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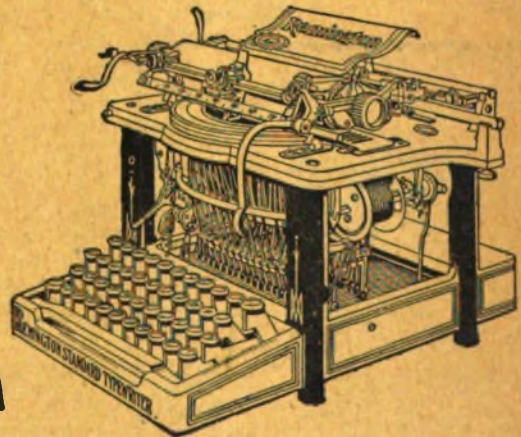
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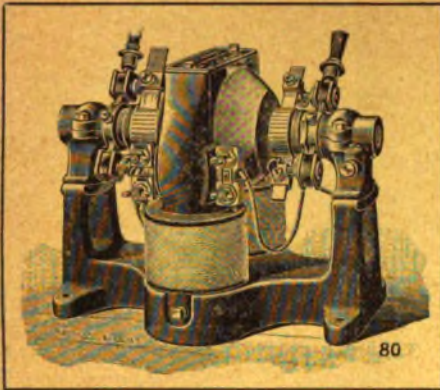
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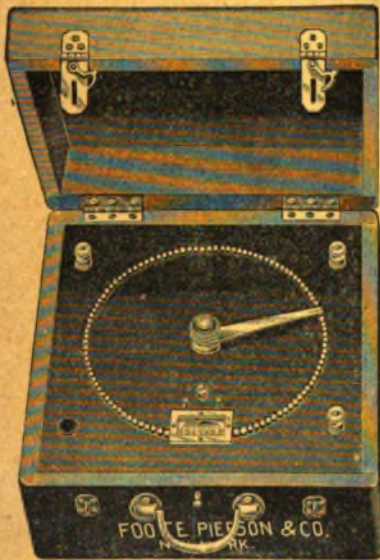
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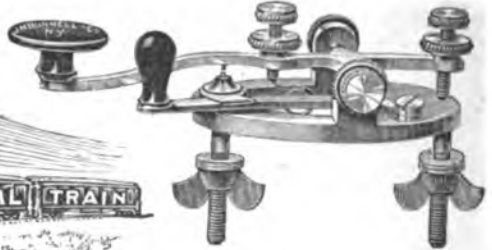
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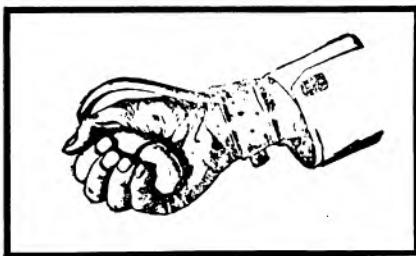
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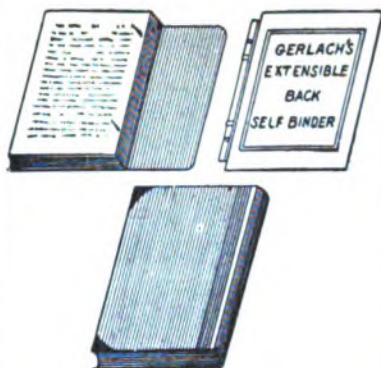


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# THE TELEGRAPH AGE

No. 9.

NEW YORK, MAY 1, 1902.

Vol. XIX.

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## SOME POINTS ON ELECTRICITY.

### Storage Battery—As Applied and Arranged in the Telegraph Service.

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 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 this superior new work, indispensable to every telegrapher, should send in their names at once.—Editor.]

So many requests have been received at this office for further details appertaining to the installation and care of storage batteries in telegraph offices that a few remarks on the method followed may serve as a general guide for all who are interested in the subject.

In the first place no single rule can be given which will cover all cases. Neither can we judge by an estimate of the battery power required for one office what may be needed in another; or rather, in what manner it shall be distributed. Perhaps it will be better before describing the various methods of charging and discharging the cells to give the reader a clear idea of what a so-

called storage battery really is, and what work it is capable of performing.

In the first place the cell is wrongly named. It is not, as is generally believed by laymen, an accumulator of electric currents, but an accumulator of electric energy, which, in turn, is capable of reproducing a current of electricity in a closed conductor when properly connected thereto, in exactly the same manner as a dynamo does when its brushes are similarly connected. In both cases the current produced in the external circuit is due to this pent up energy rushing back to its original combination, or state, by the means of the extra path thus furnished.

In the dynamo the mechanical energy expended in revolving the armature in a magnetic field is transferred into electric energy in the coils of the armature and is delivered from the two brushes. In the storage battery, the energy expended by the charging current in decomposing the fluid in the cell, collects on the two plates of the latter in the form of separated active elements, which latter in reuniting, when electrically connected by means of an external circuit, are capable of reproducing a current of electricity. From this it follows that the capacity of a storage cell depends upon the number of square inches or feet of surface contained in the plates, and the maximum quantity of such energy they will safely take on and retain.

Now, before the lead plates are capable of accumulating any great quantity of the elements of the decomposed fluid in the cell, they must first go through a preparatory stage called "forming," in order to give the elements a better purchase and more surface. In the original Planté cell this was accomplished by reducing the plates to a somewhat porous or spongy state by charging them alternately in opposite directions. This was a very slow and tedious operation, too slow in fact, to be of much use, but Faure soon came to the rescue with a method which not only made the cell of practical value but one which is followed closely by nearly all makers of our best types of storage batteries.

Faure noticed that when a current of electricity from an external source decomposed the fluid in the Planté cell, the hydrogen combined with the positive plate in the form of peroxide, or red lead, while the nitrogen collected on the negative. His idea was to save time by first giving the positive and the negative plates an artificial coating of red oxide of lead and litharge respectively. These substances were made into a stiff paste and applied in various ways.

In our modern types of storage cells the plates are either perforated or made into the form of a grid and the openings filled with tablets composed of these active elements, which latter possessing as they do two sides, like a pane of glass, presents double the area of surface to the liquid. The tablets employed by various manufacturers differ somewhat chemically, but the Faure principle is followed closely by all.

The electromotive force of a storage cell is at first about 2.5 volts when fully charged but the pressure drops to about 2 volts as soon as the charging current is shut off. This value, practically, is maintained until about seventy or eighty per cent. of the cell's capacity has been drained, when it will again have dropped to about 1.8 volts. When the latter value obtains the cells should be disconnected and recharged.

In order that all storage batteries may have a uniform rating, manufacturers generally rate the efficiency of the cells on the basis that with a stated normal rate of discharge the said drop, or minimum permissible electromotive force of the cell, will be reached at the end of eight hours. That is to say, they give a safe or normal maximum rate of discharge which may be taken from the cell without shortening the working hours or dropping the available capacity of the charge below seventy or eighty per cent. of its initial value. If the rate of discharge be greater than normal, the percentage will be lessened, while if it be slower, a little more than the usual quantity may be taken out before the low water mark is reached.

This fact shows that the popular definition of the "ampere hour" is slightly erroneous. For example: It is said that a ten-ampere hour cell means one which will give out one ampere for ten hours, two amperes for five hours, or ten amperes for one hour. Now, that is not true in a strict sense of the word, for the reason just given. The faster the current is drained the less total quantity will the cell yield. The explanation of this variation in the value of the cell's output is that when the chemical action within the jar is too rapid, the active elements are not reduced in a uniform manner.

For telegraphic purposes the following rules as to determining the required capacity of the cells to be installed and the rate at which they should be charged will give the reader a pretty good idea of the way estimates for a storage battery plant are obtained. Theoretically we should first ascertain as nearly as possible what the average hourly drain in amperes will be for all the circuits combined, and then secure a cell, the normal discharge rate of which is somewhere near that figure. In fact it should be somewhat greater than that value in order to meet the requirements of wet weather and the future growth of the plant.

The regulation rate for charging storage cells for greatest efficiency is as follows: Time required eight or nine hours. Give five-ampere-hour cells,  $\frac{1}{2}$  amperes for nine hours or more, until the E. M. F. reaches 2.5 volts, or 2.6 volts.

Give ten-ampere-hour cells one and one-quarter amperes for same period of time. They may be discharged at the rate of two and a half amperes for three hours, or at any slower rate for more hours. Twenty ampere-hour cells should be charged at a rate of two and a half amperes for same length of time and may be discharged at the rate of five amperes for three hours or at a slower rate for greater length of time. Larger cells require proportionately stronger charging currents.

The above figures give the practical working margin for the cells; that is to say, under the above strain or conditions, the electromotive force remains practically constant and steady at about two volts, but the fact must not be overlooked when figuring on current capacity, that no cell will ever deliver more than seventy or eighty per cent. of what is put into it, in a practical form, for telegraph service.

(To be Continued.)

#### Business Notices.

"My Old Virginia Home Upon the Farm," words and music by Barrington L. Brannon, an operator of the Western Union Telegraph Company, New York, is a pleasing verse and melody invested with rather a moving pathos. It is being sung quite extensively, and as the score appears in our advertising columns any one can judge for himself of the musical harmonies of the production. The song is specially advertised in an announcement made by Mr. Brannon in the Western Union notes printed under the caption of "Letters from our Agents."

The Sprague Electric Company, of New York, has found it necessary to move its Boston office into new and larger quarters to enable it to handle the increasing business in the New England district, and has taken a suite of offices in the fine Weld Building, a modern office structure at 176 Federal street. The location is an excellent one being almost opposite the South Terminal Station. Mr. H. C. Farnsworth continues as manager of the Boston office, and he has recently added to his staff Mr. George D. Simmons, who was formerly superintendent of the Hawkes Electric Company.

The Summer Book just issued by the Lackawanna Railroad contains a series of delightful vacation stories entitled "The Experience of Pa." Everyone who is seeking a place in which to spend the summer months will be interested in these amusing sketches. The book is handsomely illustrated and describes some of the most attractive resorts of the East. It will tell you where to go, how to go and the price of board; it is called "Mountain and Lake Resorts of the Lackawanna Railroad;" and will be sent on request accompanied by five cents in stamps to T. W. Lee, General Passenger Agent, New York City.



### Personal Mention.

Mr. S. A. Duncan, assistant superintendent of the Postal Telegraph-Cable Company, Atlanta, Ga., who has been seriously ill for the past month, is reported to be rapidly mending.

Col. Allan C. Bakewell, general manager of the Sprague Electric Company, New York, has recently been elected second vice-president of the Pennsylvania Society of New York.

Mr. J. C. Nelson, of the Western Union Telegraph Company, Omaha, Neb., has been promoted to the position of assistant superintendent to succeed Mr. C. B. Horton transferred to Denver, Col.

Mr. G. F. Swortfeger, of Chicago, Ill., has been appointed superintendent of construction of the Eastern and Southern divisions of the Western Union Telegraph Company with headquarters at New York.

Mr. Melville E. Stone, general manager of The Associated Press, gave a dinner recently at the Black Cat, New York, to thirty ex-Chicago newspaper men, who are now employed on New York journals.

Mr. William C. Candee, assistant secretary of the Okonite Company, New York, and a son of Captain W. L. Candee, general manager of the company, was married on April 9 to Miss Edna Burnett, of Newburgh, N. Y.

Mr. John I. Sabin, president of the Central Union Telephone Company and of the Pacific States Telephone Company, has been elected president of the Cleveland Telephone Company, one of the sub-companies of the Western Telephone & Telegraph Company.

Mr. P. H. Alexander, one of the old-timers in the electrical fraternity, has lately been made general manager of the Magneto Electric Company, a concern making magneto fire-alarm and other apparatus and having its offices in New York and factory at Amsterdam, N. Y.

Mr. E. B. Baker, for many years general superintendent of the Southern New England Telephone Company, has assumed an executive position with the Gray Telephone Pay Station Company, of Hartford, Conn. Mr. Baker will have his offices in New York at 253 Broadway.

Mr. John Gavey has been appointed engineer in-chief of the English telegraph service at London, Eng., vice Mr. Hookey, retired. Mr. Gavey entered the telegraph service in 1860 as a telegrapher, and he has the reputation of being the best posted electrical engineer in England.

Lord Kelvin, one of the leading scientists of the world, the inventor of the siphon recorder so generally used in submarine cable service, and the inventor of other telegraphic and electrical apparatus, has arrived in New York from England, and is receiving courtesies at the hands of the

electrical fraternity, due his high position in the electrical world.

Mr. Oliver Milo Dunn who has lately been appointed to be assistant general superintendent of the Illinois Central Railway, with headquarters at New Orleans, is an ex-operator, he having begun his railroad career as a telegrapher in Indiana for the Lake Shore & Michigan Southern Railroad.

### General Mention.

Mr. Nicholas Burke, a well-known American operator, is visiting London and Paris.

Mr. K. M. Grant, a telegraph operator of Rockhampton, Queensland, was recently elected a member of the Australian Parliament.

Mr. G. A. Perry, a telegraph operator, writing from San Luis, Santiago Province, Cuba, says: "May you and your valuable paper live many years to represent us in the fraternity of fraternities."

The Postal Telegraph-Cable Company has leased new quarters in Memphis, Tenn., for a main office, which will be up-to-date in every particular. Mr. W. H. Locke, is the manager of the company's interests at that point.

Major G. W. Foster has been appointed assistant general manager of the South-Western Telephone and Telegraph Company with headquarters at Dallas, Tex. Mr. Foster was formerly an official of the Postal Telegraph Company, of Texas.

"Although I have little time now for things telegraphic," writes William A. Austin, of the Rogers Screw Company, Providence, R. I., "I always take time for TELEGRAPH AGE, which certainly deserves the support of every telegrapher, whether at present in or out of the service; those in the service that they may keep abreast of the times, and those out of it that they may keep in touch with their first love."

Mr. Patrick B. Delany, the telegrapher and electrical engineer, of South Orange, N. J., lectured before Sibley College Cornell University, on April 11. Electro-Magnetic and mechanical control of tuning forks and reeds, and their application to synchronous multiplex telegraphy was fully explained, and shown diagrammatically. Rapid automatic telegraphy was demonstrated by apparatus showing a transmission speed of over 7,000 words per minute.

### Recent Telegraph Patent.

A patent No. 697,619, has been granted to G. A. Green of Dixbury, Mass., for a telegraph sounder.

To read without reflecting is like eating without digesting.—Edward Burke

### New Officers of the American District.

At the annual meeting, held April 24, of the stockholders of the American District Telegraph Company, New York, Colonel R. C. Clowry, president of the Western Union Telegraph Company, was elected president, in place of General T. T. Eckert, resigned, and William H. Taylor, vice-president of the Bowling Green Trust Company, was elected vice-president, in place of C. A. Tinker, resigned. B. Brooks, general superintendent of the Western Union, was elected general manager. Mr. Clowry was chosen a director, to succeed Henry K. Sheldon. A semi-annual dividend of 1 per cent was declared.

The following resolution in relation to the retiring officers was passed unanimously:

Resolved: That the Board has learned with regret of the determination of President Thomas T. Eckert and Vice-President Charles A. Tinker to retire from active service as executive officers of this company.

In accepting their resignations the Board desires to express its appreciation of the able services which they have rendered to the company, and its regrets that they have felt compelled to retire from the official positions that they have so long occupied with conspicuous devotion and ability.

### Obituary.

William H. Metz, for many years a member of the telegraphic fraternity, Philadelphia, Pa., died on April 18th.

Moses S. Springer, one of the best known telegraph operators, west of Chicago, died April 23. Mr. Springer had been employed by The Associated Press in Sacramento and Los Angeles for the past eight years. He went to the Pacific Coast from Chicago in 1894.

Charles H. Porter, of the New York and New Jersey Telephone and Telegraph Company, died at his residence in Brooklyn, April 27, of heart failure. Mr. Porter was connected for many years with the district telegraph companies in New York as manager and inspector. In recent years he has been at the head of the contract department in the Bedford District, Brooklyn, of the telephone company. Mr. Porter was very popular and had a wide circle of friends and acquaintances.

### The Railroad.

A patent, No. 697,277, for a signaling system for single track railways, has been issued to W. W. Salmon, Chicago, Ill.

The Burlington Railroad is constructing an elaborate long distance telephone system to connect the principal points covered by the railroad. This will give the officials of the road telephonic communication with all points, which it is supposed will greatly facilitate the transaction of its business. Of course, the running of trains and

other routine business will continue to be conducted through the medium of the telegraph as heretofore.

The executive committee of the Association of Railway Telegraph Superintendents, consisting of C. F. Annett, president; J. H. Jacoby, vice-president, vice F. B. Valentine, resigned, and P. W. Drew, secretary, have issued a circular announcing the change of the next meeting place of the association from Boston to Chicago, the dates being June 18, 19 and 20. Arrangements have been made for a convention hall, a room for exhibits and for the accommodation of members at the "Stratford" (formerly the Leland Hotel), situated at the corner of Michigan and Jackson Boulevards. This hotel, which maintains an excellent café, is conducted on the European plan, and rooms may be engaged at from \$1.50 to \$4.00 per day. Members are requested to correspond direct with the manager, Mr. George B. Weaver, as to rooms desired. It is requested that members take receipts for sleeping car fares paid on the going trip. The Pullman Company's representative, Mr. C. R. Wager, superintendent, Pullman Building, Chicago, will arrange return transportation. A large and enthusiastic meeting is expected and papers of great interest will be read and discussed.

### Directory of Telegraph Organizations.

Association of Railway Telegraph Superintendents. Next meeting, Chicago, June 18.

International Association of Municipal Electricians. Next meeting, Richmond, Va., Oct. 7, 8 and 9.

Old Time Telegraphers and Historical and United States Military Telegraph Corps Association. Next meeting, Salt Lake City, Utah, September 10, 11 and 12.

### New York Visitors.

C. E. Diehl, manager of the Postal Telegraph-Cable Company, of Harrisburg, Pa.

Mr. E. B. Pillsbury, superintendent of the Postal Telegraph-Cable Company, Boston, Mass.

Mr. C. E. Patterson, general superintendent of the Illinois District Telegraph Company, Chicago, Ill.

Mr. Clinton P. Russell, secretary and general manager of the Postal Telegraph Company of Texas, Dallas, Tex.

Italian proper names like "Sgobel," "Sgarante," etc., when forming final words on cable messages, are frequently changed to "Obel," "Arrante," etc., and rendered as signatures because the receiving operator assumes that the initial letters "Sg" indicate the signature of the message.

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### Neutralizing Capacity by Inductance.

Editor TELEGRAPH AGE:

The insertion of Dr. Pupin's inductance coils at given distances in overhead telephone wires for the purpose of neutralizing the electro-static capacity effects of such wires, is no doubt a good thing to a certain extent in dry weather, particularly in the Winter time when there is but little loss of insulation by reason of broken insulators, foliage touching the wires, etc., but the value of such coils is negated by humid atmosphere, especially by fogs, mists and rain so that during their prevalence the coils not only cease to do good, but become positively detrimental to the working of the wire, as it is well known that the talking becomes more distinct upon ordinary telephone wires when there is a certain amount of escape than when the weather is dry.

A more or less practical remedy for this trouble would be to cut the coils out of circuit when the atmosphere had become too damp for their beneficial operation. This obviously would be attended with considerable difficulty, as the coils are inserted several to the mile, and located upon the cross-arms and poles carrying the wires.

One way would be to attach to each coil a barometer, similar to that which shows the lady visible upon the outside when the weather is fine, and when the weather is damp the lady disappears and the gentleman becomes visible. The operation of this very scientific and admirable contrivance could be arranged to close a short circuit cutting out the coils when the lady receded and immediately taking off the shunt when the weather was fine enough for the lady again to make her appearance.

This would also be an advantage to the patrol man, as he could readily tell at a glance whether the coil was in or out of circuit.

The useful applications of the coil in fine weather are also limited by the fact that a copper wire besides having electrical conductivity, must also have tensile strength, which I contend, in regard to the telegraph and telephone wires in the United States, with but two or three solitary exceptions, are too weak to stand the strains to which they are subjected. In other words their load factors, over and above the breaking point, are entirely too small, but with wires of sufficiently high conductive capacity and a proper application of the inductance coils, they would certainly open up the possibilities of direct telephonic communication between points as widely separated as New York and San Francisco without the employment of an unreasonable amount of copper in the wires forming the circuit during dry weather.

It is to be presumed, if such coils were applied to underground wires, that there would have to be large air-tight rooms taking the place of man-holes every few feet, as there would probably be a great many more coils required per mile on the underground system than upon the overhead, and such coils would have to be disposed around the

sides of each of these rooms, for connection into the cable conductors, which, if numerous, would make quite a complication. In this case, however, once the application was made there would be no weather conditions to require the services of a barometer as above stated.

H. D. CUPRUM.

New York, April 16.

### Inefficient Telegraph System in the Philippines.

(From the Manila, P. I., Freedom.)

The inter-island telegraph and cable system has been a wonderful and praiseworthy accomplishment, but it seems that the work is to be brought to naught or to be seriously impaired for some months at least by lack of operators.

There is no excuse for this condition of affairs. It is due to a number of different reasons, primarily the discharging, through expiration of enlistment, of a greater part of the signal corps non-commissioned officers and men of the army who have built the system and afterwards operated it. These men are returning to the United States. They have had three years of Uncle Sam's service, and they do not hesitate to express their grievances. In the first place, the work of the signal corps men is a combination of the duties of civilians and soldiers. They have arduous, and in many instances, dangerous duties to perform—duties which render their messing with other organizations more or less impracticable. During the first two years that the United States troops were in the Philippines, the signal corps men were allowed commutation of rations in lieu of messing with organizations. While travelling this amounted to one dollar and a half gold per day, and while in station, seventy-five cents, gold, per diem. In course of time, the signal corps men came to look on this as part of their pay, and arranged their affairs in accordance. As this branch of the service is one of the best paid in the army, the addition of commutation of rations brought their stipend up to a more or less reasonable figure for the class of work they were called upon to do. Under these circumstances, the enlisted men of the corps were, as a rule, satisfied, and re-enlistments, in a majority of cases, could be expected.

However, about a year ago, it was decided at Washington that retrenchment must be the order of the day in the Philippines and, as a result, the commutation of rations except in exceptional instances, was cut off. The result has been that the signal corps telegraphers have been compelled to endure many inconveniences, and have found it difficult to get along. They have felt it in blockades of the system, inferior service, and many other ways. Now it is being felt in the refusal of the men to re-enlist. They are, as a rule, competent telegraphers, and claim that they can secure employment in the United States at fair salaries, and that they are more or less right. No inducement has been offered to re-enlist and no provision has been made for their

employment as civilians, and therefore they are going home discouraged and angry at the treatment which has been accorded them. The result will be that the Philippines will be very unsatisfactory (as it already is) for some, or until arrangements can be made either to bring telegraphers from the States or to educate Filipino operators sufficiently in English to perform the duties. But the system of American operation built up on the battle-field and in arduous campaign is to be a thing of the past because the Government will not accord to these men their rightful due. In other words, in order to save a few pennies, the Government will spend dollars, and lose its tried and trusted employees.

### The "Beauties" of Government Telegraphy.

[Those who desire to see Government telegraphy established in the United States, and who are fond of referring to England as a country where the telegraph fraternity is fairly dealt with, will find little comfort in the following which was considered sufficiently important to warrant the great expense of its being cabled to newspapers in this country.—Editor.]

London, April 19.—The House of Commons was occupied for several hours last evening in discussing the grievances of Post Office and telegraph employees. When a vote was taken the Government escaped defeat by a majority of only thirty-one votes.

There are well-founded complaints that pressure was brought by the organized civil servants upon members of Parliament, and on the other side there are dark threats of disfranchising every one in the Government service. But these charges are really made to obscure the issue; for it is beyond doubt that the lower grades in all sections of the British Civil Service are scandalously underpaid.

A few years ago, for instance, the Controller of Telegraphs in London, Sir Henry Fisher, in giving evidence before a committee of inquiry, declared that the junior telegraph operators were not paid enough to live upon. Yet nothing has been done since to remedy such a shameful state of things.

This system of official sweating has driven the telegraph operators and other employees to organize for the redress of their grievances, and there are now five trade unions in that Government department with an aggregate membership of 50,000. One of these days there may be a great strike which will paralyze the business of the country.

The humbler employees in other departments of the State service are all underpaid. There has been formed this week an association styled the Civil Service Writers' Guild, the sole object of which is to obtain for members work after office hours which will enable them to supplement their meagre official pay so that they may live in something approaching comfort.

Inadequate pay is not their only grievance.

Favoritism is rampant in every department of the public service. Here are two typical instances: In the Inland Revenue Department a young clerk of only four years' service but of aristocratic connections has just been promoted to the principal clerkship, to which a high salary is attached, passing over the heads of hundreds of abler men who had great official experience. Lord Londonderry, the Postmaster-General, the head of the telegraphs, has decided that admission to the official stands viewing the route of the King's coronation procession shall not be permitted at telegraph and post offices to officers who are in receipt of a salary less than \$2,500 a year, thus excluding from their own premises every telegraph employee in the British service.

### The Same Old Story.

A singular ill fortune appears to dog the heels of the great inventors. Marconi's present troubles call to mind the woes of many other celebrities whose genius enriched the world while it left them profitless.

Not only have the detractors of the inventor of wireless telegraphy followed traditions by condemning his invention as of little practicable value, but the British Government has refused to allow telegraph stations in the heart of the island. Germany has barred his system from the land.

Marconi has consoled himself with the reflection that it has been ever thus, and history confirms the truth. Congress made merry over Morse, who invented the system of telegraphy upon which Marconi is trying to improve. Morse could find no one, either in this country or in Europe, who would look twice at his telegraph instrument. In England he was even refused a patent, while in France he could only procure a useless paper which gave him no privileges. When the usefulness of his invention was demonstrated he was beset with litigation by those who wished to defraud him of the fruits of his genius. Marconi may be thankful he lives in this age, despite the action of the British and German Governments, and the hundreds of individuals who stand ready to sue him in order to obtain the last dollar in his possession.

### International Cable Directory.

The State Department has designated the Western Union Telegraphic Code and International Cable Directory of the World for use in the embassies, legations and consulates throughout the world. Congress recently appropriated a sum of money for this purpose. The books will be at the disposal of American citizens abroad, and the action of Congress is in furtherance of its desire to aid in the extension of American trade and manufactures.

This code may be obtained at \$15 per copy, a price which includes the insertion of the purchasing firm's name in all future editions of the directory. Address J. B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York.



### Cable Fault Testing Instrument.

The Cable Fault Testing Instrument, recently placed on the market by Foote, Pierson & Co., of New York, is designed to be used by those not having the technical knowledge necessary to make galvanometer tests. With this instrument it is not necessary to know the resistance of the cables, the size of the wire, or the voltage of the battery used in testing, but simply the length of the cable in feet.

The fault tester consists of an accurately graduated rheostat divided into 100 steps, a sensitive portable D'Arsonval galvanometer with a suitable number of cells of dry battery all neatly mounted in one case.

The whole apparatus is very compact, easily portable, and can be used in a man-hole for underground cables, or on a pole for aerial cables.



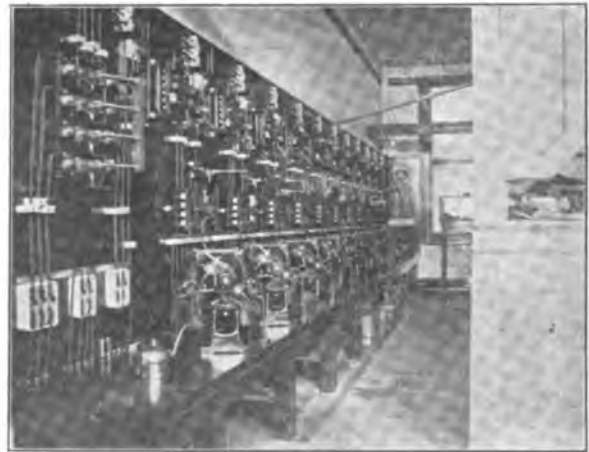
CABLE FAULT TESTING INSTRUMENT.

The method of use is simply one of ratio, viz. an arm moves about a circle connecting the galvanometer to any one of the 100 points of the rheostat and to determine the position of a fault it is only necessary to move the arm around the circle till it reaches a point where there is no deflection of the galvanometer and then multiply such numbered point by the total length of the cable in feet; that is, say, that the total length was two miles or 10,560 feet, and there was a ground on the cable at some point. When a reading of the instrument was taken the galvanometer balanced at .58 or  $10560 \times .58 = 6124.8$  feet showing that the fault was this distance from the end or point of observation on testing.

The galvanometer used with this set is the regular "Delta" portable testing galvanometer and can be used in connection with any wheatstone bridge set for the determination of high or low resistance or such general work as is performed by high class instruments of this kind.

### New Western Union Office at Columbus, Ohio.

The Western Union Telegraph office at Columbus, O., has been removed from its old location on High street, to a more convenient point on Broad street, where, as in the former instance, it also faces the State Capital. This change was made necessary by the constantly increasing business of this office, which has long demanded larger quarters, and in the choice of the new fire-proof building, in which the office is now so advantageously settled, a wise selection was made, for it affords added space sufficient for both present and future needs. The receiving room is located on the first floor and is handsomely fitted up with all of the requisites of so important an office. The operating room occupies the rear of the second floor. This busy apartment, which is connected with the receiving room below by means of the Bostedo pneumatic system, is equipped with the new standard Western Union tables



GENERAL VIEW OF THE DYNAMOTORS IN THE COLUMBUS, O., NEW WESTERN UNION TELEGRAPH OFFICE.

cut for typewriters, with a center rail, and with typewriter cupboards placed underneath the table. There are four sections of standard spring jackboard, and with Crocker-Wheeler dynamos of the following voltages, namely, 24, 90, 180 and 265. A view of these dynamotors is shown in the accompanying illustration. All of the appliances in this office are of modern design and are strictly up-to-date in all particulars, thus placing this office on a par with other recently improved Western Union offices, the renovation of which has been accomplished under the direction of Mr. J. C. Barclay of New York, the electrical engineer of the company. The Columbus office is under the management of Mr. S. M. Dunlap, while Chief Operator Owings looks after the operating department.

He that does good for good's sake, seeks neither praise nor reward, though sure of both at last.—  
William Penn.

### New Postal Main Office in Chicago.

The Postal Telegraph-Cable Company has rented the two additional stories which are to be added to the Rialto Building, Chicago, Ill., and other space in that structure for a term of twenty-five years at a rental of \$30,000 a year. The name of the building will be changed to the Postal Telegraph Building, and the additional stories and improvements to be made in the structure by which it will be converted into as fine an office building as there is in the city will cost \$250,000. The lease dates from May 1, 1905, at the time of the expiration of the company's lease on the thirteenth floor of the Stock Exchange Building at the southwest corner of La Salle and Washington streets.

The Rialto Building is now nine stories high and is constructed of red brick and terra cotta. It fronts 157.21 feet on La Salle street with a like frontage on Sherman, and 174.8 feet on Van Buren street and Board of Trade court. Board of Trade court is 30 feet wide and is between the Rialto and the Board of Trade building. There is, however, a bridge joining the two buildings at the second story. It is proposed to put new floors in the public halls and corridors of the building, the floors and wainscoting to be of marble, while the interior throughout will be elaborately decorated. A magnificent entrance will be made in the La Salle street side, giving the building an inviting and attractive appearance.

In addition to the upper stories the company will occupy a large space on the ground floor, the southwest corner of La Salle street and Board of Trade court, where the receiving and delivery departments will be located. The executive offices of the company will be in the eighth story of the building. In the ninth story it is proposed to have an ideal operating room, with double height of ceiling in order to get good light and ample ventilation, making the work of the operators easier and their environments much more pleasant. In addition to light on all sides there will be light from above. Particular attention will be given to the comfort of the employees. The employees now have a large library, but this will be much enlarged. In addition to this there will be rest rooms, lunch room, reading room and class rooms where advanced electricity may be studied by the operators. The reconstruction of the building will be commenced just as soon as it is possible to prepare the plans and get the material with which to do the work.

In its new location the company will have over 32,000 square feet of space. The company now maintains in Chicago two big offices, one at the Board of Trade, where 156 men are employed, and one in the Stock Exchange building, and it is now proposed to centralize these forces in the new office where the business can be handled much more expeditiously. The Postal Telegraph-Cable Company in Chicago employs a force

of over 700 people and maintains nearly 200 branch offices.

The executive offices of the company in that city are now in the Stock Exchange building, Edward J. Nally being the general superintendent and having charge of the entire western business of the company.

### To Carry Mail in Tunnels.

For the purpose of securing the right to engage in the business of transmitting mails, newspapers, parcels, and freight through underground tunnels to all parts of Chicago, the Illinois Telephone and Telegraph Company will go to the City Council for an additional franchise. President Wheeler said: "The complete plan embraces the system of trunk tunnels and laterals now in the down-town district. About ten miles of the laterals have been finished six by eight feet. The trunk tunnels down town will be twelve by fourteen feet, only three or four miles in length.

"For outlying Chicago the plan is to have a main trunk tunnel twelve by fourteen feet, running on some principal street as far south as Sixty-third, with lateral tunnels six by eight feet at every half-section line, or every half mile. North the trunk tunnel will extend to Diversey Boulevard, with laterals half a mile apart, and for the west side the trunk will run to Western avenue."

### The Pension Fund Proposition.

Editor TELEGRAPH AGE:

I have read the different articles in TELEGRAPH AGE of April 1 regarding pension organization. In my opinion a fund raised by levy or subscription is the only true solution of the much vexed and agitated question. Men like Carnegie will likely contribute liberally after they see that the fraternity means business.

It is to be earnestly hoped that the telegraph companies can be induced to take the matter up, and by material help place worn-out operators free of embarrassment, when they have become too old to longer perform the duties devolving upon them.

M. D. CRAIN, Sr.

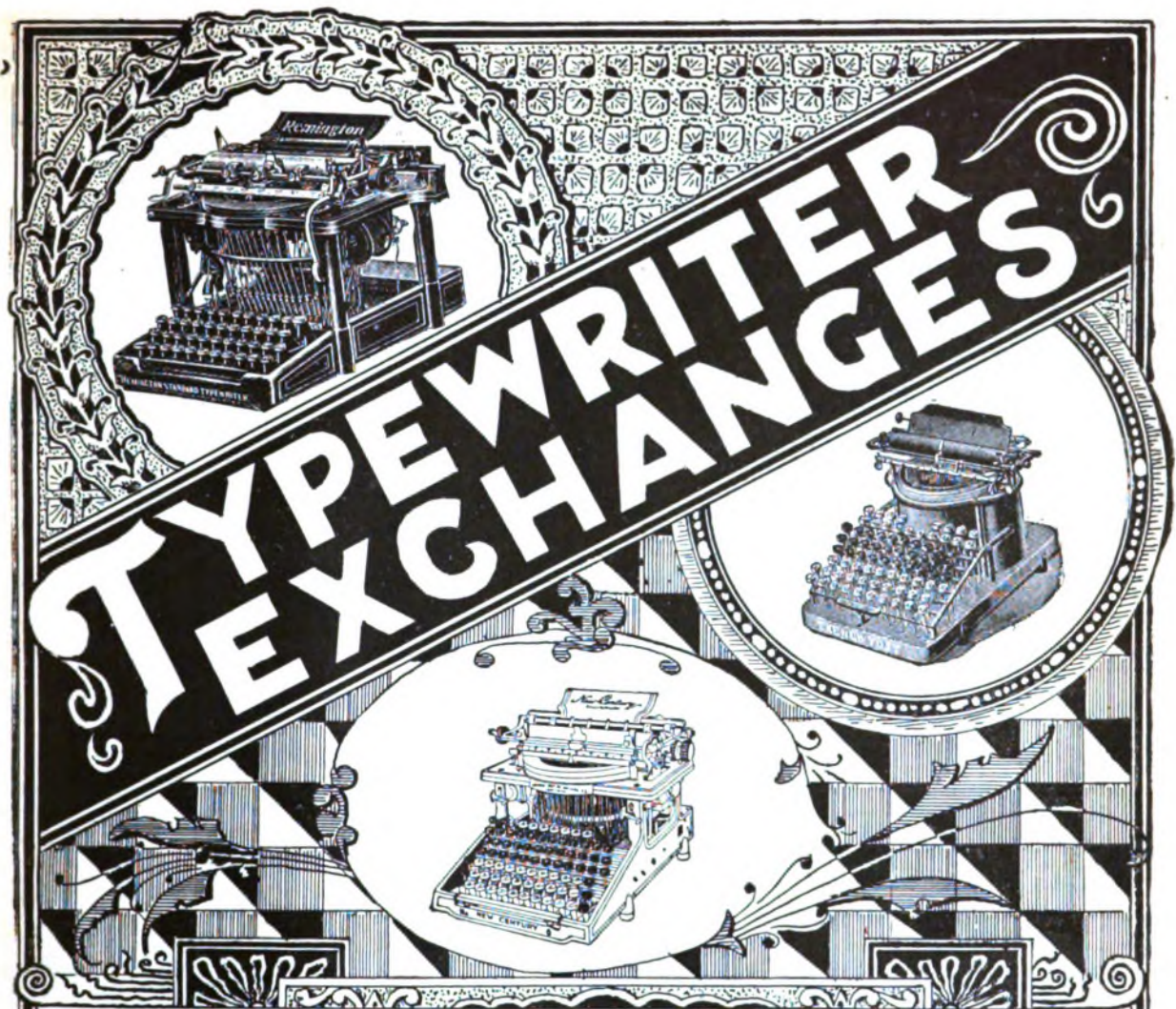



St. Louis, Mo., April 15.

### Telegraphers' Pensions.

The committee of New York telegraphers having in charge the formulation of a pension plan is hard at work endeavoring to arrange a feasible scheme to be presented to a general meeting of the fraternity to be held in the near future. The committee holds weekly meetings, and an immense amount of data bearing on the subject of pensions is disposed of at each of the gatherings.

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NEW YORK, May 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.

Since the publication of the page portrait of Col. Robt. C. Clowry, president of the Western Union Telegraph Company, New York, in our issue of April 16, we have received many requests to know whether we could supply the picture suitably framed for hanging in an office. We desire to say that we have arranged to comply with such requests, and are prepared to send the picture framed in oak and properly glazed, to any address on the receipt of one dollar. Orders should be sent to J. B. Taltavall, **TELEGRAPH AGE**, 253 Broadway, New York.

### A Telegraphers' Library Association.

The Postal Telegraph Library Association of Chicago, which had its beginning a few years ago in the adaptation of ideas originating with Mr. E. J. Nally, of that city, the Western general superintendent of the Postal Telegraph-Cable

Company, a man whose broad and progressive sympathies are always on the side of the operator, has taken a prominent place as a positive and delightful educational feature in connection with the Postal company in the Western metropolis. In fact, with such approval is the enterprise viewed by the officials of the Postal, that special arrangement is being made to provide the library with suitable accommodations in conjunction with the new offices which the company are soon to occupy in that city.

The association now has a membership of 150. There are 1,300 books in the library, all carefully selected volumes of a character calculated to instruct and elevate the mind of the telegraphic reader, with student proclivities, for whom they are intended. These books are eagerly read and have an average circulation of 208 copies a month. The expenditure for books during the past year has ranged from ten to fifteen dollars per month, and as this has been done judiciously, a fine collection of standard works is thus gradually being accumulated.

In addition to the facilities afforded by the library there has been established afternoon and evening lecture classes, this being in fact the second season of such a method of instruction. These lectures cover a wide scope of information designed to aid the telegrapher, and as they are given by competent instructors, and are fully illustrated by the employment of apparatus and by practical tests, are interesting and educatory to a high degree. The classes are proving to be popular and are now regularly attended by over sixty members, upon whom a small month assessment is made in order to cover expenses. Indeed, both the library and the classes are self-supporting.

Such an example in both of its branches as this Chicago enterprise affords, is in keeping with the spirit of the age, and is entitled to all praise. It has passed the experimental stage, the objects sought are being gained, and beneficial results attending its influence are already apparent in the broadening and elevating of the standard of the individual in technical knowledge, the stepping stone to future success. In its general plan the design is worthy of emulation elsewhere and should find many ready, willing and even anxious supporters in every community where there are a sufficient number of telegraphers to make the undertaking of such a project practicable. What is a good thing for Chicago, a center by the way that has developed so many bright telegraph men, is equally desirable for New York, for Philadelphia, for St. Louis, for Boston and other points without mention.

Goodness consists not in the outward things we do, but in the inward things we are. To be is the great thing.—E. M. Chapin.

Hard workers are usually honest. Industry lifts them above temptation.—Bovee.

### A Parting Gift to Belvidere Brooks.

The transfer of Mr. Belvidere Brooks, the assistant superintendent of the Western Union Telegraph Company at Denver, Col., to the position of general superintendent of the eastern division, at New York, drew forth many expressions of affectionate regard for him from among the telegraphic fraternity in the West by whom he is deservedly held in high esteem. At Denver it took the form of a presentation, on April 17, of a magnificent diamond ring, valued at \$300, from the employees of the Denver office and others in Mr. Brooks' district. The gift was presented in behalf of its donors by Colonel J. J. Dickey, of Omaha, the occasion being one that appealed strongly to the hearts of all present as it was largely in the nature of a reminiscence and a goodbye. Colonel Dickey spoke as follows:

"About thirteen years ago I had the privilege of making a trip through the South and to the Pacific Coast with Colonel R. C. Clowry. The journey was largely out of my territory, and among other places we stopped at was Galveston, Tex. Here I met and became acquainted with a young man by the name of Belvidere Brooks, who was in charge of that important office of the Western Union Company. I learned that he had by conscientious work and energy, worked himself into the position he held from that of a messenger boy. I became quite well acquainted with him, noted his ability, and made a mental reservation that when I had an opportunity I would try to avail myself of his services at the North. The opportunity came, and with the consent of the immediate superintendent of the Galveston district, and the approval of the general superintendent, the young gentleman referred to was transferred to Denver, about eleven and a half years ago, as the local manager of the Western Union Company, at a time when the strongest development of Colorado was setting in.

"I had discovered in the young man the elements upon which to build a successful telegraph manager; he succeeded beyond the expectations of the company, and kept ahead of the developments and the wonderful growth of the West. I had predicted from the first that he would make his mark and go to the front of the controlling management of this great corporation.

"This, of course, Mr. Brooks, refers to yourself. It was but a short time before you were called to the position of assistant superintendent, the duties of which you have since performed in a manner entirely satisfactory both to the company and to the public. It has been my privilege and pleasure to be associated with you in the progress and development of the telegraph service in this part of the country ever since that time. We have struggled together against the elements of both sleet and fire and have had to meet many complex situations, and I never have found you wanting. Your energy and loyalty have ever been present, and you have always been tireless

in your efforts to perfect the service of the company and to support me in every way possible.

"You are now called to the responsible position of general superintendent of the eastern division of this great company, with a seat next to the president. Any one who knows you, and knows of your work, will agree with me that this distinction has been well earned.

"For the past few days it has been my pleasure to be with you in your office, and upon the streets of Denver, and I have been profoundly impressed with the unanimously cordial congratulations of your acquaintances upon your success, mingled with genuine expressions of regret that you are to move from this community. I also learn that this feeling extends throughout the Western States and is not confined to Denver. Everybody is glad to see you go to the front.

"While your business acquaintances have expressed in every way their satisfaction, there are others who, perhaps, feel a closer interest in you personally than your friends outside of the service. I refer to your associates and employes. I have been requested by them to say a few words to you in their behalf, upon the occasion of your transfer from their midst. I have been in a position to know the great respect and love they have for you, and the loyalty with which they have supported you at all times, and they desire me to say that their prompt and cordial co-operation with your efforts has come freely, and from the fact that you have always held out a helping hand to each and every one of them when it was needed. You have always been free with your commendation and praise for good service; you have always been ready to help those who were sick and in trouble, and no man could leave his associates with more hearty good will. We desire to extend to you our most cordial congratulations, mingled with our regret, at being deprived of your presence among us. You take with you our most heartfelt wishes for your entire success and further advancement.

"It would be impossible for me to express the good feeling that we all have for you. But these are mere words. We have prepared a little souvenir of our great regard for you, which we hope you will treasure as a reminder of the friends you have left behind. This jewel represents our bright particular star, and we know that you will never suffer its brilliancy to be blurred. On behalf of your employes and associates I take pleasure in presenting to you this little token."

#### SKETCH OF BELVIDERE BROOKS.

Mr. Belvidere Brooks, assistant superintendent of the Western Union Telegraph Company at Denver, Col., has been appointed general superintendent of the eastern division of the same company at New York, relieving Charles A. Tinker, resigned.

Mr. Brooks is a native of Texas, having been born at Wheelock, that State, July 6, 1859. He entered the telegraph service as messenger at



Navasota, Tex., in July, 1871. During the years 1877 and 1878 he was employed as an operator and in other positions of trust at various places on the Houston and Texas Central Railroad. In 1879 he first became identified with the Western Union Telegraph Company, and in the following year was advanced to the managership of the office at Navasota. After a few months' service at this point he became a clerk in the superintendent's office at Dallas, subsequently serving successfully as manager of the Waco, El Paso

arranged to make his home with his daughter at St. Albans, Vt., and is planning a trip to Europe in the near future to visit his son and family now residing in Dresden, Germany.

A native of Vermont, Mr. Tinker learned telegraphy at Northfield, that State, when fourteen years of age, and soon thereafter was appointed manager of the Vermont and Boston Telegraph Company's office at that place. With the exception of one year he has been continuously in the telegraph service since 1852.



BELVIDERE BROOKS.

General Superintendent of the Western Union Telegraph Company.

and Galveston offices. At the latter place he remained until November 1, 1890, when he was appointed manager at Denver, Col. On January 1, 1893, he received his promotion to the position of assistant superintendent from which he has just been advanced.

Mr. Brooks is a capable official, is popular with his men, and enjoys the entire confidence of his company. He was elected vice-president of the Old Time Telegraphers' and Historical Association at the Montreal meeting held in September last.

#### Charles A. Tinker, Resigned.

Charles A. Tinker, for the past twenty years general superintendent of the eastern division of the Western Union Telegraph Company, at New York, has resigned, his retirement taking effect on May 1, thus closing his fiftieth year in the telegraph service. This is a long career, and Mr. Tinker's faithful and honorable record, covering so large a period of the existence of the telegraph itself, in which he has risen through various stages to the high position, now relinquished, will ever be a source of grateful reflection to him in the years to come. His withdrawal is in fulfillment of a long contemplated purpose. He has



CHARLES A. TINKER.

Who has resigned the general superintendency of the Western Union Telegraph Company.

During the Civil War he was in the United States military telegraph service, with the Army of the Potomac, and at the War Department, Washington, where he was associated with General Thomas T. Eckert, General Anson Stager, A. B. Chandler and D. H. Bates. In those days he saw much of the late President Lincoln, with whom his duties brought him into close association, and of whose characteristics and quaint sayings he retains vivid recollections.

After the close of the war he became, in 1866, the Western Union Company's manager at Washington, D. C.; in 1872, superintendent of telegraph of the Central Vermont Railroad; in 1875, general superintendent of the Atlantic and Pacific Telegraph Company; in 1879 superintendent of telegraph of the Baltimore and Ohio Railroad, and in 1882, general superintendent of the eastern division of the Western Union Telegraph Company.

Every telegrapher who loves his profession, who is determined to master its technicalities, and thus insure for himself the confidence and respect of his official superiors and place himself in the direct line of promotion, should subscribe for TELEGRAPH AGE.

### Charles B. Horton.

Mr. Charles B. Horton, since 1890 assistant superintendent of the Western Union Telegraph Company, at Omaha, Neb., has been appointed to a like position at Denver, Col., succeeding Mr. Belvidere Brooks, promoted to the general superintendency of the eastern division, at New York.

Mr. Horton was born at Geneva, N. Y., January 25, 1850. He removed to Northville, Mich., in 1857, and to Nebraska in 1863. In 1864 he crossed the plains, driving six yoke of oxen hitched to a "prairie schooner." Reaching Denver in the fall of that year, where he became stranded, he enlisted in the Third Colorado cavalry (Chivington's 100 day men) and took part in the expedition against the Indians, a campaign



CHARLES B. HORTON.

Newly Appointed Assistant Superintendent of the Western Union Telegraph Company at Denver, Col.

which culminated in the Sand Creek or Chivington massacre, where several hundred Indians were butchered after their own particular manner. At the end of this service Mr. Horton re-enlisted in the Second Colorado cavalry, and served with the regiment until it was mustered out after the close of the war, at Fort Leavenworth, Kas., in September, 1865. He attended Tabor, Iowa, college, for two years and then served three years in the regular army, in Battery C, Third United States Artillery. This furnished him with sufficient army experience and he returned to Michigan where he engaged in mercantile business. He was married to a daughter of Hon. James Hueston, a well known and prominent physician.

During his residence in Michigan in 1872 and 1873, he learned telegraphy. In 1878 he returned to Nebraska and on July 3, of that year, entered the service of the Western Union Tele-

graph Company as operator, holding this position until the consolidation of the Western Union and American Union Telegraph companies, when he was promoted to the position of cashier of the Omaha office. He afterwards filled the positions of clerk, stenographer and chief clerk in Superintendent J. J. Dickey's office, and on June 1, 1890, he was appointed assistant superintendent to Mr. Dickey, the place he now leaves in order to fill his Denver appointment.

### Appointed Electrician.

Mr. Lewis McKisick, electrician of the Western Union Telegraph Company at San Francisco, Cal., who has just been promoted to the position of electrician of the western division of the same



LEWIS MCKISICK.

The new Electrician of the Western Union Telegraph Company at Chicago.

company with headquarters at Chicago, was born at Memphis, Tenn., November 17, 1866. He went to California in 1879 where he took the degree of Ph. D. at the University of California in 1890. His date of service with the Western Union Telegraph Company began at San Jose, in August, 1890, a position he resigned in November following in order to connect himself with the main office of the company at San Francisco. Here he has since remained earning recognition for himself, and his present advancement comes to him as a reward of true merit.

Russell Sage, when asked the secret of success, said, "The secret of success is to keep your credit good." "Keep your mouth shut," was the answer of old Commodore Vanderbilt to the same query.

Subscribe for TELEGRAPH AGE, \$1.50 a year.

### How to Read Telegrams.

One of the "great dailies," upon the page intended for the home circle, proposed recently a new game for country parlors on Winter evenings. The leader was supposed to be a European traveler desirous of communicating with his family in a code to save telegraph tolls. He would give the initials of the words he wished to send, and the rest of the party would fit the words to the initials. Thus "Brown," for example, would be sent at the cost of one word, but would mean five words—perhaps "Bought ring on Wednesday night," or "big rain; out; wet; neuralgia." Or perhaps he answered "NPTL" to his wife's request for authorization to acquire a real dream in millinery at an incredible bargain. He might have meant "No. Price too large," but any woman would prefer to interpret, "No price too large," and indulge her whim accordingly.

This may be thought somewhat frivolous, but it is only intended to lead up to more or less serious, if not solemn, remarks upon the fact that this game is constantly played for solid stakes, not only by senders and receivers of telegrams, but even by those who read them in the daily prints. The gentle reader will perhaps be led most seductively up to the moral of this disquisition, if the journey is beguiled by a few "awful examples," which are not imaginative in any degree, but culled from the newspapers within a rather brief period, and without at all exhausting such an inexhaustible mine.

Here, for instance, is a literatim extract from an English account of Sir Henry Irving's recent sailing for these shores with "eight bags, and six hundred and thirty-two plugs." Now, what on earth does that mean? Are we to understand that such a fine gentleman as Sir Henry chews tobacco on or off the stage? Or can "plugs" be vernacular for silk hats? And if so, what does he want with 632 hats of that one sort? Or, once more, can plugs be horses of a certain sort? Only the rashest reader will venture upon a positive answer to these embarrassing doubts, but the guess may be hazarded that the intelligent copy editor or proofreader has corrected or elaborated a sailing list which announced Sir Henry Irving's departure (in bill of lading, English,) with 632 "pkgs.," meaning packages of scenery and so on.

Then here is a foreign account of Czolgosz's execution: "The prisoner is brought in by two or three warders and the chaplain is placed in the chair." Certainly nobody here put the chaplain in the chair intended for Czolgosz, and probably the good man was placed in so uncomfortable a position in foreign newspapers only metaphorically, so to speak, by the dropping of "and" after "chaplain."

But not seldom a sentence is exactly correct in every word and even letter, and yet a pretty good pair of spectacles may be needed to discover what is meant. For example, "At Memphis, U. S. A., yesterday, a little boy paced a mile to a wagon in 2 min. 1½ sec. This is a world's

record." It certainly is. A man needs more than twice as long to run a mile, and pacing is a queer gait for a boy, whether big or little, or at any rate of going, and with or even without a wagon. The fact is, the world's record in this case was made by the telegraph editor, who turned the pacer Little Boy into "a little boy." With this key, Americans can have no sort of trouble in understanding what was meant by the cablegram to London that Mr. Lawson ordered "Independence to be converted into a junk." Doubtless the telegram was intended to announce that the peppery Bostonian's order was to convert his freak yacht into junk, or scrap. He had no more use for a Chinese junk than for a 90-footer without potentiality of becoming a defender. The article "a," of course, is seldom cabled, and usually it is written into the telegram correctly, but excess of zeal sometimes inserts it superfluously, as in this case, and in another which occurred about the same time. In this way nonsense was made of what was meant for a serious account of Johann Most's approval of McKinley's assassination. "The ravings of Johann, a most stalwart Anarchist," is how a London editor printed it, and a Glasgow editor copied it.

So it is useless to say that all editors even know how to read telegrams, or to print them either. Why, for instance, did English editors insist upon asserting almost to a man that Yale's bicentennial was at "Newhaven"? There is a Newhaven in the United Kingdom, to be sure, but that is no good reason for supplying one to Connecticut simply because the cable writer wanted to save his employer one word's tolls. They will soon be supplying New York State with another city—Newyork—and no Knickerbocker will deny that would be a *casus belli*, which talk about a common literature would rather increase than excuse.

The preceding are easy ones. Ordinary intelligence and a little trouble enable anybody to detect or to understand how such blunders happen and how they ought to be corrected. But there are others which no fellow can detect without specific knowledge. Here is a case, from the "Tribune's" usually exact and always excellent London messages: "The Duke and Duchess of Fife were employed in laying the foundation stone at Passmore, King Edward's palace." This is not nonsense necessarily, but it is nonsense as a matter of fact. The cabler thought the amplifier of his skeletoned message would know, as every Englishman knows, that the reference was to Passmore, Edward's palatial soldier's home, and not to one of the royal palaces.

"General information" would probably keep Caucasian editors from printing any telegram to the effect that the German Emperor had made Gen. von Caprivi Count of Zanzibar. Any such assertion would be queried or thrown away. But the Japanese editor, who doubtless feared to correct anything he did not understand, really could



not be blamed for not untangling the mess made by hashing together two telegrams announcing the making of Zanzibar free as a port and the creation of von Caprivi a Count. This would have been lese-majeste if printed in Germany, and, since the election, a specimen of lese-Crocker may be ventured even in America. For the most part the awful tale can be told best in the ex-boss's own words. He had been lamenting the shocking stories about him in the newspapers, especially those relating to his movements to and from his adopted home, meaning the home he adopted after he had adopted America as a substitute for the home of his nativity. He said, and the quotation marks are taken from the veracious New York prints: "The news associations in Enrope sent out a dispatch saying 'Boss Crocker arrived to-day at Dover.' I happened to be in the country at Mr. Belmont's place. I thought the story about my being in Dover was sent out by the news associations for some ulterior motive, and I had the matter investigated. I find that the news associations were correct. It was a race horse called Boss Crocker, and he was on his way to France. The cable dispatch man merely said 'Boss Crocker arrived to-day at Dover,' and did not explain that he was merely a race horse."

Now listen to the great man a little further: "You sometimes hear people say that they don't believe anything they see in the newspapers. But, of course, they go on reading them just the same, because in the main there is a foundation of truth in nearly everything that is sent out as news." Just so. Upon behalf of the fraternity, hats will or should be lifted for this once in a way. But this speech from the oracle merely states the problem which is the subject of serious, if not wholly solemn, consideration here. How shall the kernel of truth be sifted from the chaff in the mass of telegrams upon which the world's politics and finance are based nowadays—for a fresh crisis is upon the Napoleons of various sorts before the facts of the old crisis are learned by the public or private mails. Not everybody who is able to put "a, b, ab," together in the old-fashioned way knows how to read even print as modern print needs to be read. Neither can the art of reading telegrams be taught in any such royal manner as up-to-date small boys are taught to read by words instead of by letters. After this primary stage is passed, there remains much to be done by sheer ratiocination before the real and true meaning is extracted from the page of "foreign intelligence."

"Beauty is in the seeing eye," and truth is for the intelligent reader. There is a profusion of grave and gay examples. Here is one: "Mrs. Langtry appeared in the new play called 'Mademoiselle or Mrs.'" This is plainly untrue, for Mrs. Langtry has not yet appeared in such a rollicking farce as any play so named must be. "Mademoiselle Mars" was meant, as was clear to any one for whom the paragraph had or could have had

any meaning. We all have more or less information about the stage, and so could reject or amend anything like that for ourselves.

But not all Englishmen, if any, have the information requisite to amend that message to a London paper on the eve of our election, asserting that New York was under a reign of terror by throngs of scoundrels imported for the purpose of false voting. The gentle reader, if he is a good American, lost something of his gentleness as he read such nonsense. He read it in the anti-Tammany sheets and was careless about it, because he knew how to discount such campaign exaggerations for himself. But to read it as gospel truth in the first paper of the world and to know that not a soul abroad would know enough to correct it for himself, and that it would never be corrected in any other way, to the great detriment of his own, his native land, makes his gorge rise. As matter of fact, the election was so far from being controlled by "thieves and assassins" that the election day was exceptionally orderly, and polling was as fair as human control could make it. The best proofs of this are the facts that only an imperceptible percentage of the rascals were convicted, although Tammany was defeated. This, of course, is intended merely as a basis of generalization applicable to all telegrams of a political nature, and which adopt such partisan errors as taking Democratic politics from Republican journals, or vice versa.

Such information cannot be amended by merely repunctuating or substituting one word for another argumentatively. The average reader is misled unless he knows what to accept or to reject as a whole. For this knowledge there is no substitute except reliance upon the character of the telegrapher, or of the print in which his messages appear. In nothing else than news is the personal equation of greater importance.

There used to be a most thrilling foreign service which served up to Americans a fresh war with every month. The fighting never came, and so in time it came about that no harm was done, because everybody knew how to read between the lines. But harm is often done, as by that most conspicuous service which informed the world that America was not in earnest about the Monroe doctrine, that Americans were rather ashamed of Secretary Hay's Chinese policy, which after all was not much to be proud of; that England needed only to persist and the Senate would waive its urgency for freedom to construct the Isthmian Canal in the American manner without restraints adapted only to outworn conditions—and so on. It cannot be said no harm is done when great nations are brought to the verge of misunderstanding by sending to England English versions of American affairs or to America American versions of English affairs. America wants to know from England what England thinks, and there are questions still in the future regarding which it is to England's interest to know early and truly what America thinks.

They are neither good Englishmen nor good Americans who, having access to the sources of public information, muddy the sources of public judgment through a weak desire to say what is pleasant, or even perchance to say what ought to be true, when in fact the truth is otherwise.

Or, take another case, the news which crosses the ocean in the reverse direction. The date line is often more important than the body of the message. Who believes war news from The Hague, or fresh barbarities by the British in a Berlin report?

Thus it appears that the simple game proposed for rustics is played in earnest every day by every person who follows the daily news. In this as in other things practice makes perfect, and the same words give different meanings to readers of different experience in the manner and extent to which telegrams conceal the truth, with or without the sender's intent.—New York Times.

#### Story of Confederate General Lee and a Denver Telegraph Operator.

At the outbreak of the Civil War, when General Robert E. Lee joined the Confederacy, and his valuable homestead, now Arlington Heights, just across the Potomac from Washington, was confiscated, the Government sent a squad of soldiers to guard the noted place. A telegraph office was opened in the east room of the spacious mansion and Benjamin Franklin Bush, now employed by the Western Union at Denver, Colo., was sent over as operator.

It was a lonesome task for both Mr. Bush and the soldiers—nothing to do but eat, sleep and occasionally call up the national capital and report: "All quiet on the Potomac." The boys soon discovered that General Lee had left a valuable library and they utilized the books in passing the time away.

Later, as the strife began to get warmer in the South, telegraph operators were in great demand, and Mr. Bush was ordered to report at the capital for Southern duty. Hurriedly packing his things he overlooked the fact that two volumes of "Tele-macrus," from General Lee's library, then considered very valuable works, had in some way been packed in the box containing his telegraph instruments and other equipment he was to take with him. Upon reaching the front, and not being far away from where General Lee was then stationed, Mr. Bush sent the books to the general, with a note explaining how they had come into his position. Several months later Mr. Bush received a personal letter from General Lee, thanking him for the books, which he very much prized, adding that he would also reimburse Mr. Bush by enclosing him a Confederate interest bearing bond for one hundred dollars. The bond with attached coupons, reads as follows:

"CONFEDERATE STATES OF AMERICA."  
"Authorized by Act of Congress C. S. A., of February 20, 1863.

"On the first day of July, 1868, the Confederate States of America, will pay to the bearer of this bond, at the seat of Government, or at such place of deposit as may be appointed by the secretary of the treasury, the sum of one hundred dollars, with interest thereon from date at the rate of seven per cent. per annum, payable semi-annually on the surrender of the annexed coupons. This contract is authorized by an act of Congress approved 20th February, 1863, entitled 'An act to authorize the issue of bonds for funding the treasury notes,' and is upon the express condition that said Confederate States may from time to time extend the time of payment for any period, not exceeding thirty years, from this date, at the same rate of interest, upon the surrender of the bond.

"In witness whereof, the register of the treasury, in pursuance of said act of Congress, hath hereunto set his hand and affixed the seal of the treasury at Richmond, this second day of March, 1863.

(Signed)

"THOMAS TYLER,  
"Register of the treasury."

After the close of the war Mr. Bush went to Colorado and was manager for the Western Union in Denver, from 1869 to 1881. Then he went into real estate and mining, but later returned to the key, just to show the boys how it "used to be done," as he puts it, and to keep himself in practice and his mind employed. While he is fifty years older than when he learned the telegraph business, Mr. Bush is still an expert operator and can come as near making the man at the other end of the wire earn his salary as can any of the younger element. He also takes kindly to the typewriter, which is now used by operators in copying messages from the wire, but he says it makes him weary, after "pastin<sup>o</sup>" some chap for an hour or two to have the fellow say: "Come old man, get your piano and take these from me," as though he couldn't copy faster with a pen than the average operator can send.

Twenty-five years ago, in February, Mr. Bush, then manager of the Denver office, engaged "Old Farmer" Lawton, at present night manager, but who was then working in the Pueblo office, to come to Denver and help him out for "only a week." He has been there ever since. Occasionally the night chief reminds Mr. Bush that the week is up and that some overtime is due. The last time he did Mr. Bush presented the chief the old Confederate bond that General Lee had given him for the books, and now the "old farmer" is wondering when the Confederate Government will redeem the bond and pay interest, which now amounts to something like \$996.59.

#### By Hypnotic Power.

Ralph Masson was night telegraph operator at a small station on the Illinois Central Railroad between Chicago and New Orleans, in a locality where the pine forests modified the air with a tonic of balsam for hurt lungs, and the dry, sandy soil furnished a chance for open-air exercise.

Like all consumptives his spirits increased as his health declined, and he saw with feverish intensity a long vista of future prosperity. Something peculiar in the mental make-up of the young operator was both interesting and baffling to new acquaintances, but it was merely the expression of a cult which is not yet one of the exact sciences, but has immense undeveloped possibilities.

Ralph Masson was a student of psychic phenomena, a firm believer in telepathy, and an ardent investigator into every new occult theory. He was himself a hypnotist, possessing a natural gift, cultivated and developed by study and practice. At Harvey Station he had small opportunity to improve this faculty, but there was one family living a few miles down the line where he found a willing convert to his peculiar views, and, what was more important, a valuable subject to carry them out successfully.

Margaret Lansing became infatuated with the strange new power, and gave Masson her intelligent co-operation when at an evening entertainment at the little district school-house, before he went on duty, he gave an exhibition of his skill and easily sent her into a profound hypnotic sleep. Her family and friends were present and gave their consent, looking upon it as a part of the evening's entertainment and seeing nothing serious in the performance. They were merely amused and incredulous when, laying his hand on her forehead with a light touch, he said: "Go over to the station, go into the office, and tell me what you see there."

He did not know that she could or would submit to the test; she had doubtless been there at some time, and might describe it from memory, and the test would be of no value. She did not respond quickly, and he repeated the command. After a moment she began to shiver as with fear.

"What do you see?"

"Two men who look like robbers. They are breaking open a desk."

"Can you describe the men?"

"One is young and one is old. They wear caps and have handkerchiefs tied over the lower part of their faces."

"Look through the handkerchiefs and tell me what you see."

"The one who is young has a red mustache and one eye is gone. The other has white hair and a smooth face. They are working in a hurry. Ah-h-h, they are caught!"

The girl's breath was indrawn with a sob. The hypnotist made a few passes over her and she came to herself weak and exhausted.

"Some of you fellows go over to the station and see if she is right," suggested Masson, who was deadly pale and much excited.

The investigating party soon returned, for they had met a posse which had surprised the robbers at their work. The men they had captured were two tramps who were exactly as the girl had described them. No one was more astonished than Masson himself, or more overjoyed, for it demon-

strated as a fact the powers that he feared might be fiction.

One night some weeks later, when Masson was on duty at his station, he received a telegram from Rawlings, ten miles down the line:

"Washout at Briscoe. Warn 2.20 express. This office can not reach them."

It was signed with the name of the night operator at Rawlins, and there was hardly a half hour before the train was due at Briscoe. Margaret's father was station agent at that point, but the express did not stop there, and he probably knew nothing of the washout, and no other train arriving until morning, he would be at home and asleep. It was five miles to Briscoe and raining hard; no horse could make the distance in time to give the alarm. And hundreds of sleeping men and women were speeding to certain death.

The young operator felt an unaccountable weariness and lethargy creeping over him, but he pulled himself together with a desperate effort that made every nerve tingle and vibrate. He was speaking aloud, although alone in his office.

"Margaret! Margaret! Margaret! Get your father's red lantern; go down to the Briscoe River and swing a danger signal for the 2.20 express. Go at once, I command you, my dear love! Go, go, go! In God's name rise from your sleep, Margaret, and go!"

The night express came thundering on to Briscoe station when Engineer Preston saw far ahead of him a tiny red spark glowing. Instinct in the man read its meaning before it had grown to proportions that signaled danger. The train slowed up with such unwillingness of steam and driving wheel, such a mighty groaning and grinding of the whole outfit, that the stubborn resistance threw passengers out of the berths and brought the throbbing shrieking engine to a standstill on the very brink of destruction, where a white-robed figure with unbound hair swung with persistence and monotonous repetition the red lantern that had averted death.

The train men wrapped Margaret in blankets and carried her bewildered, distraught, almost lifeless to her home, where she fell unconscious into her mother's arms, while the grateful passengers filled the hours they must wait with plaudits of her brave deed, and talked of the medal she should have some day.

And Ralph Masson! When his assistant relieved him at the office at early morning his hands were on the keys, but his head was bowed, and he neither moved nor spoke. In that supreme effort he had found release.—The Express Gazette.

Absence of occupation is not rest; a mind quite vacant is a mind distressed.—Cowper.

Those desiring electrical or telegraph books will consult their own interest by securing our book catalogue. We make it a point to fill all orders the same day they are received. Address TELEGRAPH AGE, 253 Broadway, New York.



**Some Valuable Works on Wireless Telegraphy.**

"A History of Wireless Telegraphy," third edition, revised, by J. J. Fahie, the eminent English author, constitutes one of the most popular accounts yet published of the origin and progress of wireless telegraphy, showing fully what has been attempted and what accomplished in that fascinating field of operations and research up to the present time. All systems are reviewed, as well as many guesses considered. Marconi's method is treated with great thoroughness and this inventor's particular development of the science is brought down to the present time. For convenience of the general reader the contents of the volume are divided under three distinctive heads, or periods, so called, namely: First period—The Possible. Second period—The Practicable. Third period—The Practical. The revised work will prove a welcome addition to the literature of the matter discussed. Under the respective headings the classification observed will be of especial aid in tracing with logical sequence the development of wireless telegraphy. The price of the book is \$2.50, express charges prepaid to any address in the world. Address J. B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York.

"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.

Operators interested in the method of treatment of writers' cramp will find very complete information in the little booklet entitled "The Cure of Telegraphers' Paralysis," published by TELEGRAPH AGE, New York. Price 50 cents.

**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.]

**NEW ORLEANS, LA., WESTERN UNION.**

Arrivals: E. J. Norton, S. Nicholls, J. W. McMahon, E. M. Matthews, A. H. Downs.

Left for St. Louis: Messrs. Flipper, Gardner and J. E. McMahon, Walker, for Chicago: Bander to a broker's office.

**CLEVELAND, O., POSTAL.**

New arrivals: A. W. Bodell, W. C. Leith, F. W. Crockett, F. D. Isham and R. J. Gwynn.

H. L. Knisely is at Memphis again for a short time.

E. C. Greger returned home after spending the winter at Memphis.

M. M. Anderson of the Akron, O., office has resigned to accept a position with the Postal at Lexington, Ky., his home town. Mr. Anderson gave us a call on his way home.

C. S. Rindfleisch had a "hot" time down south and returned home very much tanned and darkened in color. He reports having had a good time and well pleased with his trip.

**PHILADELPHIA, PA., POSTAL.**

The most notable event of recent occurrence was the wedding of Traffic Chief George W. Dunn, which took place in New York City, April 16. After one week's honeymoon the couple returned to their new home in West Philadelphia. Advantage was taken of the occasion by the operators to present Mr. and Mrs. Dunn with a beautiful set of leather-seated dining-room chairs in addition to their hearty well-wishes for a happy future. Mr. Dunn especially desires, through TELEGRAPH AGE, to thank the donors for their kind expressions and practical remembrance.

After a three months' absence in Baltimore, Mr. Joseph Eder returns to his accustomed place caring for the dynamos.

The position of regular operator at the Evening Bulletin, formerly filled in by extra men, has been assigned to Mr. Benjamin Crawford.

Two prominent Gothamites, the Messrs. F. E. McKiernan and Charles Ruffer, were the guests of Miles Dunn and Charles E. Stump during a recent short visit.

By the departure of Mr. W. J. Furman, the New York local bonus wire, now calls for the best efforts of Mr. H. P. Ruffee to maintain the good work.

Arrivals: Messrs. C. P. Mooney, R. S. Waterson, W. C. Wrenn and F. W. Dougherty.

**PHILADELPHIA, PA., WESTERN UNION.**

Daniel Gillespie, a well known operator, died

after a short illness, on April 19. Of late years Mr. Gillespie was connected with The United and Associated Press Associations of this city, a first-class operator and valued employee in every way.

J. H. Abdill is the proud father of a fine boy.

Harry C. Kelley, who recently returned from Luzon, P. I., after several years' service there is again with us. He strongly advises all operators to avoid Government service, describing it as a dog's life.

E. V. McElroy who had been absent several weeks on account of illness is back at his post again.

I. H. Trockey is absent on a vacation.

Arrivals: H. V. Shuster, J. F. Hoppes and E. Michel.

### CHICAGO, ILL.

Mills bought, sold and rented. Repairing and renting a specialty. Lowest prices and terms. Write for descriptive catalogue. Wholesale dealers in platens and parts. Agency Telegraph Age. Telegraphers' Typewriter Co., Rooms 5 to 3, 122 La Salle Street, Chicago; O. T. Anderson, manager.

### WESTERN UNION.

Mrs. Eva McCullough has resigned and gone to her home in Milwaukee.

H. L. Guerin has gone to Ireland to visit his relatives and will be abroad two months.

Mrs. Lewis, formerly timekeeper, paid us a visit recently.

Mrs. Hammond has returned looking much refreshed after a long vacation.

Never has TELEGRAPH AGE received such prompt and efficient distribution here as is now insured by Joseph Casati and the many subscribers at this point are much pleased, not a copy going astray.

The Signal Corps of the Illinois National Guard extends a cordial invitation to the telegraph fraternity and their friends to be present at their complimentary May party and ball at the Armory, corner of Washington Boulevard and Curtis street, on Friday evening, May 16. The Signal Corps is composed mostly of Western Union and Postal employees and their success as entertainers was demonstrated at their annual ball last December when 600 couples enjoyed themselves to the limit. Prominent people of both companies are expected to be present. Tickets can be had gratis by applying to Messrs. Deacon, McNeal and Cosgrove of the Western Union, or Messrs. Cralle, Goodrich and Miller of the Postal.

### POSTAL.

Arrivals: Messrs. Louis Trockey, Greenawalt, Ditch, Bauder, McGrath, Beck, Worst and Wilson.

Louis Graef and Mr. Froehle are working Detroit bonus.

Departure: F. Hatch to Cleveland, O.

Messrs. Dalton, Rich and Cordner are on regular from extra force.

### 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.

### POSTAL.

A new office has been opened at 445 Broadway, South Boston, under the managership of Miss C. Gillander.

W. S. Metzler is on duty again after an illness of several weeks.

H. C. Fraser has been temporarily transferred to Providence, R. I.

The joint office of the Postal and the Boston District Messenger Company, formerly located at 289 Tremont street, has been removed to more commodious quarters at 207 Tremont street.

J. B. Clancy, manager at the Chamber of Commerce, is laid up with a broken arm. P. J. Beasty is acting manager.

A branch office has been opened at 1512 Washington street, Miss Devere in charge.

Arrivals: A. J. Noble, T. J. Lawrence and C. H. Seavey.

### ST. PAUL, MINN., WESTERN UNION.

Mr. Walter Knowd, who for a number of years has been wire and quad chief, has accepted a position with the Santa Fé Railroad system as manager at Topeka, Kan. On the eve of his departure his old associates presented him with a beautiful ring, mounted with a lion's head, in whose mouth there is a beautiful diamond, and whose eyes are represented by two small, but very brilliant rubies.

Mr. George Humphreys is the happy father of twin daughters.

Robert Daw has gone to Grand Forks, N. Dak., to take report.

Mr. Cornell is now with a broker in this city, and Mr. W. H. Miller has been assigned to the place thus vacated on the New York stock wire.

Mr. Harry Ward has been advanced to the position of wire and quad chief.

Mr. Nicholas Lee has gone to Dickinson, N. Dak., he having accepted service with the Northern Pacific Railroad Company as second trick wire chief.

Mr. J. Edward Fitzgerald, of the North American Company in this city, was married April 16, at St. Anthony, to Miss Katherine C. Dibb. The bridal couple took an extended trip East and will be at home after May 15.

### WINNIPEG, MAN., CANADIAN PACIFIC.

George D. Smith, one of the most respected and oldest members of our staff, died April 4 of typhoid fever, aged 28 years. Mr. Smith was everybody's friend, and the high esteem in which he was held in the city, was shown by the large

number of citizens who attended the funeral, which was held under the auspices of the Foresters, of which he was a member. The telegraphers also attended the services. Mr. Smith entered employment here as messenger in 1890, and worked his way up to the position of operator. He was a very painstaking worker, a noble fellow and a good friend. He leaves a widow and two little children.

Miss Helen Blakely and George A. Voyer, members of the staff, were married on March 1st. Mr. and Mrs. Voyer were the recipients of a handsome silver tea and berry set from their fellow employees.

Miss Hickey, and Messrs. Blaney, Latimer and Greenway are recent additions to the staff.

Messrs. Roy and Hearn resigned some weeks ago to accept more lucrative positions in Chicago.

A. Ellis, also tendered his resignation a short time ago and has, we understand, accepted a position with the Postal at Portland, Ore. Mr. Ellis was with the Canadian Pacific for eight years.

#### 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 operating department will hereafter have exclusive elevator service and a separate entrance to the building. The entrance will be on Dey street, and the change has been made to relieve the congested condition of the first floor during the hours when the day force reports for duty, and when the night force relieves the day force between five and six o'clock in the afternoon.

Six new copper wires are being constructed from New York to Chicago and St. Louis. New copper circuits connecting the Metropolis with Galveston, Tex., are also being erected.

Ask for a trial of the prize winning FAY-SHO Typewriter now on exhibition by Amos L. Bougher, on the eighth floor. He is the Special Agent among Western Union Operator's Club now forming. \$5 down and \$2.50 weekly. Everyone delighted with the FAY-SHO.

"Gib" Merrill one of the finest operators in the country, lately from New Orleans, where he has

been located for the past three years, has been appointed to the waiting list. It is said "Gib" has lost none of the speed for which he was long noted.

During the absence of the wife of Mr. W. A. McElroy, assistant chief of the wheatstone system, on April 22, thieves broke into her apartments in Brooklyn, and stole many of the valuable presents she received at the time of her marriage last September.

The company's supply department in New York has been enlarged by the rental of three spacious floor on Dey street. This additional room was badly needed, and will be much appreciated by all concerned.

The wife of Alfred A. Lopez died April 22, at Montclair, N. J. While the body was lying in the casket, burglars broke into the house and stole about \$150 worth of valuables.

A private telephone exchange is being constructed in this building, and every department and official of the company will soon enjoy the convenience of a desk telephone.

Mr. John E. Evans, who has been acting superintendent of this building has resigned, to take effect on May 1st.

Mr. A. J. Brown, superintendent of construction of this district has also resigned, the same to date from May 1st.

The reading of newspapers and books, also knitting and sewing, while on duty, has been prohibited.

The father of George W. Schreiver, Southwestern traffic chief, died April 18, at La Grangeville, N. Y.

The Western Union Telegraph Company has abandoned the aluminum lever relay on account of the platinum point working loose in the aluminum lever, it not being possible to effectually solder one metal to another. The result is that poor local contacts are made, and the signals are of course greatly impaired.

Mr. H. E. Roberts, of Chicago, Ill., has been appointed superintendent of the Western Union Building. He will have charge of all of the Western Union Telegraph Company's real estate in New York, which includes the management of the employes and the machinery connected with the buildings. This appointment is to fill the vacancy caused by the death of the late John C. Hinchman.

Mr. J. C. Barclay, the new electrical engineer of the company, is frequently seen in the operating department, and as a result of his numerous visits, many improvements have been made and are contemplated.

Mr. William L. Apgar has been appointed time inspector to fill the vacancy caused by George A. Newton going to outside work for the summer. Mr. Apgar well deserves the appointment on account of long and faithful service in this department.

#### POSTAL.

The company is constantly increasing the space



for the requirements of the executive offices. The operating department is also filled up with occupied tables. If the development of the company continues for the coming five years at the same rates as during the coming five years, the entire building will be pretty well filled up with its own offices.

Changes among the operating force are few.

Mr. B. F. Ziegler has resigned to accept a position in a broker office.

Mr. V. C. Poe has gone home on a vacation.

Mr. William B. Clum, the dean of the old timers in this office, is again on duty after an absence of four months, caused by sickness.

### Who Will Act?

About three months ago we called the attention of the New York fraternity to the desirability of organizing a purchasing loan association for the benefit of the New York telegraphers'. The idea at once met with general favor, and it was stated that thousands of dollars were ready to be subscribed as a nucleus, at least, for a fund to be raised for the purpose named. It was freely acknowledged by almost every member of the fraternity approached on the subject, that the scheme would doubtless meet in New York with the same degree of success as has attended similar associations in other large cities, which were proving themselves to be of decided benefit to operators, as well as money earners, and which were declaring regular dividends as high as from thirty to eighty per cent. per annum.

As a business proposition the plan suggested certainly offered attractive features considered from every point of view. Unfortunately, a leader with the necessary enterprise to successfully engineer such an undertaking, has not yet appeared and declared himself. A splendid opportunity exists, however, for a wideawake and practical member of the craft to take hold of this project, and to work it out in the interest of the fraternity. At the same time he might earn for himself the reward of the position as secretary, as an organization of this character would require a permanent office and at least one paid official. Who will rise to the occasion?

### Old Time Telegraphers' Association.

President Corse, of Ogden, Utah, of the Old Time Telegraph and Historical Association is arranging the programme for entertainments of the Old Time Telegraphers and the members of the United States Military Telegraph Corps. The next meeting of these associations will take place at Salt Lake City, Utah, September 10, 11 and 12th. Among the entertainment events will be an organ recital at the tabernacle, wherein is the largest organ in the world. The choir will consist of 350 voices. Other features will be trips to Saltair, Glenwood Park and Ogden Canyon.

Every operator should read TELEGRAPH AGE.

### Richmond, Va., Leading Telegrapher.

Mr. C. W. White, of the Western Union Telegraph Company, of Richmond, Va., the subject of this sketch and the gentleman, who in the recent Atlanta, Ga., tournament sent Mr. H. V. Emanuel of Philadelphia, fifty straight messages, and down to the period of the fifty-first in thirty minutes, was born in Mecklenburg County, Va., in 1866, where he resided until he was about twelve years of age, when his parents removed to Drake's Branch, Va., where he learned telegraphy. After a year or two of substituting, he was placed in the dispatcher's office at Greensboro, N. C., and subsequently at Danville, Va., for the Southern Railroad Company. In 1882 he entered the commercial service with the old Southern Telegraph Company in Lynchburg, Va., being transferred to Richmond in less than a



C. W. WHITE,

Who sent fifty straight messages in thirty minutes at the Atlanta, Ga., tournament.

year at a first-class rating. In 1884 he went with the Western Union Telegraph Company in that city where he has continued ever since with the exception of a term at Richmond College and a short period with the Southern Associated Press, at Washington, a position he relinquished on account of ill-health. He has handled with distinction every "special" event which has occurred in the first Southern district for a number of years. In the tournament of 1893, held in Hardman Hall, New York, he established his first great record, sending 248 words in five minutes, in the class with champions Kihm and Catlin. In the Atlanta tournament of this year he sent 503 words in ten minutes, being second to Mr. McClintic, in the Carnegie straight Morse event, in addition to the now well-known message record.

### Cable Items.

The British Pacific Cable has been successfully laid to the Fiji Islands from Australia, and it will be continued to Vancouver, B. C., during the present year.

Mr. George G. Ward, vice-president and general manager, and Mr. Charles Cuttriss, electrical engineer of the Commercial Cable Company, New York, have returned from the Pacific Coast where they have been looking over the ground with a view of selecting the most favorable landing place for the Commercial Pacific cable. The place selected is at a point about one-half mile south of the Cliff House. Seven miles of underground conduits will be required to carry the wires from the landing to the offices of the Commercial Cable Company, in San Francisco.

Mr. Samuel S. Dickenson, superintendent of the Commercial Cable Company, Canso, N. S., was in New York a few days ago enroute to Honolulu, Hawaii, where he will select a landing place for the Commercial Pacific cable, and make the necessary arrangements for a permanent home on the island for this new cable enterprise. Mr. Dickenson is a submarine cable expert of the highest order, and he has had an extensive experience in the work he is now about to undertake.

### Lord Kelvin and Wireless Telegraphy.

Lord Kelvin in a recent interview said:

"The effect of Marconi's work upon the submarine cable companies will not, in my opinion, be hurtful. It will do good, not harm. The new agency will supplement, not replace, the old one. In fact, by popularizing transoceanic telegraphy it will not fail to benefit the cable companies."

"Will not the efficiency of wireless telegraphy," he was asked, "depend largely upon the number of tuned circuits that can be operated simultaneously? And have you any idea how many of these are practicable?"

"It is not possible to say yet. When several messages are to be received at one point at the same time each circuit must have a different pitch, to insure non-interference. That is to say, one must respond to waves of one frequency and another to waves of another frequency. But just how great a difference in frequencies will be necessary to protect a circuit from picking up the wrong message is yet to be determined. However, the principle on which the tuning system is based is perfectly sound."

"In Marconi's earlier work his receiver was apparently acted upon solely or chiefly by ether waves, which were radiated sideways from the vertical wire at his sending station and transmitted through the air. Subsequently he connected the apparatus at both stations with the earth. When the latter was used as a conductor he secured much better results. Do you think that waves which travel through the earth differ essentially from those which travel through the air?"

"We have much to learn about this phenomenon. We cannot say exactly how much, if any, change occurs through the action of the earth upon the waves. I hardly think that we are justified in saying that there is any great difference in the forms of energy that take the two routes, aerial and terrestrial."

"One of the suggestions which you are said to have made to increase the efficiency of submarine cables related to the use of the 'condenser,' to make the signals more distinct. Is there any resemblance between that idea and Professor Pupin's recent invention?"

"First let me set you right about the condenser. It was not my suggestion, but Cromwell Varley's, to use that instrument for the purpose mentioned. My principal contributions to the apparatus employed in operating submarine cables were the mirror galvanometer, which enabled messages to be received visually, and the siphon recorder, which registered them automatically.

"Between Mr. Varley's and Dr. Pupin's methods there is this difference: The former placed a single bit of apparatus at the end of a cable, while the latter introduces his at certain intervals along the whole length. Dr. Pupin, moreover, aims primarily to improve telephony rather than telegraphy. Of course, until his system is put into actual operation it is difficult to form any opinion concerning it."

A wireless telegraph tower is being erected at the Highlands, at the entrance to the harbor of New York, at Sandy Hook. The tower will be 130 feet high, which makes it reach an altitude of 340 feet above the sea level.

William Marconi, the inventor of wireless telegraphy, has gone to England where he expects to remain two months, when he will again return to this country.

The United States Government will shortly erect a wireless telegraph station in Key West, Fla., there making connection with Havana, Cuba, ninety miles across the Gulf of Mexico.

Washington, D. C., and Baltimore, Md., which are forty miles apart, are connected by wireless telegraphy, but only for experimental purposes.

Prof. Slaby and Count Arco of the wireless telegraphy system which bears their names, will send in a telegraphic bid to Brig. Gen. A. W. Greely, the Chief Signal Officer of the United States Army, for the establishment of the system of wireless telegraphy which the United States proposes to inaugurate in Alaska.

Great Britain has accepted Germany's proposition for an international conference to regulate the use of wireless telegraphy. The other Powers to which the proposition was made, namely, the United States, France and Russia, have not yet responded, but it is confidently expected favorable answers will be received, especially from the United States, which has taken much interest in the matter. Germany's suggestion embraces merely calling a conference, but without definitely formulated propositions for discussion.

### The Morse Club.

Preparations are now in progress by the officers of the Morse Club for the seventh annual dinner which will occur on the evening of May 24, at the Sturtevant House, New York. It is understood that applications of a large number for membership will be acted upon at the meeting. It is particularly desired that the interest of the ladies of the telegraph profession should be enlisted in behalf of this club, and their presence on these festal occasions will be heartily welcomed. The officers of the club are Gardner Irving, president; M. H. Kerner, secretary; M. F. Gaffney, treasurer; W. A. Van Orden, historian; W. C. Burton and F. W. Jones, governing committee.

T. M. B. Association:—Assessments No. 392 and 393 have been levied for the month of May by the Telegraphers Mutual Benefit Association to meet the claims arising from the deaths of John B. Needham, Cordele, Ga.; William S. Allen, Bayonne, N. J.; William P. Horner, East St. Louis, Ill.; J. W. McCumber, Chicago, Ill.; D. U. Newport, Las Vegas, N. M.; Fred W. Wheeler, New York, N. Y.; P. Kelly, Madison, Wis.; John R. Maxwell, Brooklyn, N. Y.; James Hoping, North Bend, O.; Cullen M. Stanton, Citronville, Ala.

The proceedings of the twenty-fourth annual meeting of the Gold and Stock Life Insurance Association, held in New York on January 20 last, together with the constitution and by-laws of the same and a complete list of its members, has been published in pamphlet form. It presents an interesting compendium of this flourishing and financially sound association, and will be valued by those in whose behalf the association is con-

ducted. Copies may be obtained by addressing the Secretary, Mr. W. J. Dealy, 195 Broadway, New York.

[Advertising will be accepted to appear in this column at the rate of three cents a word.]

PERSONAL—Will Charles F. Peckham, operator, formerly of Chicago, supposed to be employed in Broad street, New York, or any one knowing of his present address, please communicate with W. O. Holton, 913 Ashland Block, Chicago, Ill.

POSITION WANTED.—First class male stenographer, typewriter and telegrapher, familiar with general office work; books, mimeographing, hectographing, tabulating, etc., and with nearly ten years' experience in these capacities, desires position, \$75; good references. Have Civil Service eligible rating as telegrapher, and feel confident the combined qualifications are now equivalent. Address: BOX 2497, ST. PAUL, MINN.

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### IMPORTANT TO YOU

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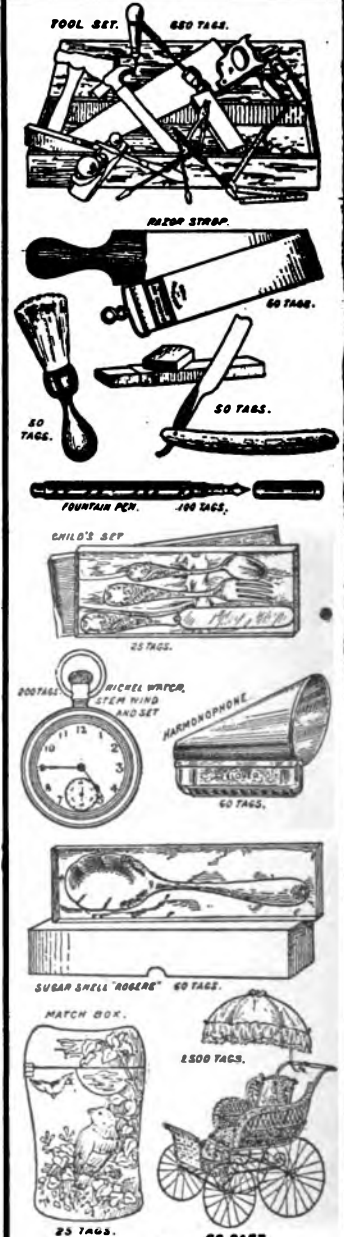
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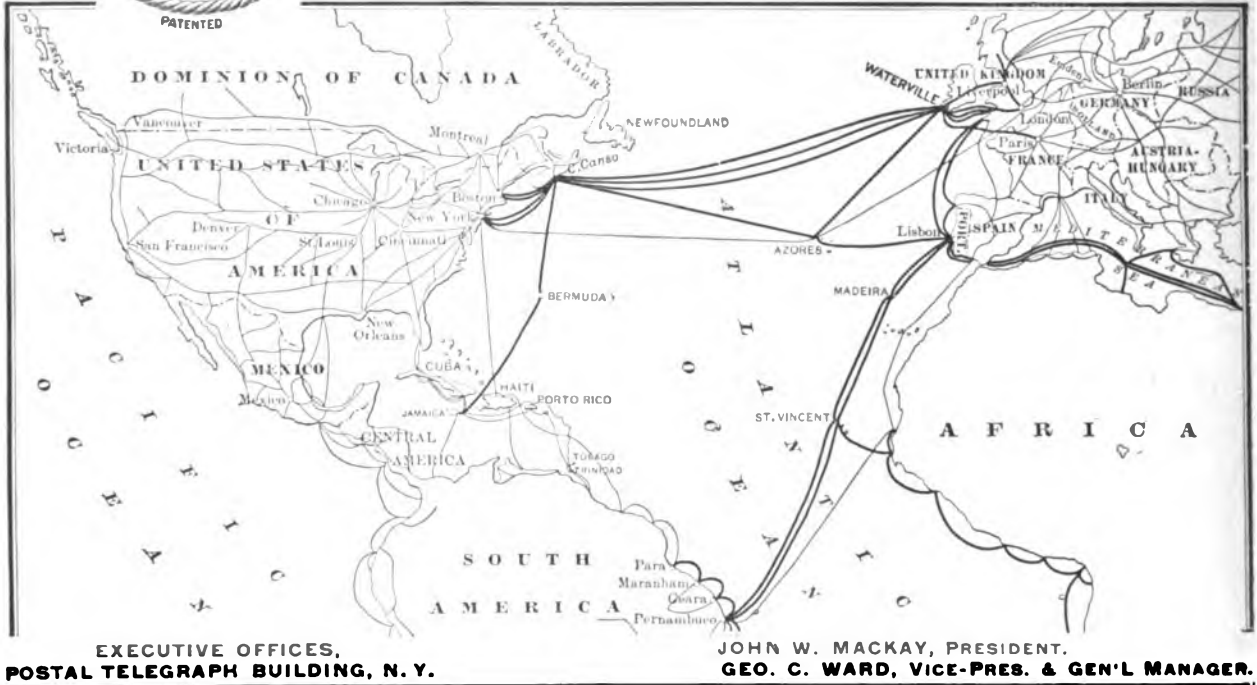


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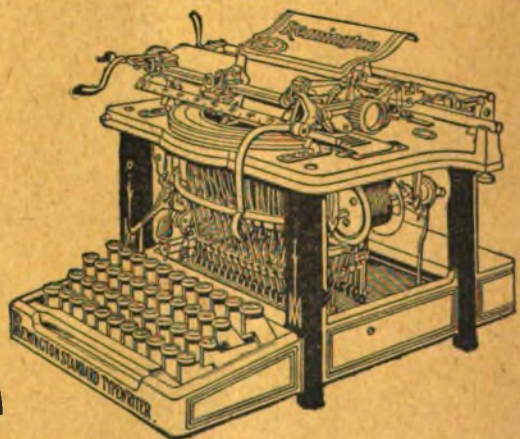
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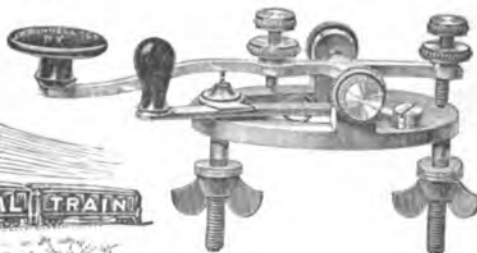
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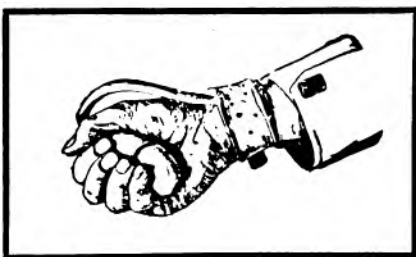
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# THE TELEGRAPH AGE

No. 10.

NEW YORK, MAY 16, 1902.

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## SOME POINTS ON ELECTRICITY.

BY WILLIS H. JONES.

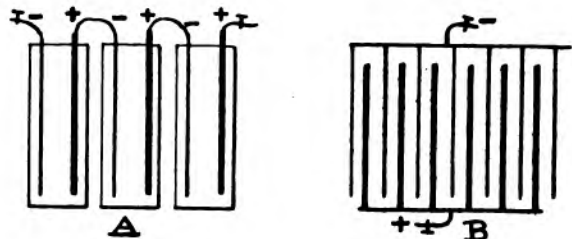
(Storage Batteries Continued.)

[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 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 this superior new work, indispensable to every telegrapher, should send in their names at once.—Editor.]

In the preceding issue of this journal the general feature of a storage cell was described and the proper rate of charging and discharging them given. For the benefit of any who may have missed the first installment of the article, we will repeat that in order to obtain the best results from a storage battery the cells should be charged and discharged at the following rates: Give cells of five ampere-hour capacity a charging current of  $\frac{1}{3}$  of an ampere for about eight or nine hours, or until the electromotive force reaches a value of 2.5 or 2.6 volts. Ten ampere-hour cells take twice as much current, or one and one-quarter amperes for the same number of hours. They may be discharged at the rate of two and one-half amperes for three hours, or at a slower rate for

more hours. Cells of greater capacity are charged and discharged at correspondingly greater ratios of current values.

It has been found best not to charge any cell with a strength of current greater than four amperes for each square foot of surface of the positive plate or plates. We designate the positive plate surface because there is a greater superficial area of negative surface than positive in cells composed of more than two or three plates arranged in multiple. This is due to the fact that such cells contain one more negative plate than positives. Thus, a six positive plate cell contains seven negatives, both outside plates being negative. The object of the additional plate is to enable us to face both sides of each positive plate with one of negative. Without the odd plate the first positive plate in the row would be exposed on one side only. This method also reduces the



internal resistance of the cell owing to the greater surface thus exposed to the liquid. Figure A in the first accompanying diagram shows the manner in which small cells containing but two plates each—one positive and one negative—are connected in series. It will be seen that the arms of the two plates are welded together, thus forming a solid yoke which latter supports them in the liquid as it rest on edges of two glass jars. When this type of electrodes is used the positive plate is immersed in one jar and the negative in the one adjoining it. The positive half of the next pair is then placed in the second jar with the negative half of the first couple, and the process repeated for each cell that is added in series. As the first and the last cells so joined will evidently contain but one plate each, a single plate of proper sign must be added to each. The two single plates, therefore, form the positive and the negative terminals, respectively, of the storage battery.

Figure B shows the manner in which a storage cell is constructed for great current capacity. On the principle that current capacity depends upon



the superficial area of plates exposed to the action of the acid, a number of positive plates are joined together by a common yoke, like the teeth of a coarse comb, while an equal number, plus one, of negatives are similarly connected. The two combinations constitute merely two large electrodes, one positive and the other negative. The positive plates are then sandwiched between the negatives, as shown in Fig. B, and the whole immersed in the acid solution.

The proper consistency of the fluid should be ascertained from the manufacturers of the particular type of cell employed. They all agree, however, on one point, namely, never pour water into the acid, but always pour the acid into the water. In other words, unless the solution is already mixed properly, first partially fill the jar with water, then add the acid as required.

#### METHODS OF CHARGING, AND REGULATION OF THE RATE.

When it comes to charging a cell, or number of cells, there are several things to be taken into consideration before adopting any particular method. Of course the primary object is to get the charging current as cheaply as possible, especially when it must be bought outright from an electric light power or other sources. The electromotive force at such plants ranges anywhere from one hundred and fourteen volts to five hundred volts. Of course with any pressure between those values it is a very simple matter to reduce the current in the charging circuit to any desired value by merely inserting the proper amount of resistance therein; but then, the electromotive force is not going to do any work for nothing, so we must pay the electric power company for the energy expended in overcoming the dead resistance necessary to bring the current down to the required strength. This point should never be overlooked.

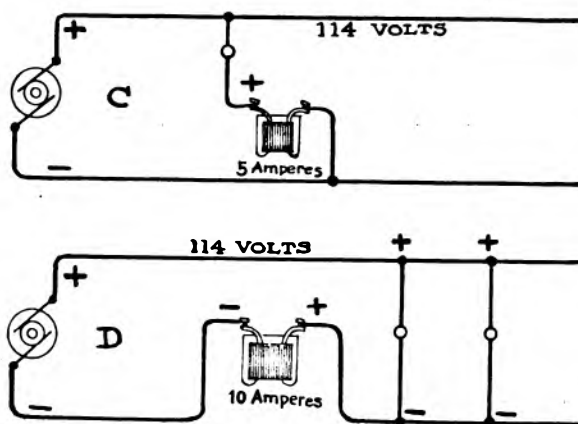
The sensible method, therefore, and the one usually followed when possible, is to employ a reducing resistance consisting of a substance which under the pressure of the said high electromotive force will return the energy required to overcome it in some useful form. An electric light lamp filament is evidently an ideal artificial resistance, where the charging can be done at night, for then the reducing energy is returned to us in the form of light, which latter would have to be paid for anyhow.

When this method is possible a few cells may be charged in multiple at practically no additional cost, except possibly in the way of a slight diminution in the brilliancy of the light, hardly sufficient, however, to be noticed, as the drop in the pressure would be but two volts, namely, that of the counter electromotive force of the storage cell.

For illustration, suppose a small office having but eight or ten four ohm sounders desired to substitute storage for chemical local battery. If the office was equipped for one hundred and four-

teen volt direct current electric light service, all that would be necessary to make the change would be to purchase a small five ampere-hour storage cell and place it in series with one lamp as shown in Fig. C of the second accompanying diagram, and let that light burn all night, if necessary, to charge it fully. The normal rate of charging five ampere-hour cells being  $\frac{1}{5}$  of an ampere for eight or nine hours, and the regulation current for sixteen candle-power electric light, but  $\frac{1}{2}$  of an ampere, the cell as arranged in Fig. A would just about fill during one night.

Should the cell required be of ten ampere-hour capacity, it should be inserted in the lead instead of in series with a lamp, as shown in Fig. D, and but two lamps in that set of feeders should be lit. Two lamps cause twice the amount of current to flow through the bottom, or return wire, that one lamp does, all of which must traverse the ten ampere-hour cell when so connected. As that quantity is but a little less than the normal charging rate, the cell will evidently also about fill during the night.



For larger cells add a lamp in multiple for each five ampere capacity. In case it is desired to charge the cells in a shorter time, a few more lights may be turned on. If on trial it is found that two lamps charge a ten ampere-hour cell too slowly, make the rule three lamps per such cell, or in fact whatever is necessary to do the work in the time required.

We can't always figure on a minimum basis owing to different conditions and requirements, but the above figure is close enough to follow under ordinary conditions.

Of course, a second cell must be provided in order that one may be charging while the companion is feeding the local circuit. The two should be so arranged that by merely turning a switch lever one may be substituted for the other in their respective places in the charging and the discharging circuits.

A simple means of telling when a cell giving out is to keep a two volt lamp on hand. If upon connecting it across the terminals it does not burn



with its normal brilliancy, the cell should be removed and recharged.

(To be Continued.)

#### General Mention.

Mr. Louis G. Boone, of New Haven, Conn., has been appointed night chief operator of the Postal Telegraph-Cable Company at Newport, R. I.

The telegraph land lines in Santo Domingo are reported to be in the possession of the revolutionists, that country now being in the throes of a revolutionary war.

The American District Telegraph Company of Baltimore, Md., has been sold. It is thought the Western Union Telegraph interests are the purchasers of the plant.

Mr. Charles F. Hauth, manager of the Western Union Telegraph Company, Niagara Falls, N. Y., has been appointed a district deputy grand regent of the Royal Arcanum.

A storage battery plant has been installed in the Western Union main office at Chattanooga, Tenn., and the manager at that point, Mr. J. B. Norris, was recently heard to remark that it is a "joy" after working many years with the Grove electropoin and gravity batteries.

Nicola Tesla, the electrical scientist and inventor, is now engaged in developing his idea of transmitting from the earth to airships the necessary electrical energy to propel them. Mr. Tesla thinks that when his scheme is developed the airship problem will be practically solved.

"Some day I may buy a lot of newspapers and then I'll give you all a chance," was the parting sally of Andrew Carnegie to a group of reporters just before sailing for Europe on April 30. Mr. Carnegie declared that he had had the subject in mind for some time, but that he had decided on nothing definite as yet. The steel magnate, who is an old-time telegrapher, has expressed himself in a similar vein on other occasions.

The offices of the American Institute of Electrical Engineers have been removed from the Havemeyer Building, at Dey and Church streets, to 95 Liberty street, New York, where six spacious offices have been secured. Mr. Ralph W. Pope, an old-time telegrapher, is the secretary of the Institute. The telegraph and electrical records in his possession make a complete history of the telegraph and electrical industry since their inception.

Mr. Bea. C. Wilkins, manager of the Western Union Telegraph Company, at Ashland, Wis., for the past fifteen years, and known throughout the Northwest as the Chequamegon poet, was married on April 15 at East Tawas, Mich., to Miss Margaret A. Donahue, also an employee of the Ashland office for many years. Mr. Wilkins is a graceful writer of songs, stories, and sketches which have appeared in the public prints for several years past.

#### Death of John H. Emerick.

John H. Emerick, one of the best known ex-telegraph officials of New York city, and up to about four years ago general superintendent in the Postal Telegraph-Cable Company, died at his home in Brooklyn on May 11.

Mr. Emerick was born at Fulton, N. Y., November 7, 1843. In December, 1861, he entered the military telegraph service at McDowell's headquarters, Arlington Heights, Va. He was in the field at the headquarters of the commanders of the Army of the Potomac, during the campaigns on the Peninsula in 1862, and the campaigns of '63, '64 and '65, in Virginia and Maryland, as operator and cipher clerk. In January, 1865, he was made chief operator of the Army of the James, and continued at its headquarters and at Richmond, until the telegraph corps was disbanded, when he accepted the chief operatorship of the Richmond office of the Western Union Telegraph Company.



THE LATE JOHN H. EMERICK.

Mr. Emerick was one of the twelve military telegraph operators who were presented with watches by the United States Government through Edwin M. Stanton, Secretary of War, "in recognition of long, continued and faithful service." In 1867 he transferred his services to the War Department, at Washington, where he remained until July of the same year, resigning to enter the cable department of the Western Union Telegraph Company, in New York. His record of three years in this most exacting branch of the telegraphic service, placed him in the foremost rank of the brilliant telegraphers of the country.

In January, 1870, he resigned to accept a position with the New York Fire Alarm Telegraph, as operator. Later he was made chief operator, and afterwards superintendent of the service. In 1878 Mr. Emerick enlisted in the service of the Metropolitan Telephone and Telegraph Company. In March, 1879, he was appointed superintendent

of the Mutual Union Telegraph Company, which position he held until the consolidation, when, in August, 1881, he was appointed superintendent of the Postal Telegraph-Cable Company. In August, 1885, he was made general superintendent of the eastern division of the Postal Telegraph-Cable Company, which position he held until January 1, 1897.

Mr. Emerick's funeral, which occurred on the evening of May 11, was largely attended, many telegraphers being present.

#### OBITUARY NOTES.

Mr. Frank Farrell, for the past ten years a prominent telegrapher of Chicago, Ill., died of nervous troubles at West Baden, Ind., a short time ago. Previous to his going to Chicago, he was identified with the telegraph at Louisville, Ky. He was well and favorably known.

Mrs. Sallie C. Brooks, the wife of R. H. Brooks, formerly chief operator of the Postal Telegraph-Cable Company, Memphis, Tenn., died in that city after an illness of five weeks of spinal meningitis, on April 29. She was twenty-one years of age and had been married but sixteen months.

Mr. J. Armstrong, forty-eight years old, who for twenty-six years was with the direct United States Cable Company at their Irish station, Ballinskelligs Bay, died on May 10. He was suffering from what was presumed to be earache but which trouble ultimately developed into congestion of the brain. He leaves a widow and eleven children.

Roxana Minerva Phillips, the mother of Walter P. Phillips, died in Bridgeport, Conn., on May 6, in the seventy-fourth year of her age, the funeral taking place at the residence of her son, Walter, at No. 649 Clinton avenue, that city. The interment was in the Swan Point Cemetery, Providence, R. I., where her husband and a daughter are buried.

James H. McNally died at Buffalo, N. Y., on May 3, after a long illness. Born fifty years ago in Tyrone, Ireland, he moved with his parents to Ontario at the age of 6. There he learned telegraphy becoming connected with the Great North Western Telegraph Company, being employed in Port Colborne, St. Catharines, Toronto, and twenty-five years ago went to Buffalo as manager of the Great North Western news service, then known as the Canadian News Company. About five years ago Mr. McNally came to New York for the "Journal," on which newspaper he was employed in the telegraph and other departments until failing health two years ago compelled him to return to Buffalo. He was a member of many organizations, including all of the telegraph insurance associations.

A patent for a telegraph sounder, number 609,056, has been granted to John A. Albertson, Lansford, Pa.

#### Cable Interruptions With Martinique.

Cable communication with St. Pierre, Martinique, St. Vincent and other islands in the West India group, was interrupted on May 8 by reason of volcanic eruptions and the loss of life and property occasioned by the disaster was appalling.

The cable repair steamer Grappler, Capt. Cruickshank, belonging to the West India and Panama Telegraph Company, while repairing the Martinique-Dominica cable about a mile distant from Mont Pelée, Martinique, which exploded with terrific force, was covered with molten lava and hot ashes and was destroyed together with all on board. The same explosion overwhelmed St. Pierre, a city of thirty thousand inhabitants, together with many other towns, almost all the population of which perished. The cable offices of the West India and Panama Company and the French Company, in St. Pierre, were destroyed and the entire staffs killed. Fernand Jallabert was the general manager of the French cable office at that place.

The French cable steamer, Pouyer-Quertier, which fortunately was absent from that locality at the time of the explosion, returned in season to rescue 450 persons. A few days after the explosion the same steamer in trying to repair the French cable connecting Martinique and New York, via Hayti, found it sunk in 4,000 feet of water, where formerly it was only 1,000 feet below the surface. Up to the time of going to press the steamer had not succeeded in finding the cable. When once located and brought aboard an office will no doubt be established on the steamer to assist in relieving the pressure on telegraphic messages.

Ordinarily, there are five ways of getting into Martinique. A cable runs from Guadeloupe to Martinique, from Dominica to Martinique, from Porto Plata, in San Domingo, to Martinique, from St. Lucia to Martinique, and from Paramaribo, in Dutch Guiana, to Martinique.

The cable from Paramaribo to Martinique is in working order, and that is the only cable by which communication is maintained with the island. The messages have to go to Paramaribo, in Dutch Guiana, thence to Para, Brazil, to Pernambuco, to Cape Verd Islands, to Maderia, to Lisbon, to the Azores and then to New York. The messages must travel 10,276 miles, a distance nearly five times greater than the usual cable route. Naturally the French Government is monopolizing this service, and only a few messages destined for America pass over this route.

Over forty families of telegraph people were killed in St. Pierre, and vicinity by the terrific volcanic explosion. The family of Mr. Fernand Jallabert, general manager of French telegraphs with headquarters at St. Pierre, Martinique, who was among the killed, is in France, where his children are attending school.

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### The Pension Fund Proposition.

At a recent meeting of the committee of New York telegraphers having in hand the pension fund proposition, Mr. Francis W. Jones was appointed a committee to bring the subject formally to the attention of Col. R. C. Clowry, president of the Western Union Telegraph Company; to George Gray Ward, vice-president and general manager of the Commercial Cable Company; to Col. A. B. Chandler, chairman of the board of directors of the Postal Telegraph-Cable Company, all of New York; to H. P. Dwight, president of the Great North Western Telegraph Company, Toronto, Ont.; to C. R. Hosmer, president of the Canadian Pacific Railway Company's Telegraph Company, Montreal, Que., and to Clinton P. Russell, general manager of the Postal Telegraph Company of Texas, Dallas, Tex., with the object of ascertaining their views. The following is a copy of Mr. Jones' letter addressed to those officials:

"A committee representing a large number of telegraphers has requested me to see you and solicit your advice and co-operation in formulating and carrying into effect a plan for the care of incapacitated and aged worthy telegraphers in the United States and Canada.

"This subject has been for some time under the consideration of the telegraph fraternity in the United States, and before calling upon you in person, as I have been asked to do, I thought it would be more agreeable to you, and conform more to your convenience, if I were, as succinctly as possible, to give a résumé of the situation as it presents itself to the committee aforesaid.

"The necessity for the care of incapacitated telegraphers has long been felt, and various unsuccessful efforts have been made to devise some permanent plan for their relief. The first serious move in the matter was made in Chicago a few years ago by the Old Time Associated Press Operators presided over by Mr. Addison C. Thomas of The Associated Press, but no definite step was taken.

"The question came up at the Old Time Telegraphers' meeting held in St. Paul, in September, 1900, Mr. Thomas formally turning the matter over to the Old Timers' Association which referred it to its Executive Committee for action.

"The prevailing sentiment at that time seemed to be in favor of a Home, and some generous offers from Colorado were made to give land and money for the purpose.

"Shortly after the St. Paul meeting Mr. W. C. Connolly, Jr., of Pittsburgh, in behalf of the telegraphers, wrote to his friend Mr. Andrew Carnegie, asking his assistance in the establishment of a Home for telegraphers, to which letter Mr. Carnegie made the following reply:

5 West 51st Street,  
New York, Feb. 13th, 1901.

Mr. W. C. Connolly, Jr., Pittsburgh, Pa.,

Dear Mr. Connolly:—

Yours of January 14th is before me this morning. I have known several "Homes for the Aged" of

specified classes that amounted to little or nothing, from Bulwer's "Home for Decayed Authors" down. Old men will not leave home and its associations to live in a distant place. Would it not be better to have a pension fund for telegraphers, who are aged and invalid? I do not see why the Pennsylvania Railroad system should not be introduced; the railroad pays half and the employes about half, and this takes away from it the element of charity. Men enjoying the pensions are really using what they themselves have contributed. If the Old Time Telegraphers' Association got up a scheme like that, I should be glad to give a sum as a nucleus.

I feel very warmly toward my old associates, and should be glad to give a considerable sum, provided the pension scheme could be made available. My opinion is that this would do far more good than your proposed Home away out in Arkansas.

Very truly yours,

ANDREW CARNEGIE.

P. S. The telegraph companies would also contribute, I think, as the Baltimore and Ohio and Pennsylvania Railroads do. Please let me know how the idea strikes you.

"Mr. Carnegie's reply, as I am informed, was forwarded to Mr. A. C. Thomas, who with Mr. S. A. Duncan, Col. W. B. Wilson, Mr. Frank Richardson and Mr. Walter C. Burton, had been appointed a sub-committee of the Executive Committee, of the Old Timers' Association upon the Telegraphers' Home subject.

"At the Montreal meeting of the Old Timers' in 1901, upon the report of the Executive Committee the subject was discussed and the following resolution was adopted unanimously:

"Moved that this Association, thoroughly believing in the care of incapacitated telegraphers, does not believe a National or International Home is practicable."

"It was generally understood that as an Association, it was out of its sphere to attempt to represent the telegraph craft at large in the matter, as the Old Timers' were organized purely for social purposes.

"After the above meeting the Editor of TELEGRAPH AGE was immediately besieged from all parts of the country by correspondents urging that the subject be not allowed to drop, but that some steps be taken by the telegraphers themselves to inaugurate a relief system for incapacitated telegraphers, as it was conceded by the Old Timers' and all others who had given the subject consideration, that such a system was very greatly needed, but as to just what direction this relief system should take, whether for a Home or for pensions or for some method, there was a diversity of opinion.

"The Editor of TELEGRAPH AGE submitted the matter by letter to Mr. Carnegie for his judgment as to the most feasible plan, and in reply he emphatically declared himself against the Home idea, and in favor of some system based upon the pension or superannuation scheme, and he has declared that if a feasible scheme can be gotten up that he should be glad to give a considerable sum towards it.

"Further details, with which it does not seem wise to burden this letter, will be found in the printed reports of the Old Timers' Association for 1900 and 1901, the New York Sun, December 5th, 1901; New York World, January 15th, 1902, and TELEGRAPH AGE, January 16th, 1902.

"A few representative telegraphers of New York issued a limited invitation for a meeting at the New York Press Club on March 20th last, to take up the subject where the Old Time Telegraphers had dropped it, and to see if a practical plan could be devised. The meeting, of course, was merely a nucleus of what promises to have national scope, as it intends to place itself in communication with telegraphers in all the chief centres of telegraph industry in the United States and Canada, and, if possible, secure harmonious action.

"At this meeting the chairman was directed to appoint a committee of five prominent telegraphers with power to add desirable persons to the number of its members, who were to thoroughly consider the subject of pensions or other methods of relief, and if possible, formulate a plan which, after consideration and adoption at a subsequent meeting of telegraphers should be submitted for approval and co-operation to all the important telegraph centres of the country.

"Tentatively this Committee has decided that its labor should be governed and given direction the following considerations:

"That no plan should be considered that would interfere with the work being carried on by the Telegraphers' Mutual Benefit Association or the various insurance and aid societies; that only a plan of relief for incapacitated and aged telegraphers referred to in the discussions of the Chicago Press Telegraphers, and the Old Time Telegraphers and in Mr. Carnegie's communication should be considered: that such plan should merit the approval and support of telegraph employers, and that the scheme should embrace all persons employed in commercial telegraphy, including the press in the United States and Canada: that the plan should not be characterized by any humiliating color of charity, and that it be supported by the contributions of all telegraphers who wish to participate in its benefits.

"There is no disposition on the part of the Committee to ask the proprietors of the commercial telegraph systems to render any assistance that will not be deemed by them to be mutually advantageous.

"It has also been suggested tentatively, that there could be two funds established, one in the nature of a gratuity and another in the nature of an annuity. The former to be built up from such contributions as may be received through the generosity of Mr. Carnegie and others, or from proceeds of entertainments, etc., and only the interest thereof used in an equitable manner for the benefit of these eligible for assistance.

"The latter to comprise the amounts paid in by members and telegraph companies for the benefit of the annuitants or pensioners under proper rules to be established, and that whatever amount is contributed to such fund by any company shall only be for the benefit of its own employes and not for those of any other company.

"I am sure that the more thoughtful telegraphers realize that in many cases the Western Union and the Postal Telegraph companies have been conspicuously generous towards old employes who have become pretty well worn out in their service; but it is thought by many that by a proper system of relief or pensions that the telegraph employers could, by contributing to such a system, not only relieve themselves of these sporadic cases which have taxed their magnanimity in the past and will probably continue to do so for some time to come, but would be enabled to rearrange their employment of labor upon a more systematic basis, insuring to themselves the advantages of the experienced service of their employes for a greater length of time and under more favorable conditions; the laborers becoming less restless and worried about their futures and making less effort to seek other fields of industry for the purpose of protecting themselves and their families against the ravages of time which their small salaries are not adequate to meet.

"There can be no doubt but that aside from the ultimate purpose of providing pensions or other practical assistance to an unfortunate but inevitable class of employes, that the considerate co-operation of employers in caring in a business manner for the physical interests of their employes, would create an influence whose importance in relation to capital and labor is becoming more widely appreciated by wise men every day. It is an influence that tends towards co-operation and must surely promote between the two effectively, though silently, that harmony which is the basis of their common prosperity.

"The committee is very desirous of securing the benefit of your advice and co-operation, and in behalf of the telegraphers whom it represents would feel very grateful if you will either act yourself or designate some one in your company to act with the committee to enable it to dispose of the subject committed to it to the best advantage to all concerned.

"It is thought by the committee that your large experience in handling great affairs will be of inestimable value under the circumstances, and for various kind acts and expressions received at your hands by the telegraphers in this country for many years past, it is believed that they may still confidently be assured of your good offices in furthering their interests in any consistent and reasonable manner.

and time that will suit your earliest convenience to answer any question by, or to receive any communication from you, and also to personally tender the compliments and highest regard of the committee.

Very respectfully,  
FRANCIS W. JONES."

(Signed)

TELEGRAPH AGE is the only telegraphic paper published in America. It is up to date, covering its field thoroughly, and no telegrapher, official or operator, can afford to be without it.



### Why Uncle Sam Should Not Own the Telegraph.

(By Congressman Charles H. Grosvenor, of Ohio.)

Government ownership of the telegraph is utterly impracticable and wholly inadvisable. One excellent reason why the government should not own the telegraph system is that it would cause and necessitate a great standing army of employees. This would be bad in principle, and it would be ruinous financially in practice. The experience of England with government ownership should be enough to satisfy this country that it would be a great mistake. Since England, as large as the State of Ohio, began the experiment her telegraph system has cost her £40,000,000. How large a deficit may it be supposed that this country, 4,000 miles wide, would soon have?

I do not believe that in a free country any industrial system should be under government control.

This project would mean that the nine people in ten who do not use the telegraph would have to be taxed to pay for a system for the benefit of the other tenth of the population.

It has been argued that because the postal system of the government has proved successful the telegraph system should also be owned by the nation. The postal system is a fine one, but I can demonstrate that nearly every improvement that has taken place in it, if not all of them, since my father paid twenty-five cents to send a letter has come because of private competition and enterprise.—Exchange.

### Postal Telegraphy.

EDITOR TELEGRAPH AGE:

Government control of the telegraph being up for discussion, you will be pleased, perhaps, to publish some views from an old subscriber.

It seems to me that a lot of sympathy is being wasted on the Government telegraph operator, apropos of his low wages. It must be remembered that the money pay he receives is probably the smallest part of the inducement which leads him into the government service. He gets many other things besides, which look fascinating at a distance, namely, travel, sight-seeing, adventure, military glory. He has been known to be present at battles, and night attacks, heard the cannons roar, and the bullets whistle. Think of the possibilities involved for pensions! And then when you come to think of all the fun he gets out of it, (or expects to get) it looks almost like a lack of business sagacity and scandalous extravagance on the part of Uncle Sam to pay him any money at all. Here is another chance for your correspondent, Mr. Peterson, to criticize government control of anything whatsoever. A trust would manage the war very differently, probably charge the soldier and telegraph operator for the trouble and expense of keeping him alive, instead of paying him anything for his services; in fact make war support war like the ancient pagans, give Manila over

to the soldiers to be pillaged, sell all the inhabitants into slavery and realize a handsome profit for the shareholders. So that after all it would require no change of heart on the part of Uncle Sam to make him treat the telegraph operator liberally. He does so already. There's no use talking, the government treats its employes better at all times than other employers do. The post office and mint, for instance, are not as Mr. Peterson complains, run on business principles; the principle, that is, of getting the most work for the least money, without any regard for the welfare of the workman, but rather on the principle that the welfare of the workman is of as much importance as the perfection of the service. The trouble is that the politicians use this benevolence (justice) of the government to pay off their own political debts and the government employe has to pay for the justice he gets from the government by political service which he himself or some one else renders to the party in power.

Perhaps every future extension of government control of public utilities, (telegraph and railroads, for instance), by making the prize of government employment more common, would make it less sought for, as that reward ceases to be an honor which is freely given to all, and would make the political service attached to it less and less important.

It seems rather ridiculous, though, for telegraph operators to bother their brains about the deterioration of the telegraph service which is predicted as a result of the government taking hold. It is amazing to hear from one representing the views of telegraph operators the argument against government control advanced by your correspondent, P. A. Peterson, in your issue of April 15th, that the post office "is not run on business principles at all," "does not pay its expenses," "they do not regard economy, but are extravagant, give vacations with pay." Why, the government itself is not run on business principles exclusively, or chiefly even, but on the principal of doing the greatest good to the greatest number, always professing to be a "government of the people, by the people, for the people." What better use can the government make of its surplus prosperity than sharing it to some extent with those of the people who are in its employ, and letting up a little on the pitiless grinding business principle of getting the very most work for the very smallest pay that the workman can be made to work for, which this correspondent seems to admire so much in private corporations. There is probably not an operator in the service, that would not consider a substantial increase of salary, and vacation with pay, sufficient consolation for a large amount of imperfection in the service, and this, too, without failing in the proper amount of zeal which every good workman should have for the good of the service. Considering how well those on top are able to take care of their own interests, generally the case of the telegraph operator under government control would be one in which he who

served his own interests best would be serving his country's interests most, if there be any truth in the idea that the real prosperity of a nation is founded on the individual prosperity of the greatest possible number of its citizens.

Old Subscriber.

Philadelphia, April 25.

### **Crehore-Squier Automatic Telegraph System.**

On April 21, 1897, Dr. Albert C. Crehore and Lieutenant (now Captain) George O. Squier read an exhaustive paper before the American Institute of Electrical Engineers, New York, on "The Synchronograph," describing a new method, devised by them, of rapidly transmitting intelligence by alternating current, says, the Western Electrician. Interest in the paper is now revived by the issuance of a patent (No. 698,260) to the inventors for their apparatus. The patent is entitled "Art of Transmitting Intelligence," and was applied for on November 9, 1896.

The invention comprises means for producing an alternating electromotive force and means for suppressing a definite semicycle or semicycles thereof, organized or adjusted with reference to the difference in phase between the impressed electromotive force wave and the resultant current wave so as to cause a semicycle or semicycles of current to flow, beginning and ending when the current is naturally zero. The recorder of the alternations comprises means for producing a beam of polarized light and for rotating the beam by the action of the alternating current, and means for photographing the succession of spots of light corresponding to the successive semicycles of the current.

A patent (No. 698,261) entitled "Submarine-cable Telegraphy," has also been issued to Dr. Crehore and Captain Squier. This invention consists in transmitting the signaling waves or pulses by impressing upon the cable distinct pulses of electromotive force, varying in number or order of succession and changing gradually and continuously from zero through a maximum to zero. Both patents are assigned to the Crehore-Squier Intelligence Transmission Company of Cleveland, Ohio.

### **Kelvin and Westinghouse on the Metric System.**

Lord Kelvin appeared recently before the House Committee having in charge the metric bill, and supported that measure. He said that he had long hoped Great Britain would take the lead in this matter, but if it would not he thought the United States should lead off, believing his own country would follow suit. He commended the plan of the committee to allow time for the people to familiarize themselves with the system before adopting it as the standard of measurement. Mr. George Westinghouse also spoke favorably of the metric system. He said, however, that he believed it would take the people at least ten years to learn to use it.

### **Prof. Pupin Secures Tuning System.**

Professor M. I. Pupin, of Columbia University, has won a long, hard fight in the Patent Office at Washington, and has sold to the Marconi Wireless Telegraph Company the right to use his system of attuning electric circuits. The attuning system protects the secrecy of telegrams in transmission. The invention itself is not very recent. Professor Pupin wrote and lectured about it a great deal in 1893 and 1894, and electricians on both sides of the Atlantic are familiar with it. When, however, he applied for a patent in the latter year, he discovered that two formidable rivals, the Bell Telephone Company and a corporation in Paris, also laid claim to the same principles. The legal battle, to determine "priority of invention," has lasted eight years. It has finally been won by Professor Pupin. The Patent Office gave him notice a few weeks ago that his application would be granted. The result is the more gratifying when it is known that something like two hundred applications for patents on tuning systems have been filed at Washington.

Marconi has experimented with the Pupin system for a year or more, and several months ago asked the author of it for an option on the right to use it. Subsequently negotiations were closed with the Marconi company for the privilege during the life of the patents now about to issue.

Professor Pupin's improvement in long distance telephony, which was sold to the Bell company about two years ago, has been introduced on several long lines. The expectations of that corporation as to its efficiency have already been fully realized.

### **A New Main Postal Office at Buffalo, N. Y.**

C. H. Newman, manager of the Postal Telegraph-Cable Company in Buffalo, N. Y., reports that his company had closed a deal with the owners of the Stafford building, at the corner of Church and Pearl streets, that city, whereby the company is to gain possession of the building for use as a central office. The corner store of the Stafford building, on the ground floor, will be used as a receiving room, delivery room and manager's office. The basement will contain the dynamos. The second floor will be used for the superintendent's offices, and the entire top floor will be employed as an operating room. It is expected that the new office will be ready for occupancy by July 1. The old quarters on Main street, long since outgrown, will be retained as a branch office until the lease expires a year hence. General Superintendent E. G. Cochrane of New York, has ordered an up-to-date telegraph equipment which will place the Buffalo main office on a par with modern plants of the kind.

Obedience, submission, discipline, courage are among the characteristics which make a man.-- Samuel Smiles, Digitized by Google

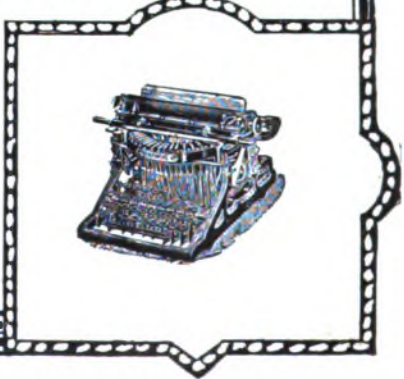


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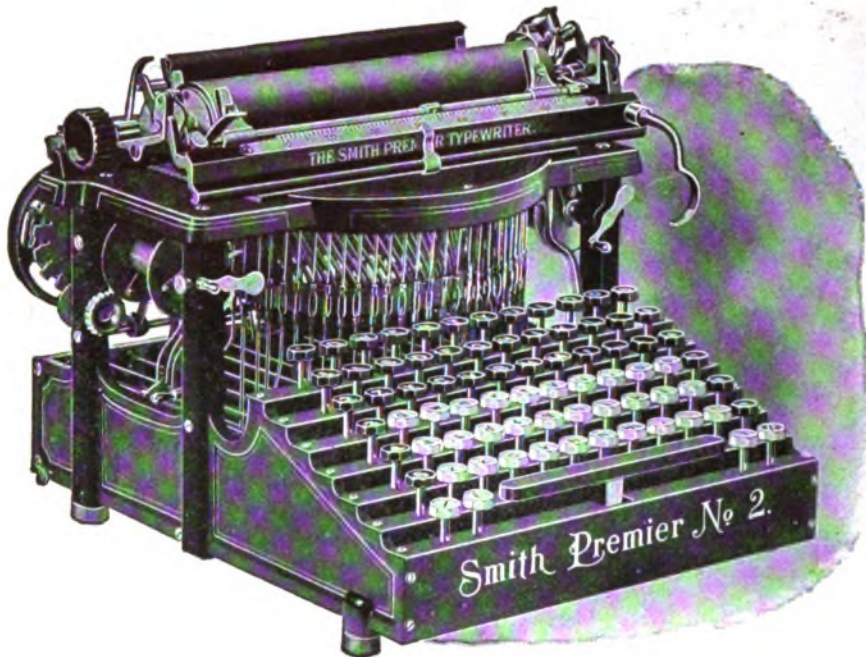
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NEW YORK, May 16, 1902.

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.

## Operators Scarce.

It is not a generally recognized fact, but it is nevertheless true, that there is at this time a decided scarcity of telegraph operators, and of really good ones there is a still greater lack. A manager, in talking of it recently, told a newspaper representative that the principal reason was that a man who had sense enough to be a good telegraph operator didn't have to stay in the employ of either of the big companies in these days of rush, for the private lines were so numerous that he could make more money, and make it easier, by getting one of them. The private wire people demand good operators, and get them with more money. Of course, there are many good operators in the employ of the commercial companies, but they are generally men who are getting good salaries, or who are working for promotion.

This scarcity of operators has prevailed all over the country for the past several years, and the demand is as great in the big offices as in the small ones.

## The Signal Corps in the Philippines.

EDITOR TELEGRAPH AGE:

My attention has been called to an article on the Signal Corps telegraph and cable system in the Philippine Islands, published in the *TELEGRAPH AGE*, of May 1, 1902, page 181.

The Chief Signal Officer of the Army has no comment to make upon the article from the Manila Freedom as his views and forecasts on this subject form a part of his official report to the Secretary of War. It is asked, however, on what grounds has the article this heading: "Inefficient Telegraph System in the Philippines," when the Freedom speaks of the system as "a wonderful and praiseworthy accomplishment" and nowhere states that it is inefficient.

Such a heading is believed to be an injustice to the men and officers of the Signal Corps who have constructed, operated and maintained this system at the expense of life, health and comfort to the admiration of at least foreign critics who have viewed the work. To brand these men and officers with inefficiency hardly seems justice or American.

Yours truly,

A. W. GREELY,

Brigadier General,

Chief Signal Officer, U. S. A.

Washington, D. C., May 3.

## Will of S. F. B. Morse's Widow.

The will of Mrs. Sarah Elizabeth Morse, widow of Samuel Finley Breese Morse, the inventor of the Morse telegraph system, was filed for probate in New York, April 28. She left no real estate and the value of the personalty is stated to be "upward of \$8,000."

The residuary estate is to be divided into three parts: one for her son, Edward Lind Morse of Washington, D. C.; another for her daughter, Leila Morse Rummel of Washington, and the other for her granddaughter, Leila Livingston Morse. Another son, William G. Morse of Port Washington, L. I., will not benefit under the will unless there is something for him in a sealed letter Mrs. Morse left providing for the distribution of personal effects. She died in Berlin, Germany, last November.

The difference between enterprise and dry rot is the difference between a town that is dead and a town that is alive. An enterprising telegrapher pulls off his coat, rolls up his sleeves and gets down to hard work and furthers his own interests by pushing the interests he serves, while the non-enterprising man sits in his chair and waits for business, education and promotion to come to him.

### Dallas, The Telegraphic Centre of Texas.

BY WILL C. LONG.

Owing to its geographical position and the energetic character of its business men, Dallas, has grown to be not only the commercial metropolis of Texas, but has also become the great telegraphic centre of the Lone Star State.

At the outbreak of the Civil War, Dallas, like many other places in Texas, that have since grown into prominence, was comparatively speaking but a small station on the railroad map. At that time the telegraphic facilities of this State consisted of a single wire between Houston and Navasota, managed by Mr. C. C. Chute; a wire from Shreveport, La., running to Crockett, Texas, built by the Arkansas State Telegraph Company; a wire owned by the Southwestern Telegraph Company, which continued on from Crockett, to Houston and Galveston, and these meagre facilities were entirely adequate then to transact the business offered.

These lines about the close of the war were merged into one company, and in 1872 became a part of the Western Union Telegraph system, which in the meantime had built a single wire from Marshall to Galveston. Along in 1876, the office at Dallas was located in a little corner of old Judge Bowers' office, and Mr. J. S. Burton, the manager, sent all his business on a single wire to Galveston, while the Judge sent culprits to the "pen" from his tribunal of justice in the other corner.

The Associated Press, organized by the Galveston-Dallas News, was then unknown, and about the only use at that time for a "leased wire," would have been for laundry purposes. The telegraph grew very slowly in Texas until about 1893, when the business began to increase with such rapid strides that it was almost impossible to furnish facilities therefor; and now, instead of simply connecting with Galveston, Houston and San Antonio, Dallas works direct with all principal points in the United States. Up to the date mentioned, the single wire system was sufficient to move the local business of Dallas and the through business from other points in the State for which Dallas had already become the great distributing centre; and the multiple system consisted of but one duplex and five quadruplexes. Since that time seven more quadruplex sets have been added, and it will probably be necessary to set up another duplex and three more quadruplexes before the cotton business opens up the coming season thus aggregating sixty-four multiple circuits in addition to the seventy single wires in daily use.

In 1893 one wire was sufficient for Waco's business, while now a quadruplex is required daily, and during the busy season six circuits will be necessary. Then Sherman, Denison, Corsicana and Paris were all on one wire with Waco; at the present time they each require separate wires for their exclusive use. From one circuit affording all

the facilities necessary for Fort Worth, now frequently eight circuits are inadequate to accommodate the business of that city. One quadruplex to Houston and a duplex to Galveston sufficed for the business of those cities at that time; now eighteen circuits are required. One single wire to San Antonio has been increased to six circuits. One way wire to El Paso has been replaced by a quadruplex one side of which is used daily for two circuits between Chicago and Los Angeles; two circuits to New Orleans have been increased to four, and one way wire to Shreveport to seven circuits; one iron quadruplex wire to Kansas City has been replaced by two copper quadruplex circuits, with a third copper wire in course of construction; four circuits to St. Louis have been increased to twelve and four more will soon be established.

Thus, from a single wire at the close of the war, to something less than forty in 1893, the wires have almost been doubled and all the trunk lines rebuilt until the system has become one of the finest to be found anywhere, and the business increased so rapidly, that it has been almost impossible to string wires and afford facilities fast enough to keep up with its remarkable growth. Five years ago a leased wire could not have existed in Texas for want of patronage, now there are three separate systems in eight different directions from Dallas, covering Texas, Arkansas, Louisiana and the Indian Territory, built especially for this service, over which thousands of messages, grain, stocks and cotton reports are sent and received daily by the firms operating these wires, and The Associated Press and Dallas News handle thousands of words of press nightly over the wires they lease from the Western Union Telegraph Company in addition to over twenty thousand words of day and night specials handled by the telegraph company every twenty-four hours for the Press Association and the different newspapers here in Dallas. The number of public messages with such a small beginning away back in the sixties, aggregating not more than four thousand per day passing through Dallas in 1893, has increased to an average of ten thousand per day, and eighteen thousands per day or over half a million per month are frequently handled.

The single operator necessary to handle the business at Dallas thirty years ago has increased in number with the wires a hundred fold. The wires used are of the highest and best conductivity known, radiating from Dallas to all points in the country.

In place of the unpretentious location at that time, the company now maintains a well appointed business office on the ground floor, and a finely arranged operating room, with twenty-five quartette tables, manned by nearly a hundred operators and clerks, on the sixth floor, of one of the best fire-proof buildings in Dallas. When the present operating department was first occupied, five or six of the tables were vacant. Since then more have been added, and all con-



nected up with new wires recently introduced to the company's equipment, until the place is actually crowded for room, the business having outgrown the greatest expectations. It will not be long before the problem of more commodious quarters will have to be solved.

### "Daddy of Telegraphers."

(R. K. Atchison in the Dallas, Tex., "News.")

Your article in reference to the services of telegraphers during our Civil War was not only appropriate, but rendered a service to the memory of men, who accepted services and invariably accomplished the part assigned them, although in many instances they knew it was death to be caught. George Elsworth was noted, but there were others yet living who performed valorous deeds.

Visiting the Dallas reunion is Col. Philip H. Fall, styled the "Daddy of Texas Telegraphers." He hails from Houston, Texas, where he has lived just sixty years, his parents, having come to Texas when he was two years of age. He has lived continuously in Houston during all these years, with the exception of two or three years at college when a boy, in Kentucky and Tennessee, and nearly four years in the service of the Confederacy east of the Mississippi. He is the oldest telegrapher in service in Texas. At the commencement of the war he was in Vicksburg, having been suspended from Franklin College, Nashville, on account of having assisted his roommate in spiriting away a young lady of a nearby seminary. He saw the couple married, and was notified by the president of the college of his suspension for two weeks. As soon as the war commenced he joined a Vicksburg company, but on account of the death of his mother at Houston he secured a furlough in order to settle his mother's estate. On his return to Vicksburg, Gen. M. L. Smith ordered him over to Desota, a village opposite Vicksburg, to take charge of that end of a little telegraph line running from Desota to Lake Providence, seventy-five miles up the river. Gen. Breckenridge's operator was sent up to Lake Providence to give Fall information as to when the enemy should pass down the river.

Christmas Eve, forty-two years ago, the operator at Lake Providence, called Fall up and notified him that eighty odd gunboats and transports had passed, loaded with troops and that lights could be seen up the river as far as the eye could reach.

Fall hurried across the river in his skiff and notified Gen. Smith. Smith ordered all non-combatants out of the city and by next morning thousands of troops were pouring into the city. In two days the Federals landed at Chickasaw Bavou, where they were defeated with great loss and retreated back to Memphis. This incident is noted in Federal and Confederate history. Fall after this was assigned to Gen. Earl Vandorn,

with whom he served, until the fall of Vicksburg, when he was ordered to report to Gen. Magruder, commanding Texas.

Col. Fall is aid de camp with rank of Colonel on Gen. Gordon's staff, and is also Adjutant of Dick Dowling Camp of Houston, which position he has held as Adjutant for five years, his commanders refusing to allow him to retire.

Col. Fall still slings lightning for the Western Union Telegraph Company, with which company he has served for nearly forty years.

Others became noted such as Elsworth, but Fall performed the greatest service to the Confederacy recorded in its history.

Had he not been prompt Vicksburg would have fallen the day after Christmas, 1862, and there would never have been a siege, and the east and west of the Mississippi River would have been sealed from all assistance of each other.

I am a friend of Col. Fall and consider that this episode should be given to his fellow veterans through The News during our great reunion.

### Lord Kelvin's Appropriate Key Note.

The jubilee of the sub-marine cable recalls a little story of Lord Kelvin, says The London Express, whose inventions the mirror galvanometer and siphon recorder made "sub-marine telegraphy commercially practicable."

At the time Professor Thomson, as he was then, was engaged on his deep sea sounding work, he was one day discovered by a visitor experimenting with a long coil of wire.

"What is that for?" inquired the visitor, pointing to the wire.

"Making sounds," replied the Professor.

"Ah," said the guest jocularly, "What kind of note does it give off?"

"The deep C, of course," came the answer like a shot accompanied by the well known twinkle in the Professor's eye.

### Never Heard of Philadelphia.

Captain James A. Hersey of the bark E. C. Mowatt on his arrival at St. Nazaire, France, on a recent voyage, desired to cable news of his arrival to his owner in Philadelphia. The owner's cable address consisted of his own name, followed by "Philadelphia," and the despatch was so worded. The operator, however, inquired: "Where is Philadelphia?" Captain Hersey was astonished, and endeavored to explain, but the question was settled by the production of a large railway atlas of the United States, in which the operator found several Philadelphias. That ended the discussion, and the message was sent with Pennsylvania added to the address. The captain's remarks have not been recorded, on earth, at least.

A single bad habit in an otherwise faultless character as an ink drop soileth the pure white page.—H. Ballou.

### Walter C. Humstone Retires.

Mr. Walter C. Humstone, superintendent of the Western Union Telegraph Company, New York, has resigned, the same to take effect on June 1. Mr. Humstone now retires from active telegraph life as he has desired to do for the past two years. He leaves the service of the company with the regrets of all of its officials as well as the employees in his division. Mr. Humstone was born at Esopus, Ulster County, N. Y., June 1, 1849. He entered the telegraph service in 1862, as messenger at Poughkeepsie, and in 1864 became night operator there. He served later at other stations along the Hudson River Railroad and in 1867 was placed in charge at nights of the same company's Thirtieth street office in New York city.



WALTER C. HUMSTONE, OF NEW YORK.

Who Has Resigned from the Office of Superintendent of the Western Union Telegraph Company.

In 1869, at the age of 20, he became manager of the Western Union Telegraph Company's offices in Brooklyn, and in 1870, was associated with the Atlantic and Pacific Telegraph Company in New York. Here, during the contest with the Franklin Company, his ready talent and activity led to his appointment as receiver of the latter. He then became successively superintendent of the Metropolitan and New York State districts of the Atlantic and Pacific Telegraph Company, until in 1875, when with headquarters at Chicago, he became manager of that company's lines west of Buffalo—and in 1879, general superintendent. At the close of the following year he became the representative of the American Cable Company on board the cable steamer Faraday, during the laying of its cables, and made the arrangements for its opening in London and Liverpool. In 1881, when General Eckert became general manager of

the Western Union Telegraph Company, Mr. Humstone was called to its service as superintendent of the first district of the Eastern division, from which position he now is about to retire. Mr. Humstone is active and prominent in several clubs, a 32d degree Mason, president of the Telegraphers' Mutual Benefit Association and is as genial as he is progressive, and his retirement from the telegraph is a distinct loss to the service.

### An Arab Widow.

The "Times," of India, tells the following story to show the character of the Arabs of Yemen, among whom there have been some disturbances lately. A man of the Zaraniks, who has several times cut the new telegraph lines, and who was punished more than once, was caught on one occasion by an Arab Sheikh in charge of the lines. The Sheikh intended to send him to Meedy for imprisonment, but the wife of the accused came in and stood as a guarantee for his future good behavior. The Sheikh accepted the bail and released him, but shortly afterward he again resorted to his old practice of cutting the wires and bolted away to another village, at a distance of one day's march, where he had another wife.

The Sheikh then sent for his first wife, who stood security for him, and told her he would disgrace her among the Arabs if she failed to bring in her husband. The woman asked the Sheikh not to "spread the black sheet" (a custom of the country when any one commits a breach of trust) till the following day. She started that night, taking a sharp dagger concealed under her clothes, to the village where her husband was staying. She found him asleep in his abode, and stabbed him, cut his throat and carried his head back to her home. The next morning she went to the Sheikh and presented the head of her husband, saying: "Here is your criminal, and I am freed from the bail. Please do not affix the black sheet."

### The Cable.

A cable line is to be laid to the Farallone Islands off the coast of California, near San Francisco. Articles of incorporation have been filed for the enterprise, which is to be styled the Farallones Cable Company. The incorporators are John E. Lutz of Oakland and James F. Swift, James I. Carniss, George M. Davis and Louis G. Boardman of San Francisco, Cal. The capital stock is to be \$75,000, and \$50,000 of it will be required in construction and equipment. There will be twenty-eight miles of submarine cable from the Cliff House to the islands and an eight-mile telegraph line from the Cliff House into the heart of the business part of San Francisco.

The Chilean Government is asking for tenders for the work of laying an ocean cable to the Straits of Magellan, starting from Talcahuano.

Life is of little value, unless consecrated by duty.—Samuel Smiles.

**Charles H. Erwin Appointed Superintendent.**

Mr. Charles H. Erwin has been appointed superintendent of the Western Union Telegraph Company, New York, to succeed Walter C. Humstone, resigned, the change to take effect June 1, 1902.

Mr. Erwin's entire business career has been associated with telegraph interests. His first position was with the Pennsylvania Railroad Company at Columbia, Pa. Subsequently he entered the service of the Atlantic and Ohio Company at Philadelphia, and later became identified with the Pacific and Atlantic Telegraph Company as manager of its New York offices; since which time he has been associated with metropolitan telegraph interests. For the past twenty-two years he has



CHARLES H. ERWIN.

The Newly Appointed Superintendent of the Western Union Telegraph Company, New York.

been with the Western Union Telegraph Company as assistant superintendent of the first district, eastern division, in which capacity he has acquired a thorough, practical knowledge of the workings of the entire system, and having kept in close touch with the working forces, he has won their confidence by his just and courteous treatment, and will enter upon his duties with the well wishes of all.

The territory over which Mr. Erwin will have control comprises the great central office in New York with its 250 city branches; 1,500 offices in the States of New York, Pennsylvania, New Jersey, Massachusetts, Connecticut and Vermont, and lines aggregating 70,000 miles of wire, cables, pneumatic tubes, etc.

In personal appearance Mr. Erwin is above the

medium height with a well knit figure and a strong, handsome face. His manners are kindly, and he easily makes friends since his heart readily responds to all that is worthy and honorable. He is a member of the New York Athletic, Marine and Field and Essex County Country Clubs, an enthusiastic golfer, and an advocate of all outdoor sports believing they are conducive to both physical and mental development.

**A New Edition of Phillips Code.**

The popularity of the Phillips Code, by Walter P. Phillips, was never more apparent than at the present time. Its acceptance by the telegraphic fraternity as a standard work of the kind dates from its first publication, and the constantly increasing demand for this unique and thoroughly tested method of shorthand arranged for telegraphic purposes, has necessitated from time to time the issuance of several editions. Lately, pending the need of bringing out still another edition, the work has been carefully gone over under the supervision of Mr. A. P. Velie, an expert press and code operator, for many years identified with The Associated Press, New York, a few revisions made and a number of contractions added, until now this "staunch friend of the telegrapher" is strictly up-to-date in every particular. The volume is in press and will be ready for delivery within a week. The new edition is offered with every confidence that it will meet all expectations and we feel sure that a cordial reception awaits it.

Many expert code operators have examined the revised edition of this code, and all pronounce it perfect. Mr. George W. Conkling, who won the championship for sending code in the New York telegraph tournament of 1898, after looking over the book, writes:

"I have examined thoroughly the additions contained in the latest edition of the Phillips Code and most heartily approve of them. Every operator who is familiar with the code should find no difficulty in mastering the new contractions, as they 'fit in' smoothly and I think the ground has been entirely covered."

The price of the book is \$1 per copy. Address all orders to J. B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York.

**Recent New York Visitors.**

Mr. Henry W. Pope, general manager of the Bell Telephone Company, Buffalo, N. Y.

Mr. H. Osborne, superintendent of the French-Cable Company's station at Orleans, Mass.

Mr. H. D. Reynolds, superintendent of the Postal Telegraph-Cable Company, Buffalo, N. Y.

Mr. J. H. Jacoby, superintendent of telegraph of the Lehigh Valley Railroad Company, South Bethlehem, Pa.



### John C. Nelson.

A well-merited promotion in the Western Union service, happily made possible at this time by the recent shifting of so many men among the executive heads of that company, is that of Mr. John C. Nelson of the Omaha, Neb., office, who on May 1 was appointed assistant superintendent under Col. J. J. Dickey, at that point, vice Mr. Charles B. Horton, transferred to Denver, Col.

Mr. Nelson is of foreign birth, having been born in Denmark, December 14, 1873. Coming to the United States when but a mere child he has grown up thoroughly imbued with American ideas, and in his characteristics partakes of the progressive spirit of the West, which early became his



JOHN C. NELSON.

Assistant Superintendent of the Western Union Telegraph Company, Omaha, Neb.

home. His first position in the telegraph service was as a messenger with the American District Telegraph Company at Omaha, in the Spring of 1887, thus beginning at the lowermost round of the telegraphic ladder in common with so many other successful telegraph men. On May 3 of the following year he entered the employ of the Western Union Telegraph Company, at Omaha, as a check boy. Here he attracted the attention of Mr. Dickey, who a month later took him into his own office as office boy. Recognizing the innate qualities of the lad, Col. Dickey counseled him as to his future, and suggested that he apply his evenings and other leisure time to the

study of shorthand and telegraphy, advice that was gratefully received and promptly acted upon. In the course of a year young Nelson had made such advances in his studies that on November 1, 1890, when yet not quite seventeen years of age, he was given the position of stenographer. Since that time he has fully rewarded Col. Dickey's early confidence, remaining close to the superintendent and filling various positions in the latter's office including that of chief clerk, while also continuously acting as private clerk and stenographer. During this period he has occasionally worked as operator in his district, also frequently serving as manager at different points, besides spending considerable time in company with Col. Dickey in inspecting offices and lines, as well as supervising in the construction and reconstruction of both. The experience thus gained has well qualified Mr. Nelson for the higher position to which he has now been advanced.

### A Presentation to Theodore P. Cook.

On Saturday, April 26, Mr. Theodore P. Cook, now general superintendent of the Western Union Telegraph Company at Chicago, Ill., was seated in his old private office at St. Louis which he occupied as district superintendent for a number of years previous to his recent present appointment, when he was surprised by about fifty of the old employees, headed by Manager R. H. Bohle, and the Rev. W. J. Williamson, who is Mr. Cook's old pastor, and who acted as spokesman in presenting Mr. Cook with a very beautiful watch. He said:

"Mr. Cook, the men of the second district, who have been associated with you, and under your direction for the past five years, feeling that they cannot trust themselves to speak, have conferred on me the honor of expressing to you their sentiments on this occasion. It is not necessary to say to you that each man in the district regards you as his friend, and holds you in highest esteem and affection. You have taken a personal interest in each employee, and every man in the second district feels himself debtor in a much greater sum than he can ever repay. As is often the case, separation has brought to the men a realization of the deep love they feel for you, and the great personal loss they sustain through your departure. They have followed your career from that of the boy, who followed Indian trails in the early settlement of the Great West, until you have been promoted to one of the highest offices in the gift of the Western Union Telegraph Company. They rejoice in your success and realize that each advancement has been the recognition of merit. They recognize in you a true man, one who has been loyal to every trust, and who has deservedly won the highest esteem. They have watched your past with loving interest, and they now beg of you to accept this time piece, that your future career may be 'watched' as well. They ask me to wish for you a long life and a successful one."

Mr. Cook, who was taken completely by sur-

prise, was so overcome as to be scarcely capable of responding to the address. Finally, he said:

"As you know, I am not a speaker, and if I were, I could not, at this time, find words that would fully express my thanks for this beautiful gift and the kindly spirit that prompted its giving. As I have many times said, my promotion carried with it sincere regrets that it removed me from the St. Louis district, in which most of my life has been spent, and from direct business connections with old friends and associates like yourselves; but I consoled myself with the fact that I would still have general supervision over you in connection with the large additional field now under my charge, and, therefore, would not be separated entirely from you. Whatever success may have attended me, I appreciate and give full credit to your loyalty and co-operation, and I shall ever be interested in your future happiness and success."

A music box was then brought in, and Mr. Williamson presented this to Mrs. Cook, saying:

"And to you, Mrs. Cook, we desire to express our sincerest regard. Back of every truly great man's life, is the influence of a good woman. We desire that you accept this music box as a slight token of our appreciation of you. We trust that as you listen to its strains, you may have an occasional thought for the men among whom your worthy husband has labored during the past years. May God bless you both."

### Wireless Telegraphy.

A mast 185 feet long has been erected at Sagaponock, L. I., for a Marconi wireless telegraph station, together with a one horse-power gasoline engine and a dynamo. It will be the principal station on the coast and the first one to speak incoming steamships. It will be connected with New York by Western Union wires and will be in charge of the operator of the Nantucket lightship. The station will also be used to educate operators in the new system. The instruments to equip it came from Cape Cod. The instruments will be set for a range of sixty miles and this will enable the station to talk with the one at Sandy Hook. The station was located with a view of giving it advantages over all other stations even the one on the Nantucket lightship. In the winter months the European steamships take the southerly course and it is expected that the station will be able to keep in communication with steamers for a longer period than can the Nantucket station. Substantial buildings will be put up without delay.

The United States Weather Bureau has recently been testing Prof. Fessenden's system of wireless telegraphy at Roanoke Island, N. C. The wireless telegraph might be of especial use to the Weather Bureau, by enabling inaccessible or remote localities to be telegraphically reached without involving the expense of carrying and maintaining a wire or cable. Moreover, for the business of making weather reports only a few daily

words are necessary, and in cases where no other business is forthcoming, a telegraph wire or cable might be prohibitively expensive. The Fessenden system is particularly different from the Marconi system in not employing a coherer for the detection of the incoming electric waves. The two systems also differ materially in other respects. It is interesting to observe that Prof. Fessenden is reported as stating that the waves of wireless telegraphy do not penetrate appreciably beyond one foot below the surface of the sea and three feet below the surface of the land traveled over. Pupin, we believe, takes a similar view.—*Electrical World and Engineer.*

The first movement toward the adoption of a system of wireless telegraphy by the United States Government for communication between fixed bases was made at Washington, May 6, when General Greely, chief signal officer, opened bids for the supply of such systems for service in Alaska, where the ordinary cables fail in important points owing to climatic conditions. The principal connection wanted was across the waters of Norton Sound, connecting Fort Davis, Cape Nome, with St. Michael, either by one circuit or by a relay on Stuart Island. In the latter case the greatest uninterrupted distance would be ninety miles. In the first case the stretch would be about one hundred and eight miles. The department also called for bids for systems between Rampart City and Winter Houses, a distance of one hundred and thirty-six miles, or, preferably, between Fort Gibbons and Bates Rapids, a distance of one hundred and sixty-five miles, being from the seacoast inland. Five bids were received, and another is on the way from Germany.

A wireless telegraph mast 140 feet in height has been erected near Long Branch, N. J., for the Marconi Wireless Telegraph Company. Its use will be in connection with signalling to and from vessels.

The "Electrical World and Engineer" in discussing the likelihood of two competent wireless telegraph systems across the Atlantic Ocean, says that with two actual and potential wireless systems in the field, each with a transatlantic working radius, we are liable to have wire tapping carried out on broad cosmic lines and quite put to shame the finest efforts of the pool-room sharps.

"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.

### The Railroad.

The Association of Railroad Telegraph Superintendents will meet in annual session at the Stratford House, formerly the Leland House, Chicago, Ill., on June 18, 19 and 20.

Copper wires from New York city to Binghamton, N. Y., a distance of 210 miles, have been constructed by the Delaware, Lackawanna and Western Railroad Company, under the supervision of Mr. L. B. Foley, superintendent of telegraph of that system, for telephone purposes, which is now considered to be a valuable auxiliary to the telegraph. These telephone wires will be extended to Buffalo at an early date.

No attempt has yet been made by the Burlington people to handle trains by telephone, other than at terminals and where "blind sidings" have been connected with the nearest regular telegraph office, and, when necessity arises, moving trains from those "blind sidings" by the telegraph operator telephoning the order to the conductor of the train to be moved. This is quite an important feature, as on some of the Western lines the regular telegraph offices are few and far between, while there are a good many "blind sidings," and by connecting them telephonically with the telegraph office, the necessity for operators at those points is very greatly lessened.

The Chicago, Burlington, and Quincy Railroad Company has in actual operation at the present time branch exchanges at Chicago, Kansas City, Rock Island, St. Louis and Omaha with an aggregate of 141 lines and 231 stations. Branch exchanges are now being installed at Aurora, St. Joseph, Havelock, Hannibal and Lincoln, with a total of 151 lines and 220 stations. The company has just finished the stringing of a pair of copper wires between Chicago and Aurora, to connect the exchanges at these points, in addition to the composite iron wire circuit between the same points, which has been in operation for the past two years. Mr. W. W. Ryder, joint supervisor of telegraph for the road, writes to the *Electrical World* that he is getting one simple Morse circuit out of the new combination copper line. A pair of copper wires is now being strung between Lincoln and Havelock, to connect the branch exchanges now building at these points. It is the intention to eventually install branch exchanges at all division points and important terminals, and to have them all connected, making a system similar to those now in use on some of the principal Eastern railways.

Operators interested in the method of treatment of writers' cramp will find very complete information in the little booklet entitled "The Cure of Telegraphers' Paralysis," published by TELEGRAPH AGE, New York. Price 50 cents.

He who wants to do a great deal of good at once will never do anything.—Samuel Johnson.

### Lord Kelvin.

The biographical sketch of Lord Kelvin who recently returned home to England after spending a pleasant three weeks in this country, is an extremely interesting one from a telegraphic standpoint, Lord Kelvin being identified with submarine telegraph interests from the very inception of cable laying.

The Right Hon. Lord Kelvin, M. A., D. C. L., F. R. S. E., past president of the British Association, was born in Belfast, June 26, 1824. He is a son of James Thomson, LL. D., professor of mathematics, Glasgow University, and received his early education in that city and university. From here he continued his education at the University of Cambridge, where he obtained the high position of second wrangler. In 1845 he was first Smith's prizeman, and was elected a fellow of St. Peter's, Cambridge, in the following year, being re-elected in 1872. He was the electrician for the Atlantic cables in 1857-58 and 1865-66, and is the inventor of the mirror galvanometer, and siphon recorder, in connection with submarine telegraphy. In 1869 he acted as electrical engineer for the French Atlantic cable, in 1873 for the Brazilian and River Platte, in 1875 for the West Indian cables, and in 1884 for the Mackay-Bennett Atlantic cable. In 1876 he perfected an electrical improvement in the mariner's compass, and since then has invented a navigational sounding machine and many electrical measuring instruments. He has been professor of natural philosophy at Glasgow University ever since 1846. His Lordship was president of the British Association at the Edinburgh meeting in 1871, and filled a similar position in connection with the Royal Society from 1890 to 1895. In 1892 a peerage was conferred upon him for his distinguished services to the cause of science. He has published several works.

The occasion of Lord Kelvin's visit to America and Niagara was made memorable by a statement he made in these impressive words:

"The originators of the work recommended by the International Niagara Commission, of which Lord Kelvin was chairman, so far carried out, and now in progress, hold a concession for the development of 450,000 horse-power from the Niagara waterfall. I do not myself believe any such limit will bind the use of this great natural gift, and look forward to the time when the whole water from Lake Erie will find its way to the lower level of Lake Ontario through machinery, doing more good for the world than that great benefit which we now possess in the contemplation of the splendid scene which we have presented before us at the present time by the waterfall of Niagara. I wish I could think it possible that I could live to see this grand development. I do not hope that our children's children will ever see the Niagara Falls cataract."

With pleasure own you errors past, and make each day a critic on the last.—C. H. Spurgeon.



### Edward M. Mulford, Jr.

Edward M. Mulford, Jr., who on May 1 entered upon his duties as manager of the New York City main and branch offices, was born at Greenwich, Cumberland County, N. J., on January 7, 1805. He learned to telegraph when but a boy of eleven. His father obtained permission from the New Jersey Southern Railroad, to repair and equip an abandoned wire between Greenwich and Bridgeton, which he and his son accomplished, and this line the boy worked for about three years while attending school, being sent for when any one desired to send a message. Aside from that, his first position in the telegraph business was as a train despatcher operator at Long Branch, N. J., during the summer of 1881, where he also served the two succeeding summers. In August, 1884, young Mulford entered the employ of the Western Union Telegraph Company, as manager at Camden, N. J., remaining there for three years. From this point he was promoted in 1887 to the managership of the offices at Ninth and Chestnut streets and the Continental Hotel, in Philadelphia. Resigning on account of ill health in 1888, he went West, and at Champaign, Ill., served as manager of the Western Union office from May 1, 1888 to June 1, 1889, when he was appointed claim clerk in the office of Superintendent F. H. Tubbs, at Chicago. In 1889 he was made chief clerk, and on May 1, 1892, became manager of the receiving, delivery and financial departments of the Chicago office. In September, 1898 he was promoted to be manager of the main office, operating and all other departments, from which position he has just been advanced to the office he now holds in New York.

### Pacific Commercial Cable Increases its Capital.

The Pacific Commercial Cable Company on May 10 increased its capital from three millions to twelve millions of dollars. The company will lay cables from San Francisco to Manila by way of Hawaiian Islands, Midway and Guam. One-third of the cable to be laid between San Francisco and Honolulu is already manufactured.

The company is now prepared to proceed with the construction and laying of the remainder of the cable from Honolulu to Manila, a distance of about six thousand miles, and this increase of capital is in order to provide the cash necessary to complete the cable.

The company was incorporated September 30, 1901, with the following officers: President, John W. Mackay; vice-presidents, George G. Ward and George Clapperton; treasurer, Edward C. Platt; secretary, Albert Beck; directors, John W. Mackay, George F. Crane, W. W. Cook, E. C. Platt, George Clapperton and Albert Beck.

The articles, "Some Points on Electricity," published regularly in TELEGRAPH AGE, are filled with practical information for the up-to-date operator. Send for a sample copy.

### Some Valuable Works on Wireless Telegraphy.

"A History of Wireless Telegraphy," third edition, revised, by J. J. Fahie, the eminent English author, constitutes one of the most popular accounts yet published of the origin and progress of wireless telegraphy, showing fully what has been attempted and what accomplished in that fascinating field of operations and research up to the present time. All systems are reviewed, as well as many guesses considered. Marconi's method is treated with great thoroughness and this inventor's particular development of the science is brought down to the present time. For convenience of the general reader the contents of the volume are divided under three distinctive heads, or periods, so called, namely: First period—The Possible. Second period—The Practicable. Third period—The Practical. The revised work will prove a welcome addition to the literature of the matter discussed. Under the respective headings the classification observed will be of especial aid in tracing with logical sequence the development of wireless telegraphy. The price of the book is \$2.50, express charges prepaid to any address in the world. Address J. B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York.

"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.

Every telegrapher who loves his profession, who is determined to master its technicalities, and thus insure for himself the confidence and respect of his official superiors and place himself in the direct line of promotion, should subscribe for TELEGRAPH AGE.

### 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.]

#### CINCINNATI, O., WESTERN UNION.

During the past six weeks a number of marriages have occurred here. These include Mr. George S. Schaeffer, Miss Etta Gallaher, our popular timekeeper, who becomes the wife of a young farmer near Wilmington, O., her former home, and Miss Pearl Snyder. They were, of course, all handsomely remembered by their friends and associates in a substantial manner.

Although the usual spring rush of business has not fully developed, the volume is quite large and is keeping everybody busy.

#### 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.

So many changes have taken place recently among the officials of the company, a feeling of unrest was clearly manifested by the chiefs and operators in this office, it being rumored that many changes would be made in the operating department by those now in authority, but this feeling has been allayed and the status is about normal once more. The members of the force, however, feel the stimulus imparted to them through the ideas being introduced by the new general management, all of which goes to expedite and improve the service.

The services of Doorkeeper Briggs of the operating department has been dispensed with.

Michael Smith, aged eighty-three years, who has for several years past acted as night watchman of the 195 Broadway building for the Western Union Telegraph Company, was a few days ago relieved from further duties by the appointment of a younger man to the position. Smith

was said to be the oldest living lineman in the United States, he having put in over fifty years of service at repairing and constructing telegraph lines. As is usually the case, Mr. Smith had not provided against a misfortune of this kind overtaking him, and the result is that he has now, unfortunately, no means of support. If any argument were needed to aid the present movement in favor of a pension fund, the Smith case, which is only one in many, is conspicuously pertinent. The telegraph company, it is said, cannot be expected to jeopardize its own interests by the continuance in active service of men over eighty years of age, and expect them to fill positions frequently requiring the strength of an athlete in ejecting intruders from its building. Smith's fifty-three years of service with the Western Union Telegraph Company, during which he had received many injuries in the discharge of his duties, certainly earned for him a pension by which he might be kept from actual want during the few remaining years of his life, and it is to be hoped that this and other cases like it will be the means of adding additional impetus to the present pension movement.

Mr. Reuben Fagan, who has had charge of the Western Union lunch room for the past twenty years, has severed his connection with that service, much to the regret of his many friends. Mr. Fagan has been active in New York telegraphic affairs, and was well and favorably known to every member of the profession, and his retirement is regretted by all. Mr. J. Edwards has assumed charge of the lunch room, vice R. Fagan, resigned. Waitresses will hereafter be employed instead of waiters.

Mr. William Finn, telegraph expert of the quadruplex department, has gone to St. John, N. B., on business connected with the service.

Mr. D. E. Roberts, the new superintendent of the building, who is an old-time telegrapher, has removed his office to room B 2, which is located on the second floor.

Mr. William Luding, an old New Yorker, has been appointed chief janitor of the building, and his office will be located on the first floor.

Mr. Ernest Brock Van Every, of the auditors office, son of Mr. J. B. Van Every, vice-president and auditor of this company, was married on April 30 to Miss Frances P. Barnes.

Mrs. Cora A. H. Mauer who was injured by a collision on the bridge some time ago, has recovered sufficiently to visit the office but not yet to work.

L. V. Goodwill has resigned to go into other business.

A number of the operators have recently bought small farms at Patchogue, L. I.

Miss Mary S. Joslyn, who has for some time been in poor health, has been allowed an indefinite leave of absence. Miss Joslyn has been in the service of the Western Union for over thirty consecutive years.

Dr. S. C. Osborne has resigned to again take up the practice of medicine.

Miss M. E. Bailey, manager at Danbury, Conn., accompanied by her sister, were recent visitors.

Arthur M. Lewis, assistant Southern traffic chief, has, on account of the health of his family, taken up his residence at Ossining, N. Y.

The clerks of the Western Union Telegraph Company baseball team would like to play the Postals' and arrangements for a game can be made by applying to W. H. Brown of the Western Union Telegraph Company building.

J. J. Welch has returned from the South very much improved in health; also A. E. Fredking, who has been in Virginia for nine months.

Peter Ritter, who for twenty-five years ran the night elevator, has resigned.

The whole of the seventh floor will soon be given over to the operating department. Superintendent Erwin's office will be removed to the fourth floor; the bookkeeping department, Mr. J. W. English manager, will find quarters on the fifth floor, and the office of the superintendent of supplies, in charge of Mr. E. C. Cockey, will be removed to the mezzanine floor.

#### POSTAL.

The Masonic fever seems to have struck a number of officials of this company. Mr. Thomas E. Fleming, special agent was recently passed through the third degree and had a very "large" time. Assistant treasurer, Theodore L. Cuyler Jr., went through the shrine degrees last week and the sands were very hot. The superintendent of supplies, Mr. W. D. Francis, and storekeeper Mr. J. S. O'Brien, also walked over the hot sands of the desert and are now all nobles of the mystic shrine. We understand there are several others contemplating joining the Masonic order.

Mr. Albert Eckert Chandler, manager of the messenger service is soon to take a three months' vacation in a trip to Europe. He will be accompanied by his wife, mother and brother.

Announcement is made of the engagement of Mr. S. Isaac Naftal to Miss Esther Bandler of this city. Mr. Naftal came here from Asbury Park, N. J. where he was the New York Herald representative for several years. Mr. Naftal is well known and popular among his co-workers and has a large circle of friends.

John J. Cleary, aged 41 years, well known in telegraph circles, having charge of the Postal Telegraph Company's messenger depot, at No. 2 Old Slip, New York, died of heart failure May 1, after a short illness.

Mrs. Mattie Watkins, who came here from Austin, Tex., two years ago, died of blood poisoning on April 28, after a short illness. The interment was at Battle Creek, Mich.

Mr. Henry F. Sherwin of the city department, died May 4 from diabetes from which he had been suffering for the last two years. Before his illness he was a large, powerful, broad shouldered man but wasted away to a mere skeleton. He had been employed here ever since the present main office was opened. A handsome floral tribute from the force was sent to his late home on the day of the funeral.

Mr. George Burmeister has resigned and returned to Texas, his native state, to engage in the cotton business.

Miss Ruth Alexander after a long absence has returned to duty in the city department.

Mrs. A. M. Grier is back again after an illness of nearly five weeks.

Mr. Travis Rhodes has been transferred from the city department to the eastern division.

Mr. Fred. E. Brown is a late arrival.

The following named have been assigned to the early morning tricks: 6 a. m., P. L. Reilly and John Mann; 6.30 a. m., W. C. Snyder; 7 a. m., C. R. Knoess, Irving Roloson and Charles Adams.

#### PHILADELPHIA, PA., WESTERN UNION.

Mr. Belvidere Brooks, general superintendent, and J. C. Barclay, electrical engineer, of New York, paid us a visit recently.

Our sympathy, and that of many friends, is herewith extended to our genial cashier, Mr. W. E. Van Arsdale, in the loss of his father who died rather suddenly about ten days ago.

Lou Smearer was the recipient recently, for faithful work and attendance, of a solid gold, with a diamond center, 32d degree Masonic mark, of which he is justly proud.

J. E. Mallon has resigned to go with a news bureau company in this city. Other resignations are: C. O. Boggs, W. E. Scholl and H. J. Butland.

A. R. Barlich has gone to Princeton to help out during the college commencement exercises where the manager, Miss Thompson, has more than her hands full.

W. M. Harvey of Washington, D. C., paid us a visit recently while enroute to Pittsburg.

Arrivals: J. V. Baldwin, T. M. Ragen, Mauch Chunk, Pa., and T. F. Murphy, New York.

John J. Connelly who was in the superintendent's office for quite a while has developed into an operator and is doing excellent work.

O. A. Ludecke, Jr. of this office, has been appointed manager of a branch office and is doing well.

#### PHILADELPHIA, PA., POSTAL.

Political honors, with the accompanying emoluments, are casting their alluring shadows across the path of Traffic Chief George W. Dunn. Present indications point to his ultimately becoming a member of the State Legislature.

Miss Katie Kehoe, of Conshohocken, has been added to the regular day force in the city department.

The familiar face of John Quigley is again seen with the night workers.

A better position with the Western Union at Pittsburg, was the inducement that caused Mr. W. J. McNerney to tender his resignation; likewise Mr. J. F. Purcell, who is now with the Long Distance Telephone, this city.

That the "Shad Crop" is being harvested is very evident from the way Mr. Stump is keeping the wires hot during the early morning hours.



An additional 6 a. m. man was added to his staff, Mr. M. Auerbach being the appointee.

The serious illness of Mr. William M. Anderson's mother necessitated his absence from the office for a few days.

CHICAGO, ILL.

POSTAL.

Mr. George Lee, one of the oldest employees in this office, died recently. He worked up to within a few days of his death.

Mr. Delaronde, of the Louisville wire, recently had his home damaged by fire.

Mr. Fleetwood has returned to Pittsburg.

The Denver wire has been brought from the Exchange to the main office.

Recent arrivals: Messrs. Long, Greenawalt, Marcy, L. Trocky, Bland, Mrs. E. B. Rose and Mr. Patterson, from Pittsburg.

J. Gallagher has been assigned to Kansas City bonus wire, Mr. Reetz to Minneapolis wire and Mr. John Brosnan to the Cleveland bonus.

WESTERN UNION.

Miss Thompson has a new assistant, Mrs. Farron, who is being initiated into the complicated desk work.

Miss Cora Talmage was lately assigned to a broker's office temporarily.

Con. Fray is visiting friends and relations in his old home at Buffalo, N. Y.

The Bloomington, Ill., office has an efficient force. The new and popular manager, H. F. White, who gained a good reputation while manager at Elgin, Ill., bids fair to work up an increase in the business. He is ably assisted by W. R. Baptist the gilt-edged night report man. The day man is B. N. Rooney; split trick J. W. Murphy, and Miss Lilian Weaver is bookkeeper. They all state that the TELEGRAPH AGE is exerting a marked influence for betterment in that office.

We are pleased to hear favorably from our friend Frank L. Titus, formerly of this office, now at Maumee, O., for the telephone company.

Charles Case, night division chief, is away on a leave of absence. His place is filled by Julius Swartz.

Annie Morrison contemplates a trip to her old home in Fall River, Mass.

"Dad" Fisher is a fine specimen of hardihood, and being past sixty years of age, he feels and knows he can handle any young man in a foot race or anything else. Mr. Fisher was a military telegrapher during the Civil War, and tells many interesting anecdotes of those stirring times.

The anniversary of the birth of Professor S. F. B. Morse was recently celebrated for the first time in Chicago, under the auspices of Morse Council

of the National Union and was an extremely enjoyable affair. The guests, being members of the council, sat at the president's table. Henry Jahn, the president of the council, was the toastmaster and a number of those present made responses to the toasts. The first proposed was "To the memory of him who has become one of the world's greatest benefactors through the invention of the telegraph, Professor Samuel F. B. Morse." This toast was responded to by Frank M. Crittenton who sketched the history of the great inventor, following his life through all its vicissitudes in a graphic manner and exhibiting a handsome steel engraving of the professor which had been in the speaker's possession since the dedication of the Morse monument in Central Park, New York, many years ago.

The second toast was "The National Union," and was responded to in a fitting manner. The third toast was to "The Flag of Our Country, Old Glory," without which no National Union Council can be legally convened. The feast of things substantial was closed with the singing of "America."

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.

The sixteenth annual dinner to "The Globe" employees was held May 1, in Faneuil Hall, and Gen. Charles H. Taylor, editor of that newspaper, graciously invited the telegraphers employed by both telegraph companies at "The Globe" office to his "family reunion." It is needless to say the invitation was accepted, and all the boys express themselves as delighted with their good treatment, and they highly appreciate the General's thoughtfulness.

Arrivals: L. B. Carrigan, J. P. Cleary, J. H. Cobb, F. H. Jennings, J. Jones, C. H. Labonte, J. C. Landon, J. H. Nance, J. W. Ross and J. A. Santamoure. Resigned: L. J. Gordon and W. Southerland.

Mr. J. O'Connor of Nashau, N. H., wire, days, vice W. Southerland.

NEW ORLEANS, LA., WESTERN UNION.

On April 27 "The Telegrapher's Relief Association of New Orleans," was organized. A constitution and by-laws were adopted and the following officers elected: J. R. Terhune, president; P. Leloup, vice-president; J. L. Adam, treasurer, and N. J. Petrich, secretary. These officials, together with W. D. West, constitute the board of directors. The association was formed to meet a long felt want of the craft in this city. Its aims and objects are to accumulate a fund to be disbursed as relief, when sick-

ness or inability visits a member, and after a fund of \$200 is in treasury, relief will be granted to its sick members the amount fixed at \$15 per week while illness continues.

The association starts with a membership of sixty and will, it is hoped, soon include the entire force of workers, (operating, clerical and linemen) in the employ of the telegraph companies in the city. The dues are fifty cents a month, payable monthly in advance.

The operating force of the Western Union have had for about ten years an association termed "The Burial Association," and it has buried thus far eleven of its members. It will very probably be incorporated into the relief association.

Mr. Val Train of this office was lately married to Miss E. Pfeffer.

**Recent visitors:** J. R. Rogers; Superintendent J. M. Stephens, Atlanta, Ga., and Inspector Morris.

Messrs. Garland and Carrol are the telegraphers at the baseball park.

**Resignations:** Messrs. Murray, Lawrence and Molony.

#### KANSAS CITY, MO., POSTAL.

Charles C. Holloway, one of the oldest men, in point of service, in this office, and formerly manager at the Stock Yards branch office, has gone to Butte, Mont., to accept a position with a newspaper at that place. Asher Bumgartner has succeeded Mr. Holloway.

John Hall of the Chicago wire, nights, has returned from a six weeks' vacation.

#### KANSAS CITY, MO., WESTERN UNION.

On account of business interests, Mr. Charles R. Fisher, night quad and loop chief, has resigned his position and removed to Chicago. Mr. John C. Greeno, who succeeds him, has served the company continuously since 1878, hence the promotion comes to him as a well-merited one for long and faithful service.

Messrs. Fred Jacobson, Andrew Kehoe and Joseph H. Giles, former check boys, but now rising young operators, of acknowledged ability, have sought new fields for labor, the first two named having chosen St. Louis, Mo., and the latter, Chicago, Ill., as their first ventures.

Mr. T. M. A. Haston, whose resignation went into effect May 1, has secured a position in the office of the superintendent of telegraph of the Chicago, Burlington & Quincy Railroad, at St. Joseph, Mo., where the TELEGRAPH AGE will continue to reach him with best of wishes for his future success.

Messrs. McKenney and Daley, recent arrivals from Dallas, Tex., have been added to the split trick force.

Mr. Fred Wessel, of Denver, Col., is again visiting in our midst.

#### The Associated Press.

Mr. Addison C. Thomas, superintendent of telegraph, Chicago, Ill., was a New York City visitor a few days ago.

The New York Bureau, telegraph department, has been equipped with new resonators, which reduces the sound over fifty per cent. The resonator was devised by Superintendent Thomas, and members of the operating force declare it to be a very useful device.

Mr. William B. Upperman, an old time telegrapher, and night manager of the New York Bureau for the past ten years, has resigned to accept a position with a trade publication.

Mr. J. S. Strachan has been appointed night chief operator of the New York Bureau, vice C. L. Morris who resigned some time ago to accept service with the Boston Globe in its New York bureau.

Among the recent appointments in the New York Bureau are operators Wm. J. O'Neil, W. H. Gomery, C. W. Baldwin, J. H. F. Walker.

The Associated Press, through Mr. C. H. Boynton, the New York superintendent has inaugurated a system of promotions in the Eastern Division which is giving general satisfaction among the operators. It consists of advancing lower salaried men to better paying positions as they are made vacant. Since the first of the year fully twenty promotions have been made under this ruling, all of them giving entire satisfaction.

#### Personal Mention.

Mr. Isaac Smith, superintendent of tariffs of the Postal Telegraph-Cable Company, New York, was in Washington, D. C., last week on business.

Mr. Frederic N. Bassett, formerly assistant general manager of The United Press, New York, is now the representative of The Publishers Press with headquarters at Boston, Mass.

Mr. J. C. Smith, manager of the Western Union Telegraph Company at Galveston, Tex., has been promoted to the managership of the Chicago, Ill., office, vice E. M. Mulford, Jr., transferred to New York in a like capacity.

Mr. George G. Ward, vice-president and general manager, and Mr. Albert Beck, secretary of the Commercial Cable Company, New York, sailed for England on the steamer Celtic on May 9. Mr. Ward was accompanied by his wife.

Mr. J. P. Altberger, manager of the Western Union Telegraph Company at Denver, Col., has been promoted to be assistant superintendent of the first district, Eastern division of the company with headquarters in New York, vice C. H. Erwin appointed superintendent.

Mr. G. F. Swortfger, the newly appointed superintendent of construction of the Eastern and Southern divisions of the Western Union Telegraph Company, with headquarter at New York, has established his office in room 66 on the sixth floor of the Western Union building.

Mr. John M. Klein, an old-time New York telegrapher, now president of the John M. Klein Electrical Works of San Francisco, was in New York recently enroute to Europe on a trip around

the world. He was accompanied by his wife and a friend. He expects to be home next January.

There are many busy B's in the City of New York, and the telegraph has its share. The three busiest B's in the Western Union service to-day are J. C. Barclay, B. Brooks, and C. H. Bristol. The three busy B's of the Postal Company are W. H. Baker, E. C. Bradley and C. P. Bruch.

Mr. James W. Plaisted, superintendent of construction of the Western Union Telegraph Company at Portland, Me., who on May 1 completed fifty years service with the Western Union Telegraph Company, has resigned, and has been succeeded by Mr. F. S. Dresser of Boston, Mass.

Mr. H. D. Reynolds, superintendent of the Postal Telegraph-Cable Company, Buffalo, N. Y., who has been absent on account of illness since September last, has returned to duty fully recovered in health. Mr. A. C. Kaufman, superintendent of the same interests at Albany, N. Y., has been attending to the duties of Mr. Reynolds three days of each week during the latter's absence.

At the farewell banquet given to Lord and Lady Kelvin, which took place at Delmonico's, New York, on May 8, tendered by the electrical and telegraph fraternities, many distinguished representatives of the electrical industry were present. Among the telegraph people were: Mr. and Mrs. Thomas A. Edison, Mr. J. L. Great-singer; Mr. and Mrs. E. A. Leslie, Mr. and Mrs. Frank Sprague, Mr. and Mrs. G. G. Ward, Nikola Tesla, T. C. Martin and others. Lord and Lady Kelvin sailed for England on May 10.

#### The Morse Club.

Invitations have been extended to the officials of the Western Union and the Postal Telegraph-Cable companies to attend the banquet held by the Morse Club, on May 24, at the Sturtevant House, New York, commemorating the fifty-eighth anniversary of the transmission of the first telegraph message. It is expected that a number of those invited will be present.

#### American District Reorganization.

Since the announcement in our previous issue of the election of new officers of the American District Telegraph Company of New York, the working force of the company has been reorganized. Mr. M. W. Rayens, the superintendent of the company, has had his responsibilities enlarged, and he now has full charge of all de-

partments of the company. Among those whose services have been dispensed with in the reorganization movement are: Mr. C. S. Shvler, who had been in the district service for a number of years; Inspector John Riley; Gustave Morris, manager of the circular department, and Miss E. Adams, forewoman; Samuel B. Van Nortwick, special inspector; J. H. Gibbons, batteryman; J. W. Beggs, storekeeper; R. Timmons, floorman, and T. McGovern, manager. The new appointments are: J. H. Riley, manager of the circular department and T. S. Mahoney, night inspector.

**NEW OFFICE AT ALBANY, N. Y.**—The new main office of the Western Union Telegraph Company at Albany, N. Y., was successfully opened for business on May 4. The equipment is thorough and up-to-date in every particular, and it is asserted by those competent to judge that the business office is one of the best arranged of any in the country, the space allowed the public is ample and conveniently arranged and resembles a banking institution.

Mr. C. H. Murphy, clock inspector of the Western Union Telegraph Company, Denver, Col., has been promoted to be general inspector and superintendent of the clock service of the company, at New York.

#### Business Notice.

When vacation time comes the Lackawanna Railroad can help you in choosing a resort. Its Summer book will tell you where to go, how to go, and cost of board. Send five cents in stamps, to cover cost of postage, to T. W. Lee, General Passenger Agent, Lackawanna Railroad, New York City.

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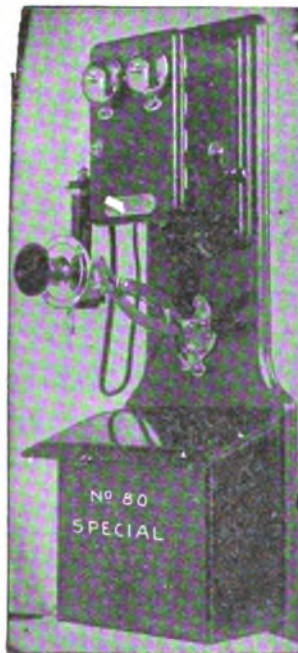
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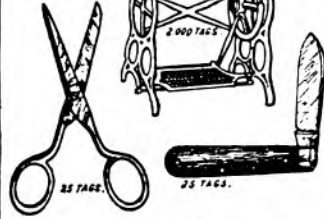
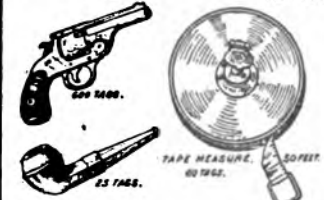
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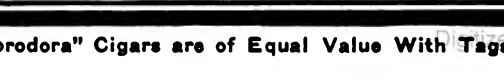
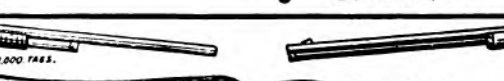
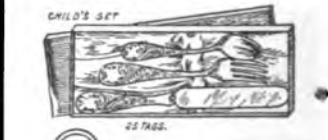
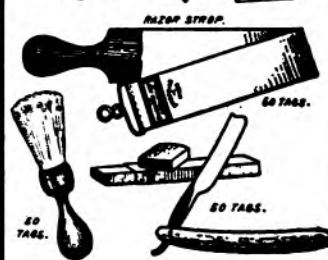
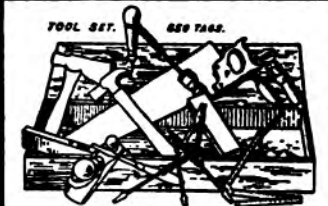
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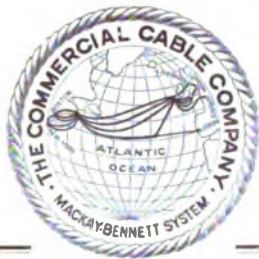
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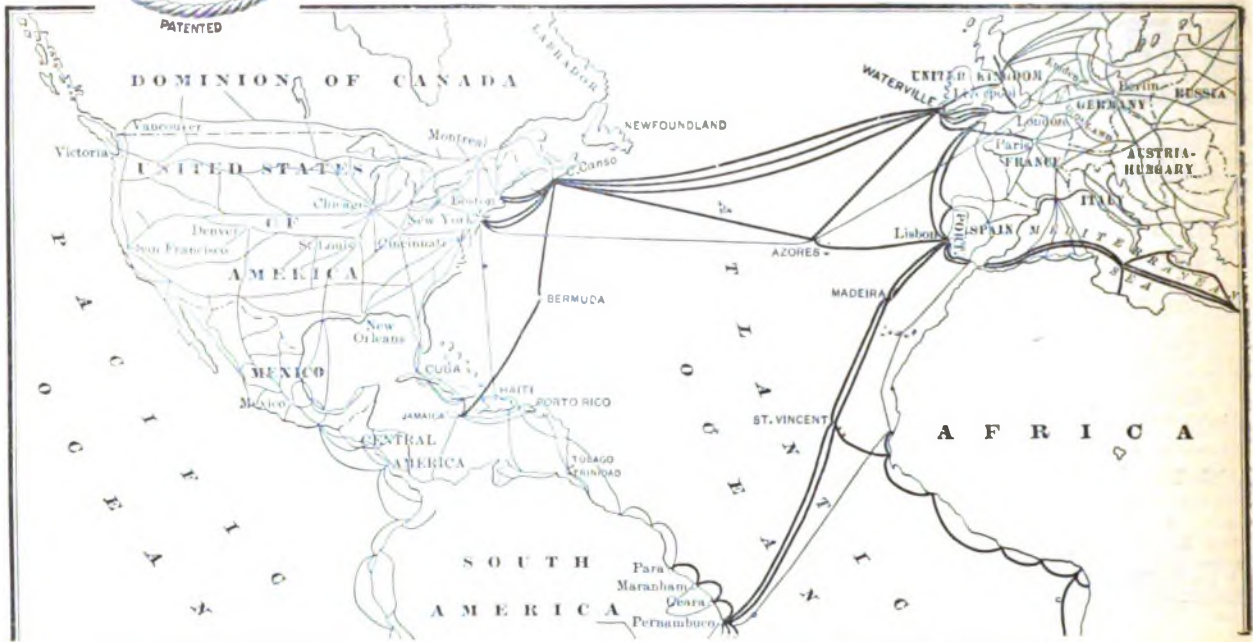


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