issuing of \$150,000,000 legal tender notes. This amendment reads as follows:

"That the Secretary of the Treasury is authorized to borrow from time to time, at a rate of interest not exceeding three per centum per annum, such sum or sums as in his judgment may be necessary to meet public expenditures, and to issue therefor certificates of indebtedness in such form as he may prescribe and in denominations of \$50 or some multiple of that sum; and each certificate so issued shall be payable, with the interest accrued thereon, at such time, not exceeding one year from the date of its issue, as the Secretary of the Treasury may prescribe; provided, that the certificates of indebtedness authorized by this section shall from time to time be first offered, whenever practicable, at popular subscription, under such regulations, to be prescribed by the Secretary of the Treasury, as will give opportunity to the citizens of the United States to participate in the subscriptions to such certificates; provided, further, that the amount of such certificates outstanding shall at no time exceed \$100,000,000; and that at least \$50,000,000 of said certificates herein authorized shall be issued before any of the bonds provided for in this act shall be issued, sold, or disposed of; and the provisions of existing law respecting counterfeiting and other fraudulent practices are hereby extended to the bonds and certificates of indebtedness authorized by this act.

"That the Secretary of the Treasury is hereby authorized to borrow on the credit of the United States from time to time, as the proceeds may be required to defray expenditures authorized on account of the existing war (such proceeds, when received, to be used only for the purpose of meeting such war expenditures), the sum of \$300,000,000, or so much thereof as may be necessary, and to prepare and issue therefor, at not less than par, coupon or registered bonds of the United States in such form as he may prescribe, and in denominations of \$25 or some multiple of that sum, redeemable in coin at the pleasure of the United States after ten years from the date of their issue, and payable twenty years from such date, and bearing interest, payable quarterly in coin, at the rate of three per centum per annum and the bonds herein authorized shall be exempt from all taxes or duties of the United States, as well as from taxation in any form by or under state, municipal, or local authority; provided, that the bonds authorized by this section shall be first offered as a popular loan, under such regulations, to be prescribed by the Secretary of the Treasury, as will give opportunity to the citizens of the United States to participate in the subscriptions to such loan; provided, further, that such bonds and certificates shall be issued at par, no commissions shall be allowed thereon, and in allotting said bonds and certificates the several subscriptions of individuals shall be first accepted, and the subscriptions for the lowest amounts shall be first allotted, and a sum not exceeding one-half of one per centum of the amount of the bonds herein authorized is hereby appropriated to pay the expenses of preparing, advertising, issuing, and disposing of the same."

At the conclusion of the events about 5 o'clock a. m., those present were taken charge of by the reception committee and enjoyed refreshments in the Kimball House parlors, after which they returned to the ball room to contest for a consolation prize for those who had entered, but had been unsuccessful in the preceding events. J. I. Hilliard, of the Postal Telegraph-Cable Company, Memphis, Tenn., won the consolation prize, which was a beautiful one hundred and twenty-five dollar phonograph, tendered through Mr. Horace G. Martin, by the Columbia Phonograph Company, of New York.

Mr. Martin took a complete record of all the events on the Phillips automatic receiving instrument, for future use.

The judges of the contest were: P. E. Murray, Atlanta; I. N. Miller, Cincinnati; C. C. Adams, Atlanta; Horace G. Martin, New York;

G. L. Lang, Chattanooga, and J. L. Scott, Atlanta.

Resolutions were passed thanking J. H. Bunnell & Co., of New York, the Atlanta "Journal", the Atlanta "Constitution", the Kimball House, the street railway company, Walter P. Phillips, of New York, C. W. Crankshaw, the Southern Typewriter headquarters and the Columbia Phonograph Company of New York, for the many courtesies extended.

It was decided, owing to the lateness of the hour to leave the question of the place for holding the next annual convention to the executive committee, and it was suggested that the committee communicate with the world's fair commission of St. Louis, and the telegraphers of that city, with the object in view of holding the next annual convention in St. Louis next year.

The work of the Phillips automatic telegraph was one of the most fascinating features of the tournament. The Phillips automatic recorder was in the circuit on which the contests took place, and faithfully recorded each dot or dash on a paper ribbon. These matrices were in turn run through a transmitter, a part of the system, reproducing automatically on a sounder the sending of the contestants.

Duplicates of these tape records will be made to be used in connection with the Phillips automatic transmitter. The sending will also be recorded on graphophone wax cylinders by the Columbia Phonograph Company of New York, from the matrices secured by the Phillips recorder, thereby enabling their use in graphophones.

Among those who participated in the tournament were:

F. M. McClintic, The Associated Press, Dallas, Tex.; C. W. White, Western Union Telegraph Company, Richmond, Va.; H. V. Emanuel, Western Union, Philadelphia; J. I. Hilliard, Postal Telegraph-Cable Company, Memphis, Tenn.; D. A. Mahoney, Philadelphia; E. E. Bruckner, Postal Telegraph-Cable Company of Texas, Dallas, Tex.; Michael Healy, Postal, Memphis; J. A. Dobson, Western Union, Augusta, Ga.; W. H. Rometry, Western Union, Jacksonville, Fla.; H. A. Mansfield, Western Union, St. Louis, Mo.; C. A. Sweet, Postal, Memphis; R. W. Park, Southern Railway, Chattanooga; A. G. Sullivan, Postal, Birmingham, Ala.; F. G. Johnson, Western Union, Louisville, Ky.; L. F. Jamieson, The Associated Press, Washington; John Benton, The Associated Press, Lynchburg, Va.; W. E. Peirce, Western Union, Washington; J. S. Patterson, Western Union, New York city; J. Harmond Oswald, Southern Railway Company, Memphis Tenn.; G. L. Lang, superintendent of telegraph Queen and Crescent Railroad, Chattanooga, Tenn.; I. N. Miller, superintendent Western Union, Cincinnati; J. B. Norris, manager Western Union, Chattanooga, Tenn.; S. M. English, assistant general manager of the Postal Telegraph Co. of Texas, Dallas, Tex.; C. C. Adams, John L. Scott, John

Dessausure, W. C. Murray, F. G. Mathews, A. G. Goodloe, W. Z. Swann, J. H. Smythe, S. A. Duncan and J. M. Stephens, all of Atlanta.

J. M. Stephens, president of the American Telegraphers' tournament, said: "The success of the tournament just ended assures a similar annual event in the years to come, and will greatly benefit the telegraph service in all of its branches."

The tournament has accomplished this much for the betterment of the service, namely, that one hundred messages per hour at least can be sent and received in one hour's time; it has demonstrated that about seventy words of press matter per minute can be transmitted over a wire by the use of the Phillips code. This sets the precedent for ambitious telegraphers to follow, and they doubtless will do so and future tournaments will probably show even greater speed and greater records than those attained. The cash prizes and gold medals were tendered the winners at the end of the contest and every obligation of the committee was faithfully carried out to the letter.

Especial mention should be made of the hard and earnest work of H. VanDevender, the treasurer of the tournament. Mr. VanDevender has labored hard for the success of this tournament and he has been fully rewarded as every one in attendance spoke in glowing terms of the event. Praise is also due to all of the other officers of the Association, as well as to Mr. J. H. Smythe, agent of The Associated Press, Atlanta, and an old telegrapher.

It was found that each of the contestants in the sending classes used the steel lever key manufactured by Messrs. J. H. Bunnell and Company of New York, and that firm very graciously presented each of the winners with the particular key he had used. This firm also furnished the fine equipment of telegraph instruments used in connection with the tournament.

Mr. Walter P. Phillips congratulated Mr. J. M. Stephens, president of the tournament, in a phonographic letter which was reproduced from the wax cylinder in the hall before a large audience.

Messrs. Edward and Son, photographers, of Atlanta, Ga., succeeded in securing three very fine views of the tournament, one showing the contest while operators were receiving on typewriters, another the operators contesting for the Carnegie medal and the third, the contest on fast sending.

Wireless Telegraphy.

Before reaching New York, where he arrived March 1, Mr. William Marconi made a new test of the range of his transmitting apparatus at Poldhu, Cornwall, England. While on board the steamship Philadelphia, on his way here, he sought to find how long he could keep up communication with the new station in Cornwall. He asserts that a definite message was received at a distance exceeding fifteen hundred miles, and that

more elementary signals were discernible twenty-one hundred miles away.

It is likely that the British Government will refuse to grant licenses to Marconi, to enable him to carry on his experiments in wireless telegraphy on English soil. The reason for this action it has been stated in Parliament, is that Marconi might interfere with similar experiments now being conducted by the British Admiralty.

"England is not the best place in the world for an inventor to conduct experiments," said William Marconi, "and she must remember that there are other countries whose shores are washed by the Atlantic Ocean, and where better treatment is accorded one who has new ideas to demonstrate.

"It can be better explained" he continued, "if the words of the British Postmaster General are quoted correctly, by stating that the act incorporating the government telegraph lines of Great Britain, I think, was passed by Parliament in 1870, with a clause that no person or persons may maintain telegraph stations from any point in Great Britain to another point in the Island kingdom; but a station may be maintained if the end of the line is in another country.

"This was evidently designed to meet the requirements of the several cable companies, and it is now applied to us. We have contracts with Lloyds, running fifteen years, to supply instruments to every one of their signal stations in the British Isles. As these talk with ships more than three miles from land, the limit of British jurisdiction, no act of the Postmaster General can cut them off. The great stations at Poldhu or elsewhere, which are to communicate across the ocean, are also obviously within the law.

"Some time ago I told the Postmaster General if one of the ships we had now equipped with the wireless telegraph instruments, the *Lucania*, the *Campania* or the *Philadelphia*, for instance, should strand in the fog and storm within the three-mile limit and signalled for help, we could not answer without breaking the law and render ourselves liable to imprisonment. He answered—"Well, I hardly think we should prosecute you."

"Three years ago I did ask for a license for a short inland line, but was refused. It is very difficult to get any concessions from them which they need not give."

Mr. Marconi a few days ago made a statement to the effect that seventy steamers and twenty-five land stations were equipped with his wireless telegraph system.

Mr. Marconi is now engaged in the work of constructing a transatlantic station on Cape Breton.

Mr. E. S. Green, president of the Texas Midland Railroad Company, has decided to install the Marconi wireless telegraph system on that railroad. Mr. Green has not yet stated just what branch of the railroad service he purposes to cover by this method.

Subscribe for TELEGRAPH AGE, \$1.50 a year.

THE FAY-SHOLES TYPEWRITER

MAKES A CLEAN SWEEP AT

The American Telegraphers' Tournament

AT ATLANTA, SATURDAY MARCH 1, 1902.

OVER 28 COMPETITORS USING REMINGTON, SMITH PREMIER
...AND OTHER MACHINES...

F. M. McClintic, of Dallas, won
Championship in Code Class, and
the Carnegie Gold Medal, using
Fay-Sholes Typewriter.



W. C. Murray, of Atlanta,
won second place in Code Class,
and the Carnegie Silver Medal,
using Fay-Sholes Typewriter.

H. V. Emanuel, of Philadelphia
Won Championship in Message Class using the Fay-Sholes Typewriter.

SEND FOR OUR PROPOSITION TO TELEGRAPHERS, AND OUR MCGURRIN BOOKLET ON SPEED
WRITING, ETC. MAILED FREE ON APPLICATION.

FAY-SHOLES COMPANY, 127 Rees St., Chicago, Ills.

EXECUTIVE OFFICE: **Western Union Telegraph Company,** THOMAS T. ECCLES, PRES. & CH. MAN. A. H. BRADSHAW, SECR.
NEW YORK.

SUPERINTENDENT'S OFFICE

W. B. GILL, MGR.
Philadelphia, Pa., November 15th 1901. 190

Fay-Sholes Company,

127 Rees Street,

Chicago, Ill.

Gentlemen:-

It may prove interesting to you to know that the
Fay-Sho typewriter model #2, serial #2839 which, manipulated
by Mr. Harry V. Emanuel won the Worlds Championship in the
"Message Class" at the Telegraphers Tournament, held at Medi-
son Square Garden, New York, May 14th, 1898, is still in daily
use between eight A. M. and five P. M. on the Philadelphia-
New York (first) quadruplex circuit.

Over 450,000 telegrams have been received by Mess.
Emanuel and Gould on this typewriter within the last three
and one half years, and less than two dollars and fifty cents,
(one dollar and fifty cents of which was for a new platen) has
been expended for repairs.

I doubt if there is another typewriter in the tel-
egraph service in this country that can show such a remarkable
record and yet retain the wonderful writing qualities of
this machine.

This letter is written upon Mr. Emanuel's typewriter.

Very sincerely,

D. A. Mahoney

LETTERS FROM OUR AGENTS.

[Advertising will be accepted to appear in this department at the rate of five cents a word, announcements to be enclosed with a border and printed under the name of the place of the advertiser. The special local value attached to advertising of this character will be apparent. Our agents are authorized to solicit advertisements for these columns, and further information on this subject may be obtained on application.]

CLEVELAND, O., POSTAL.

W. J. Birmingham has resigned and accepted a position with a local firm.

J. W. Sullivan and W. H. Pope have also resigned.

H. L. Knisely has accepted the position as second man at the "Leader," formerly held by J. F. McDonagh, who resigned, so he could devote all his time to the study of dentistry.

L. U. Race is a new acquisition.

Our sympathy is extended to Mr. and Mrs. E. W. Collins on the demise of the mother of Mrs. Collins, who died in New York city recently.

CEDAR RAPIDS, IA., POSTAL.

Cedar Rapids is full of ex-telegraphers, representative business men, who are now forming a little club of former members of the fraternity with the object of getting together, having a banquet and talking "shop."

So far the following applications have been received: C. H. Chandler, president of the Chandler Pump Company (largest plant in the State); W. G. Haskell, wholesale coal dealer; F. W. Faulkes, editor of the "Daily Gazette;" J. C. Arthur, implement dealer; A. F. Groeltz, real estate (ex-manager of the Western Union Telegraph Company), and others.

The above were once "gilt edge" operators and may be remembered by some of the old-timers still in the service. Mr. Edward Zeisel, an extra-train dispatcher of the Lake Shore and Michigan Southern Railroad who is now vice-president of the Diamond Investment Company, of Minnesota, and who resided here for several years, has moved to Minneapolis. His old friends will be glad to hear of his great success, especially the old Lake Shore boys.

Will C. Albright, manager of the Postal, has held the office for six years. Some of his first messenger boys are now holding good positions, among them John McElheran, with the Baltimore and Ohio Railroad, Pittsburg, and "Doc" Anderson, of St. Louis.

Mr. Albright does not believe in students, but is always ready to help a messenger boy along. He and Manager Edward Adams, of the Western Union, are both hustlers for business but never "scrap," which is too often the case between competitors.

Mr. C. H. Reese who works both the Postal and Western Union wires for T. M. Sinclair & Co., packers, has been with the above firm over 20 years and still retains a first-class grip.

CEDAR RAPIDS, IA., WESTERN UNION.

We still have summer business in Iowa. Our new manager, Mr. Edward Adams, formerly of Springfield, Ill., has the business up to the standard. During the closing ten days of February bad weather and big business have caused long hours and vigorous pounding for the already worn out force.

On account of the large increase of relay business we are called upon to handle we have been promised a new switchboard as our present facilities are insufficient.

LOS ANGELES, CAL., WESTERN UNION.

Vail Stevenson has gone to Tucson, Ariz., where he will assist Manager Culton. Tucson is an important relaying office for all points in Arizona.

NEW ORLEANS, LA., WESTERN UNION.

The chief dispatcher's office of the Southern Pacific Road, Louisiana Division, has been removed from Algiers to Lafayette, La.

Arrivals: John C. Flood, C. C. Lawrence, C. O. White, A. E. Zevely, G. W. Maynard, M. J. Kelly, J. E. Williams, S. W. Copers, Messrs. Porter and Knecht, and John Poole.

Elias Westerfield, former Western Union manager, now with the United Fruit Company, was a recent visitor.

A daughter has been born to Mr. and Mrs. George Perrett.

L. L. Johnson, Hattisburg, Miss.; Frank Sims, Crowley, La.; Miss J. Cumings, Summit, Miss.; E. Horton, Alexandria, La.; Miss M. Little, Opelousos, La., and R. Thompson, Lafayette, La., are popular managers at these points.

Messrs. E. L. and A. J. Hamm, Ward, C. French, Waitz, Parham, Flipper, Heck, Gowdard, Schraut, Cochran and Davis of this office are hustlers.

Departures: Messrs. Polland and Ross.

There is considerable baseball talk going the rounds and those in position to speak say that this year's Western Union team will be the strongest yet put forward.

The home of Lineman Baker at Ocean Springs, Miss., was totally destroyed by fire on March 7.

Alice Catherine, the infant child of Mr. and Mrs. Thomas H. Kelly, died on March 4.

INDIANAPOLIS, IND., WESTERN UNION.

The following is the personnel of this office:

Day force: J. M. Taylor, chief operator; G. F. Coit, assistant chief; M. S. Allen, wire chief; J. W. Price, quad chief; C. W. Steinhauer, traffic chief; F. C. Kurz, assistant traffic chief; P. J. Barrett and M. Finan, first Chicago; T. P. Toohill, Board of Trade, Chicago; O. C. Weigman, Louisville; E. J. Cantwell, New York; Miss F. B. Greely, St. Louis; H. M. Walker, Cincinnati; James F. Cunningham, Evansville; H. B. Walker, Cleveland; H. A. Godfrey, Pittsburg; George T. Farquhar, Lafayette; E. A. Bradbury, Mattoon; D. F. Warren, Board of Trade; S. G. Wallick, New Albany; M. A. Ryan, Columbus, O.; W. H. Francisco, Toledo;

C. F. Newsom, Terre Haute; W. C. Rogge, Muncie; J. F. Davis, Peoria; F. W. Kellogg, Portland; H. F. Sarber, Benton Harbor; Leroy Allen, Anderson, and A. W. Murphy, Madison. Extra men: J. M. Ryan, D. J. Griffin, R. B. Noblitt, James E. Broden, R. W. Pentzer, S. F. Gilbert, C. E. Ott, Robert W. Bass, Earl C. Brown and J. C. Foley. Number clerk: Miss Nellie M. Moore. Checks: Edward Heid, Henry Katzenberger, J. J. Mullen and Tim Clark.

Night force: George W. Weakly, manager; L. V. MacIntire, chief operator; R. B. Dungan, traffic chief; T. E. Cantwell, J. J. Maher, William B. Fette, J. W. Middleton, Walter E. Carey, E. T. Murray, W. J. Broden, Alfred Harrison, J. A. Hogan. Checks: G. A. Pressler and Saul Oppenheim.

Arrivals: R. W. Bass and E. C. Brown.

J. E. Broden, of the extra list, has accepted a position with the Cerealine Manufacturing Company.

John Mullen, one of our check boys, is to appear in a drama given by the Odd Fellows lodge.

PHILADELPHIA, PA.



My Motto—Honest Dealing. Emanuel the peerless. A two-time World's record smasher on the **FAY-SHO NO. 6**. In New York, 1898, 50 messages received in 32 minutes 17 seconds. In Atlanta, Ga., 1902, 50½ messages received in 30 minutes. Operators cast aside your prejudice and examine into the merits of the Fay-Sho typewriter, a machine that is built on honor. Special prices and terms on application. D. A. Mahoney, Special Representative, W. U. T. Co., Philadelphia, Pa.

WESTERN UNION.

Our sympathy is herewith extended to Robert Atkinson and Robert Brown, both of whom had the misfortune to lose their mothers.

William C. Shugar succeeds George Potteiger, resigned, at the switch, nights.

After two weeks of turmoil and disturbs, due to the recent storm, things are again resuming their normal conditions and the appetite of the wolves for extra has been appeased.

Messrs. Brenckman, Madden, Mintzer and Daly were sent to Harrisburg to help out during the rush of extra business which that office handled on account of the storm. Harrisburg was the terminus of all western wires coming east.

Wilmington was another terminus of Delaware wires coming north with Messrs. Clark, Hannon, Hehl and Jones to handle the business.

Now then, all together; hip, hip, hurrah! Three cheers and a tiger for Emanuel, "Our Manney," the invincible. Another scalp hangs to his championship belt; 50½ perfectly copied messages received in 30 minutes. By the beard of the prophet, 'twas well done and we are justly proud of the same. In another part of TELEGRAPH AGE will be found a full account of this great tournament. A few facts worth mentioning that were seen and heard by one who was present are, that Emanuel was cool and collected during the whole trial, even looking up to see how his opponents were getting along. This in itself was marvelous when we consider how fast the messages were coming.

On Emanuel's return to duty here he was given an ovation worthy of his great feat and congratulated on all sides.

POSTAL.

Our former superintendent, Mr. C. C. Adams, is specially desirous to express his sincere thanks for the beautiful hall clock, of which he was made the recipient at the farewell dinner, to every person who was in any way represented by that testimonial.

Incoming Superintendent L. Lemon, began his administration in this district amid most trying circumstances, caused by the crippled facilities due to the terribly destructive sleet storm, which completely shut us out from the rest of the world so far as wire service was concerned.

Business suddenly became so heavily congested as to make it necessary to call in outside assistance. Newspaper, broker and private operators, who suddenly found themselves without wires, were invited to the main office. In addition to these the Messrs. G. Newman, quad chief; Ross, Hibbetts, Poe, Sutphin, Roesner, Shannon, Wilson and Hirsh, all of New York City, and Messrs. Wright, Bleakney, Fiester, Hayden, Purcell, Cronin and Henderson were added to our operating force. With all this extra help it was quite common to hear of men working 18 to 20 hours straight. Messrs. Mecke, Lane and McGarvey, from this office, were ordered to Harrisburg to help move the business at that point.

Among many recent visitors, we were pleased to see Mr. W. V. Madden of Mahanoy City.

Quad Chief Charles Dreher spent a few days on special duty at Newhope, Pa. He was afterward relieved by Mr. H. O. Steltz from this office.

ST. LOUIS, MO.. WESTERN UNION.

Frank Spencer, way room chief, met with a very serious accident a few days ago. In attempting to board a street car which was started before he could get a secure footing he was thrown violently to the ground, resulting in a broken leg and severe bruising. He is doing nicely and a speedy recovery is looked for.

Mrs. John Lane, wife of the assistant wire chief, who has been very ill for some time, is said to be improving rapidly.

New faces are beginning to appear frequently and the waiting list is getting to be of large proportions. The latter part of February witnessed a heavy business caused by storms and irregular routing. Extra men got all the time wanted, while the day force were held nights and the night force ordered on days.

The enormous business that is done by the St. Louis office has necessitated the removal of all way wires to the fourth floor while the entire fifth floor has been given to the quad room and wheatstone department. Still there is not room enough so quad sets are placed one above the other on shelves, so that leased wires and through quads are in easy reach in case of trouble.

A. E. Deverell, assistant chief at the Merchant's Exchange, was laid up a day or two with a severe cold.

Miss Catherine Reilly, of the wheatstone, was called away recently by the death of an uncle.

Miss Gleason, also of the wheatstone, has recovered from a ten-day siege of pneumonia and has returned to work.

Fred Brownald, still another wheatstone operator who has written several popular pieces of music, has one in press, entitled "The Directors March," dedicated by permission to the World's Fair directors.

Mrs. George J. Frankel, wife of the assistant superintendent, has been appointed one of the board of lady managers for the Louisiana Purchase Exposition.

Mr. Allen E. Bowden was married on March 1 to Miss Kate E. Iley of Paducah, Ky.

Miss Julia Healey of the wheatstone department, Chicago, was a recent visitor at this office.

Miss Marie Tynan has just returned after an absence of six weeks, owing to illness.

Miss Craven has also been on the sick list for the past two weeks.

BOSTON, MASS.

Typewriters for sale, to rent and repaired. Remington, Smith, Densmore and all makes sold or rented on easy monthly terms to telegraphers. Send for samples, catalogues and full information to E. M. Bennett, Manager, The Typewriter Exchange, 38 Bromfield Street, Boston, Mass.

WESTERN UNION.

Mr. T. C. Devine has received a letter from Mr. Cortelyou, private secretary to President Roosevelt, thanking him for efficient telegraph service rendered during the President's visit at Groton, Mass.

Messrs. Cloney, Wentworth, Bowe and Gordon were assigned to Groton, and George Tracey and O. H. Chambers to Ayer Junction, to help out on press matter during the President's sojourn at Groton.

Mr. William E. Henderson, of the Western Union main office, is proving himself a skilled pen-and-ink artist. His latest achievement in this

line is a unique calendar, representing a "prize package," a clever piece of work, which shows the intricate workings of a telegraph office.

Arrivals: J. M. Winder, New York; R. J. Dodd, Haverhill, Mass.

POSTAL.

A daughter has been born to Manager F. E. Wolfe, of the "Herald" office, and a son to each, Assistant Chief O'Donohue and C. A. Hart.

H. J. Finn has been transferred from the night force to the New York bonus wire, days.

Thomas Shannon has resigned to accept a position at the Metropolitan Stock Exchange.

C. A. Hart has been confined to his house for the past week with illness.

The branch office in the Hotel Somerset, where Prince Henry and his suite made their headquarters, did a rushing business during the royal visit. In addition to the regular operators—Misses Clair and Sweeney, Messrs. F. E. Wolfe and N. H. Tracey, and an additional force of messengers were assigned to special duty there, to attend to the telegraphic wants of the party.

G. H. Boothby has resigned to accept the managership at Portland, Me.

Arrivals: E. F. Sullivan, assigned to the night force; H. C. Fraser and G. A. Johnston, split trick; Hugh Fraser, days.

CHICAGO, ILL.

Typewriters bought, sold, rented and repaired. Renting a specialty. Also Agency for "Telegraph Age." Telegraphers' Typewriter Co., Room 5, 122 La Salle St., Chicago, Ill. Be sure to mention TELEGRAPH AGE.

WANTED, A FIRST CLASS OPERATOR. Typewriters make numerous first class operators that are always in demand. To be first class requires both quantity and quality of work; can't keep up the quality with dirty, blurred type, nor the quantity if you spend 15 minutes daily, cleaning type. Get one of our brushes that cleans your type while you work. Postpaid, 50 cents each. Eacutt & Cawthorn, 2704 N. Lincoln St., Chicago, Ills.

WESTERN UNION.

Mrs. Helen Cummings who has been quite ill for some weeks has returned to duty.

"Bert" Johnson has the sympathy from all in the death of his wife, which occurred February 4. She has been an invalid for some time.

Another section is being added to the west switch board which completely utilizes all the space to the wall. New wires are constantly being added to our equipment and if our growth keeps on we shall give our New York friends a hard rub, for their's has the honor of being the largest office.

Manager Paige and party of Cincinnati visited the operating room a few days ago under the escort of Colonel Clowry and Electrician Barclay.

A sure sign of spring are the new faces appearing among us. Business this winter has been without precedent in volume and extra men have not a word of complaint.

Where can you find a more courteous and gen-

tle pair of fellows than James and Joseph Cummings? There never was a cooler headed couple. James is chief of the St. Paul division and has served in that capacity for several years with distinction, his coolness even in the most trying situations have rendered his services invaluable, while Joseph is working the first Milwaukee quad in connection with Edward Lavery.

The importance of keeping well abreast of the times on telegraphy, wireless telegraphy, the telephone, etc., should be apparent to every operator who seeks preferment in his profession. These subjects are discussed in such a clear, practical and up-to-date manner in TELEGRAPH AGE, the wonder is that any operator should be without it.

Mr. Louis K. Whitcomb received congratulations from his many friends and relatives at his home recently upon his having reached the half century mark. Mr. Whitcomb has served thirty-four years of his life in the telegraph business and twenty-nine years of it have been spent in the Chicago office, filling the position from operator to that of chief operator.

POSTAL.

Recent arrivals: Mr. Willard, from the Union Pacific; O. D. Ensminger, formerly manager at Madison, Wis., has accepted a position here; "Doc" Carnes. Mr. Marsh, who recently lost his wife and little child, has returned to work after an extended absence.

Mr. Thomas Dalton, I. T. Deacon and C. P. Haggly from the Western Union, are on the extra list.

W. C. Moore has accepted a position at Vancouver, B. C.

NEW YORK CITY.

"My Old Virginia Home Upon the Farm," one of the sweetest songs published; "God's Will Not Ours be Done," (McKinley's last words) strong descriptive song with martial music; "Left on the Battlefield;" "Down Where the Cotton Blossoms Grow;" "I'll be With You When the Roses Bloom Again;" "Any Old Place I Can Hang My Hat is Home Sweet Home to Me;" "Heirloom Waltzes;" Zenda Waltzes;" "Utopian Waltzes;" "Metropolitan March and Two Step;" 18 cents each. If you want any other sheet music write to me about it. I can save you money. PIANOS SOLD ONE DOLLAR PER WEEK. Address, B. L. Brannan, 195 Broadway, New York.

WESTERN UNION.

The new assignments to the wheatstone department are Misses Lorretta Flannagan, Jennie Doran, Ella Buss, Edith Brenness, Mav Gifford, Abbie I. Boles, and Sallie McManus, all of whom have been assigned as copyists.

The wheatstone force has been working night and day for the past two weeks. Miss Ruth Worthington has been confined to her home with a severe attack of bronchitis.

John A. Dreams, who has presided over the Newport, R. I., circuit for so many years that he has grown familiar with the doings of many of the "400" of New York, and vicinity, will hereafter become a "Hoosier," having transferred his flag to the Indianapolis circuit.

Mr. J. H. Robinson, of the Marine department, who met with a painful accident at the Manhattan end of the Brooklyn Bridge several weeks ago, although still confined to his home in consequence, expects soon to resume his duties.

Mr. Fred. F. Norton of the Postal has been nominated for president, and Ramage Ferguson for recording secretary of the New York Telegraphers Aid Society for the coming year. The election will take place on March 26th. Mr. Norton has for a number of years been a member of the Executive Committee.

Mrs. John Brant read a paper on "Substitutes for the Saloon," February 5, and another on "Chinese Exclusion," March 4, at meetings of the Original Woman's Republican Club, Brooklyn. The papers were highly praised by members of the club who heard them, and the Brooklyn newspapers speak in strong commendation of Mrs. Brant's efforts.

It may not be apropos to make a distinction where all did so well during the big break between New York and Philadelphia, but the services rendered by General Traffic Chief Nourse deserve mention. Under the most trying circumstances he was cool and collected as if matters of great moment did not await his action. It may truly be said that Mr. Nourse never gets excited.

Mr. William Arnoux, now connected with the legal department, is one of the oldest operators in the employ of the Western Union. He entered the service of the New York Boston and Magnetic Association Telegraph Company in 1847, then located at the corner of Hanover and Beaver streets, New York. He opened the first telegraph office at Taunton, Mass. and New Bedford, Mass. He went with the American Telegraph Company in 1861, which was absorbed by the Western Union in 1866. He has a tariff book which was in use in 1848, and some old passes he used in that year between New Bedford and Boston.

The new Atlanta, Ga., wheatstone circuit recently started to that point has been doing excellent work. The general average on that wire is about two thousand messages a day.

Mr. William J. Davis and Miss Genivieve Bolland are at the New York end. Messrs. Martin and Melville have been transferred to Atlanta.

The Buckingham printing department is now in good working condition. It has at present two wires, one to Chicago, and the other to Buffalo. Miss Lizzie Hons works the Buffalo circuit, Lorretta Nevins, the Chicago. On the machines are Misses May Mahoney, Annie Garey, Ph. Bartlett, M. Pearl, E. R. Phillips, Florence Burgraf and Anna Miller.

David U. Newport, late of this office, died of

consumption at Las Vegas, N. M. on February 28. His wife died of the same disease two days previous. They are survived by an infant daughter six months old. Mr. Newport was about thirty years of age, and was well known throughout the country, he having worked in a great many telegraph offices. The remains both of Mr. and Mrs. Newport were interred at Osage City, Kan., their place of birth.

The father of Joseph McCusker, recently died at North Adams, Mass.

Mr. Conrad A. Meyer, was absent from the office a few days recently owing to the death of his wife's mother.

Miss Lizzie Miller from Highland Falls, N. Y., has taken the position as operator at New Britain, Conn., vacated by Miss Emma Firl, who leaves the service to be married.

George Cromwell, for many years an old timer, of this office and now retired to a farm at Damascus, Pa., has been spending a couple of weeks in town.

Mr. John A. Henneberry, a well known old time telegrapher, and for many years a prominent figure in this office, has been appointed chief clerk in the New York City district attorney's office.

The requirement of much greater space for conducting the business of the office will necessitate many changes in the operating room during the coming spring.

POSTAL.

During the visit of Prince Henry, a temporary office was established by this and the Commercial Cable companies on the West 34th street pier, where the Imperial yacht Hoenzollern lay, from which point, in connection with the German American cable, a tremendous amount of business between this country and Germany was done. Prince Henry used these lines exclusively to the Kaiser as well as for all other business both in his and this country. Four men were at work in handling the volume of business and press to the many Berlin papers. S. Isaac Naftel, of this office was in charge.

Geo. F. Randolph leased wire chief, has returned after having had a severe attack of grip.

City Chief S. B. Hague, is absent being confined to his home by severe illness, the result of a heavy cold.

Mrs. A. M. Griez, has been absent several weeks on account of illness.

The veteran of the force, "Uncle William" Clum is still confined to his home by rheumatism, having been absent nearly two months.

The engraving which appeared in the previous issue entitled 'The Operator and His Valentine,' was the work of Mr. J. H. Meyer of this office, and was much appreciated by the members of the staff.

Mr. W. E. Athearn has been appointed assistant electrical engineer of the Western Union Telegraph Company, of New York. Mr. Athearn has been identified with this department for several years.

General Eckert Retires.

General Thomas T. Eckert retired from the presidency of the Western Union Telegraph Company on March 12. His successor is Colonel Robert C. Clowry, of Chicago, who has been first vice-president and general superintendent of the Western division of the company, with headquarters at Chicago. General Eckert was elected chairman of the board.

General Eckert will be seventy-seven years of age on April 23, next. He will no longer be compelled to shoulder all the responsibilities of the company, but as chairman of the board he will still be the guiding spirit of the company. Colonel Clowry, of Chicago, General Eckert's successor, is a man of great energy and executive ability, and his election is a satisfactory one.



GENERAL THOMAS T. ECKERT.

Russell Sage, one of the directors of the company, said:

"Colonel Clowry's position is a kind of honorary presidency. He was elected to relieve General Eckert of a lot of routine work. General Eckert is no longer a young man. The business of the company has increased rapidly under his management, and the detail and routine work of the presidency has increased accordingly. We decided, therefore, to relieve General Eckert of this and made him chairman of the executive board and Colonel Clowry president."

General Thomas Thompson Eckert, a man of fine executive ability, cautious and far seeing, has been president and general manager of the Western Union Telegraph Company since 1893, when he succeeded Dr. Norvin Green. He has been in the service of the company since 1866.

General Eckert was born at St. Clairsville, Ohio. He learned telegraphy. He became postmaster at Wooster, Ohio. In 1852 he was made

superintendent of the Western Union Company. After the outbreak of the Civil War, he was appointed Assistant Secretary of War. He then took charge of the military telegraph department



COL. ROBERT C. CLOWRY.

at Washington, and was eventually brevetted brigadier general.

From the close of the war until 1875 General Eckert was at the head of the Eastern division

of the Western Union Company. He took a conspicuous part in the reorganization of the Atlantic and Pacific Telegraph Company, and was made president of the concern. His vigorous work resulted in 1879 in the pooling arrangement between that company and the older Western Union. Not long afterward he was chosen by capitalists to head the American Union Telegraph Company, and two years later to bring about a consolidation of all the companies then in the field. That was in January, 1880. From 1881 to 1893 he was vice-president and general manager of the Western Union Telegraph Company.

Colonel Clowry has filled places with the Illinois and Mississippi, Missouri and Western and Western Union Telegraph companies as messenger, operator, manager, superintendent, general superintendent and vice-president. At the beginning of the Civil War he was commissioned by President Lincoln as captain, and appointed assistant quartermaster in charge of the United States military telegraph in the departments of Missouri, Kansas and Arkansas.

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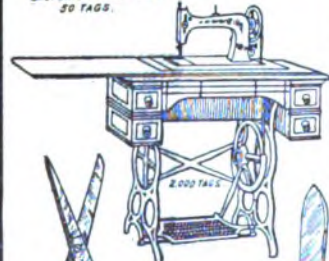
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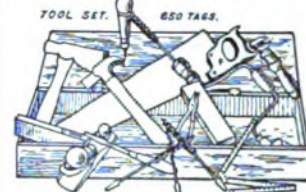
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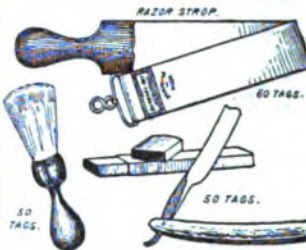
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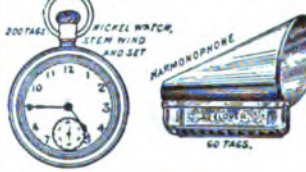
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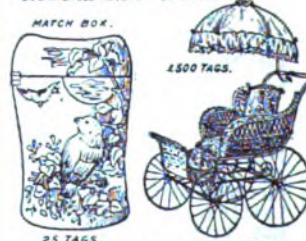
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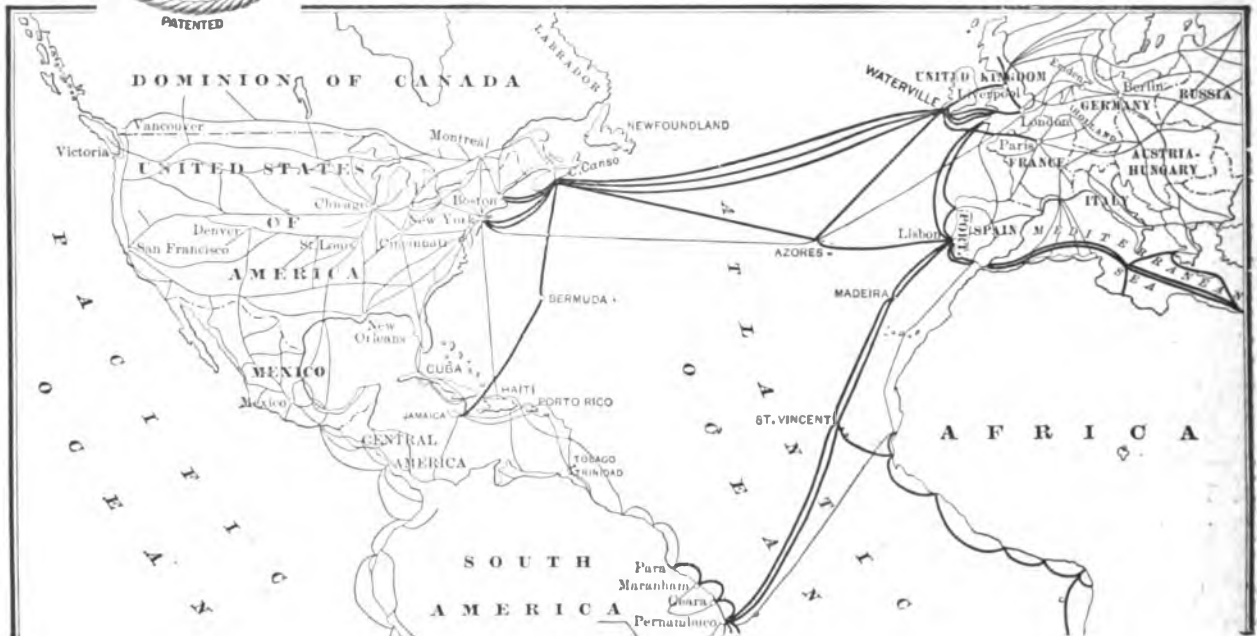
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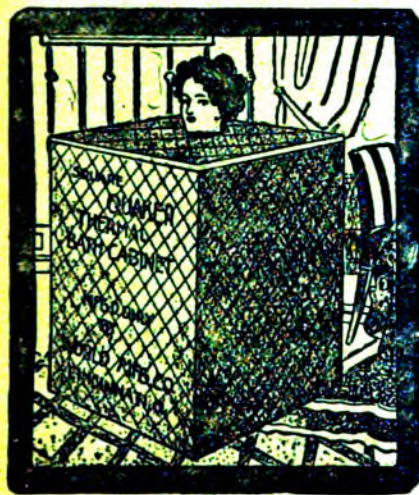
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Hundreds of Ministers

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Physicians are unanimous in claiming that colds, lagrippe, fevers, kidney troubles, Bright's disease, cancer; in fact, such

Marvelous Eliminating Power

has this Cabinet that no disease can gain a foothold in your body if you take these hot Thermal Baths weekly. Scientific reasons are brought out in a very instructive little book issued by the makers.

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Whatever Will Hasten Profuse Perspiration

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It Will Cure a Hard Cold

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