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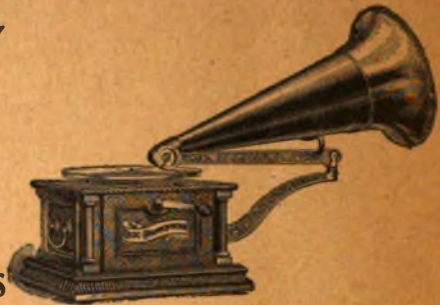
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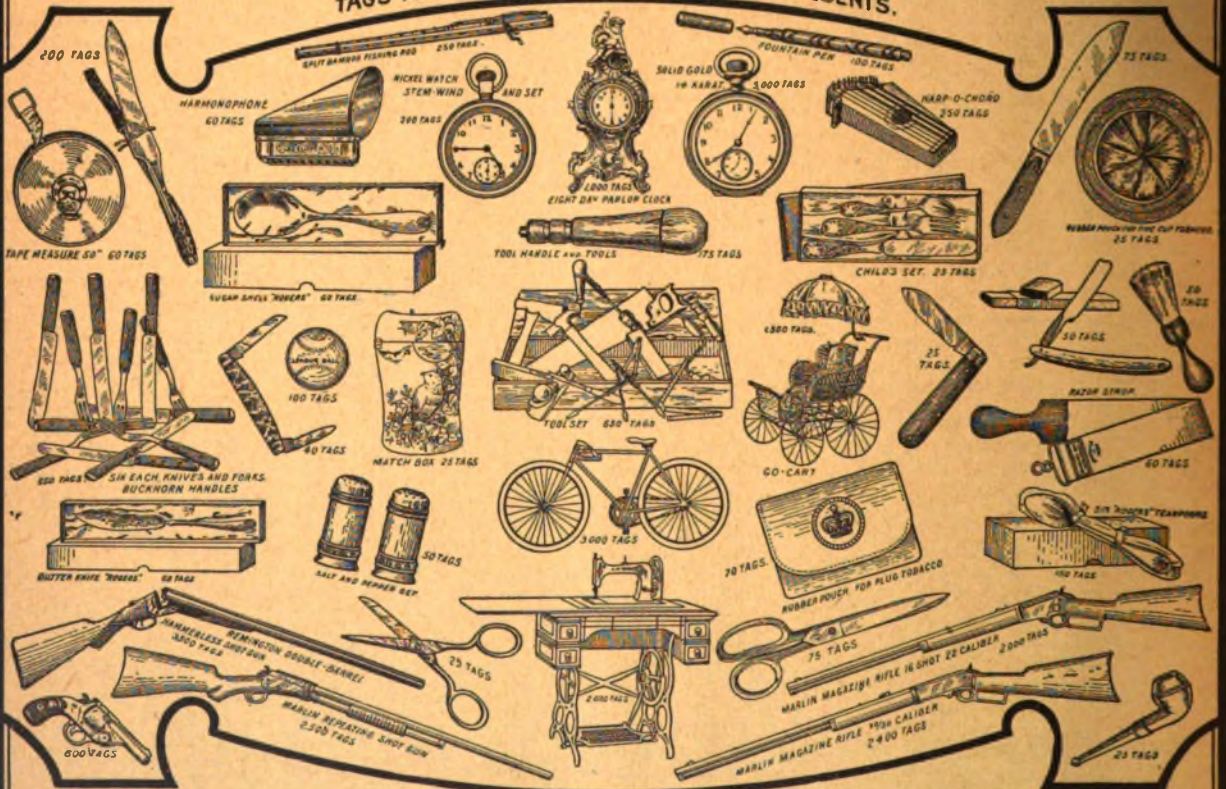
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# THE TELEGRAPH AGE

No. 9.

NEW YORK, MAY 1, 1903.

Vol. XX.

## SOME POINTS ON ELECTRICITY.

BY WILLIS H. JONES.

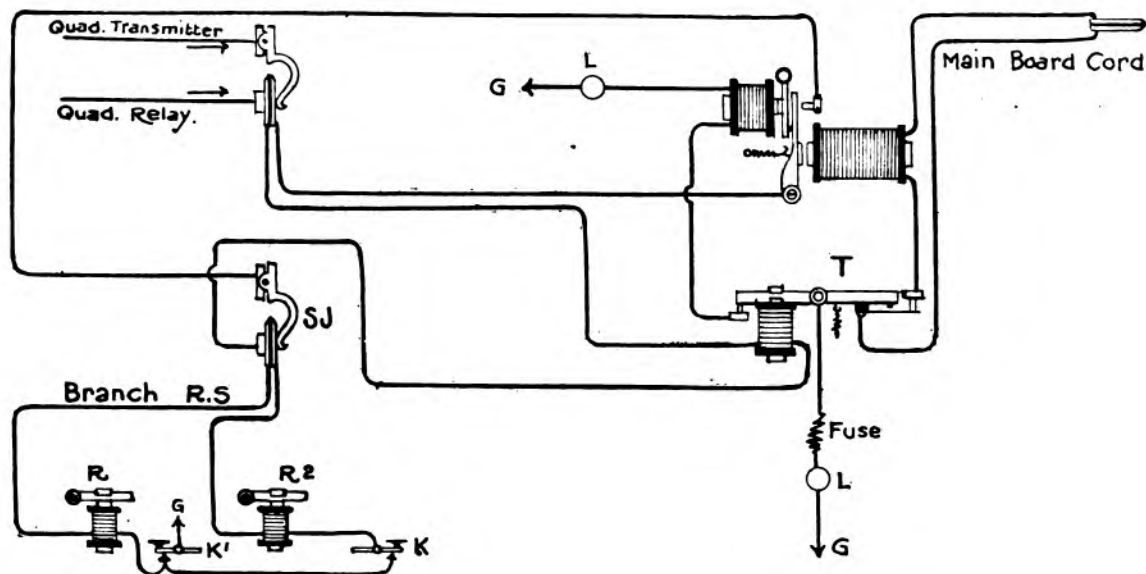
### Arrangement for Connecting a Grounded Loop and a Single Wire With a Duplex, or One Side of a Quadruplex.

Mr. James B. Dillon of Louisville, Ky., suggests the following method of connecting a "duplexed" or grounded loop and a single line wire with a quadruplex apparatus by means of a slight modification of an ordinary half-Milliken repeater. It appears to be a practical arrangement for which there are frequent demands.

The usual method of making such connections is to employ both a half-Milliken and a "double-

the quadruplex transmitter, but as it removes the ground connection for both legs of the loop the operation breaks up the relay signals at the quadruplex set, and the moment the quadruplex operator hears the disturbance he will close his key. It will be readily seen that key<sup>1</sup> at the branch office will also actuate transmitter T, and thereby permit the single line operator to hear the branch office operator's break, hence this method precludes collisions and misunderstanding between all concerned.

This adjustment naturally suggests that a half-Milliken repeater so arranged would be useless for any other purpose in case the demand for it was not constant. This, however, is not true. When it is desired to disconnect the



loop" repeater, but the arrangement shuts out the signals in one direction and therefore is seldom used.

#### OPERATION OF MR. DILLON'S METHOD.

The accompanying diagram shows the connections. The operation is as follows:

The opening of the quadruplex relay actuates transmitter T and sounder R, thereby permitting the single line and the branch offices to hear the signals of the quadruplex operator. When the operator on the single wire breaks, or sends, the opening of the half-Milliken relay (which he controls) actuates the quadruplex transmitter and sounder R<sup>2</sup> at the branch office.

Should the branch office operator desire to break he uses key<sup>1</sup>, which primarily actuates

branch office and use the set in the ordinary way, all that is necessary to render the repeater available is to merely substitute a dummy ground wedge for the discarded loop, at the loop switch, and there you are. It is also practicable with this arrangement to connect several more single line circuits through repeaters and all will be in hearing and control of each other.

As the presence of a key in the receiving side of a branch office loop can do no harm, the method described seems to be practical making necessary but little alteration in the present arrangement of our standard half-Milliken repeater. The addition of an extra springjack and a dummy ground wedge is about all that is required for the purpose of making such alteration.

TELEGRAPH AGE is again requested to explain how a distant office is enabled to make a signal on our home neutral relay when like poles oppose each other on the main line; in other words, when no current gets through the line wire.

This question has been answered before, but as the problem continues to perplex young students, a repetition may be appreciated by others also.

In reply we would say that the home battery makes the intended signal that is cut off in the main line when like poles meet, by means of the current which flows through the artificial line coil and rheostat. The current in that circuit can never be shut off, but it never gets a chance to energize the home relay magnetically except when its opponent in the main line coil is held quiet by a like polarity of current at the distant end of the wire. When this happens the artificial coil current, being no longer handicapped by its opposing main line companion, energizes the relay and produces the signal that otherwise would have got through.

From this it will be seen that the current in the artificial line coils at each end of the wire is always trying to make the same signal as that made by the incoming current, hence all that is necessary to progress on interrupted incoming signal, or part of a signal is to give that coil a chance.

When like poles oppose on the line it is obvious that both the home and the distant offices are momentarily making the same signal; that is to say, a dash or a space, hence the relays at each end of the circuit kindly help one another out of the difficulty by calling upon their ever ready artificial live current to act during that interval.

#### Recent Telegraph Patent.

A patent, No. 724,628, for a telegraph key, has been granted to Edwin T. Thorpe, of Dickerson Run, Pa.

Patents, Nos. 725,214 and 725,215, for a telegraph instrument, and a telegraph key, respectively, have been taken out by Carey E. Bunker, of Oregon, Mo.

#### Resignations and Appointments.

Mr. W. L. Simpson, of Springfield, Ill., has been appointed assistant chief operator of the Postal Telegraph-Cable Company at Denver, Col.

Mr. C. Bradbury, a well known expert land line and cable operator, has accepted a position with the British Pacific Cable Company at Bamfield Creek, B. C.

#### General Mention.

The Postal Telegraph-Cable Company at Dayton, O., F. T. Bott, manager, is to have a new and up-to-date main office by June 1.

A well known operator on the East Louisiana Railroad writes: "If half of the operators and linemen would only invest the little sum of \$1.50

for Pocket Edition of Diagrams, they would get the full value invested ten times over. Why, Mr. Jones' switchboard diagrams alone are worth the amount, and that is only one chapter of the book. I am talking up this book to all the boys on this road and everywhere I go."

The Postal Telegraph-Cable Company has just finished the erection of four new copper wires from New York to Atlanta, Ga. New copper wires have also been constructed connecting Atlanta and New Orleans, La., and Atlanta and Birmingham, Ala.

At the Magnetic Club dinner at the Hotel Vendome on Saturday evening, April 18, the large horseshoe magnet embracing the emblem "73", back of the guests' table, luminous with electric lights, which attracted much attention because of its beauty of design and conspicuousness, was furnished by Foote, Pierson & Co., of New York.

The small glass insulators on the cross-arms of the miniature telegraph poles, which were a decorative feature on every table, as well as the full-sized insulators in which the Yvette punch was served, were contributed by B. M. Downs, manager of the Brookfield Glass Company.

The snapper sounders, which produced the peculiar strident click in the song of "My Grandfather's Clock," which swelled in merry tune through the great hall, were furnished by J. H. Bunnell & Co., and Messrs. A. J. Wise, J. J. Ghegan and Jesse H. Bunnell of that company, were all present to witness and enjoy the odd sensation this introduction created.

The printing for the occasion was done by the James Kempster Printing Company and by Martin B. Brown.

#### Wireless Telegraphy.

Mr. J. Maxwell Smith, who for some time past has been engaged in wireless telegraph work, at Siasconset, has been appointed in charge of the transatlantic station at South Wellfleet. Mr. Smith is regarded as one of the best of wireless telegraph operators.

It is reported that a wireless press association is in process of organization in New York, to embrace the United States and Canada. It is said that operators are to be obtained at Glace Bay and South Wellfleet stations of the Marconi plants, and that the organization will be ready for service by the time that perfect communication is established across the Atlantic.

At the time Miss Alice Roosevelt, the daughter of the President, left Porto Rico, recently, on her return to the United States from a visit to that Island, a number of wireless telegraph messages were exchanged between the steamer Coamo, which conveyed her away, and the City of San Juan from whence she sailed. During the afternoon messages were sent alternately every fifteen minutes. The last came from the receding steamer when she was one hundred miles distant from port.



### The Convention of the Railway Telegraph Superintendents.

This year the convention of the Association of Railway Telegraph Superintendents, will be held at New Orleans, the place of meeting being at the St. Charles Hotel. The dates covered by the event, Wednesday, Thursday and Friday, May 13, 14 and 15, it will be observed, are about a month in advance of the usual time of holding such affairs. In this instance this change is rendered necessary because of the Southern latitude of the place in question. But during May, New Orleans is at its best and those who attend this session will not only be met by balmy airs and soft skies, but as well by a true Southern cordiality of welcome and generous hospitality, for which the Crescent City is justly famous. And then much is being done by the committee of



J. H. JACOBY.

President of the Association of Railway Telegraph Superintendents.

arrangements which includes Messrs. George M. Dugan, of the Illinois Central Railroad, Chicago; E. E. Torrey, of the Mobile & Ohio, Jackson, Tenn., and George L. Lang, of the Queen and Crescent, Chattanooga, Tenn., to render the visit of the superintendents a pleasant one. The meeting itself promises to be one of marked interest inasmuch as the attendance will be large, thus carrying all of the enthusiasm due to numbers; while the papers prepared for the occasion to be read and discussed by members cover a wide range of closely allied and interesting subjects akin to railroad telegraphic needs and practices. Altogether it may confidently be stated that the attractions of place, occasion and circumstance, as planned, are such as to warrant the belief that one of the most successful conventions of the Railroad Telegraph Superintendents will take place.

For the benefit of our readers we republish the

circular issued by Messrs. J. H. Jacoby, president; W. J. Holtton, vice-president, and P. W. Drew, secretary, who constitute the Executive Committee, which is in part as follows:



GEORGE M. DUGAN.

Member Committee of Arrangements Railway Telegraph Superintendents' Convention.

"The twenty-second annual meeting will be held at the St. Charles Hotel, New Orleans, La., on May 13, 14 and 15. Rates at the hotel will be from \$1.50 per day up for each person, European plan, two or more in a room, and from \$3.00 per day up for each person, American plan, two



GEORGE L. LANG.

Member Committee of Arrangements Railway Telegraph Superintendents' Convention.

or more in a room. Single rooms for one person \$2.00 up European plan, and \$3.50 up American plan. Rooms with private bath attached \$3.00 per day for each person European plan, and \$4.50 per day up for American plan. Members are requested

to engage rooms personally from A. R. Blakesley, manager. Take receipts for Pullman accommodations full fare going trip, return transportation free upon presentation to Mr. S. M. Carley, district superintendent, New Orleans."

Aside from the regular features of the convention, the reading and discussion of papers, several matters of business of more than ordinary interests will come up for consideration. Among these will be the resolution adopted last year at Chicago, providing for an amendment to the constitution by which electrical supply people and



ST. CHARLES HOTEL, NEW ORLEANS.

Where the Convention of the Association of Railway Telegraph Superintendents Meets.

those engaged in kindred trades, may be eligible for membership in the association. The amendment provides that all such members shall have the full privileges of active members except that of voting. The dues for these associate members were named to be five dollars per annum.

It will be remembered that an exceedingly interesting paper written by Vice-President W. J. Holton, was read at the convention last year treating on the importance of train orders being typewritten. It evoked a spirited discussion in which nearly all present took part, and so deep-rooted was the interest shown that, following a motion, to encourage the use of typewriters for train orders, which was unanimously carried, President Jacoby appointed a committee to confer with the train order committee of the American Railway Association, looking to the rescinding of the rules prohibiting the use of typewriters for train order work. This committee is composed of C. A. Darlton, of the Southern Railway, Washington, D. C.; Charles Selden, of the Baltimore and Ohio Railway, Baltimore, Md., and W. F. Williams, of the Seaboard Air Line, Portsmouth, Va. Their report will be awaited with interest.

Another important matter that will receive attention is that pertaining to the adoption of a universal code for railway service in which the co-operation of the American Railway Association has been sought. Mr. C. S. Rhoads, of Indianapolis, is the chairman of the committee having this matter in charge. There will also be an election of officers to succeed J. H. Jacoby, of South

Bethlehem, Pa., president; W. J. Holton, of Chicago, vice-president, and P. W. Drew, of Milwaukee, secretary and treasurer. If established precedent be followed, Mr. Holton will be advanced to the presidency, and it goes almost without saying that Mr. Drew will be continued in his present office. His long occupancy of his position, dating back to the time when the old men of the association of today were young, gives the genial secretary and treasurer a title to the place that nothing apparently can disturb or has ever sought to interrupt.

### Ernest Everett Torrey Railroad Telegraph Superintendent.

Ernest E. Torrey, superintendent of telegraph of the Mobile and Ohio Railroad Company, with headquarters at Jackson, Tenn., is a native of the State of New York, his place of birth being at Smith's Mills. It was on December 1, 1871, that he first entered the railway service, becoming an agent and operator at Laona, New York, for the Dunkirk, Allegheny Valley and Pittsburg Railroad. Believing, however, as many another has done, that the West offered better opportunities for advancement, young Torrey went to Detroit, where, in May, 1873, as an agent and operator, he found employment with the Michigan Central



ERNEST EVERETT TORREY.

Superintendent of Telegraph of the Mobile and Ohio Railroad.

Railroad. Here his surroundings were congenial and opportunities excellent, and his abilities speedily won recognition. In October, 1875, he was made train dispatcher, and in November, 1879, was promoted to be chief dispatcher. His appointment as superintendent of telegraph of the road occurred in November, 1884. This position he continued to hold for over eighteen years, winning for himself during this time the high esteem of his official superiors and gaining

a recognized place in the social and business world of Detroit. On the first of January of the present year he entered upon his present duties. The portrait of Mr. Torrey, herewith presented, shows a man in the prime of middle age, revealing a face with strongly marked mental characteristics. As a superintendent of railroad telegraph he has proved himself to be a fine executive officer. Mr. Torrey is a member of the Association of Railway Telegraph Superintendents and is a familiar figure at its yearly conventions.

#### Superintendent of Telegraph Millington.

Ethan Hall Millington, superintendent of telegraph of the Michigan Central Railroad Company, Detroit, Mich., belongs to the large and desirable



ETHAN HALL MILLINGTON.

Superintendent of Telegraph of the Michigan Central Railroad Company.

contingent of telegraphers in the United States who have been so liberally contributed to this country and sent across the line by our generous neighbor of Canada. Mr. Millington was born at Guelph, Ont., December 1, 1859, and entered the employ of the Montreal Telegraph Company in the capacity of a messenger in his native place in January, 1873. Young Millington was a lad of studious habits and returned to school for a period of about six months before accepting the position of clerk and assistant operator with the Dominion Telegraph Company. Here he remained until the close of the year 1878, when he again went back to his studies, first at the Collegiate Institute at St. Thomas, Ont., and afterwards at the London Commer-

cial College. It was in March, 1880, that he re-entered the telegraph service, this time going as an operator for the Dominion Company at Chatham, Ont., from which point he was soon transferred to London, Ont. In April, 1881, he was promoted to be chief operator. Deciding to change from commercial to railroad telegraphy, Mr. Millington, in January, 1882, obtained a place as operator with the Canada Southern Railway. He afterwards held various positions jointly between the Michigan Southern, Michigan Central and the Canadian Pacific Railroad freight offices, terminating on December 17, 1889, when he was appointed chief operator of the Canada Division of the Michigan Central. From this post he was promoted to be private secretary and chief clerk to Division Superintendent J. B. Morford, in October, 1894, and on August 15, 1902, received his appointment of superintendent of telegraph of that road, with headquarters at Detroit.

Mr. Millington has always shown himself to be a public spirited citizen, a man who has associated himself on the side of elevating moral influences. From 1896 to the close of 1902, he was a member of the St. Thomas, Ont., Board of Education, serving as chairman during 1901. He was also the president of the Railroad Young Men's Christian Association at the same point from 1895 until his removal from that city in August, 1902.

#### Telegraphic Bookkeeping.

##### Seventh Article.

BY W. H. DOHERTY.

The larger the office, the more numerous, of course, are the debit entries in the day-book. From day to day there will appear regular items, such as "transfer receipts," "guaranteed message receipts," "collections," both current and of previous months, besides all cash received for messages and cablegrams, shortages, etc. The credit entries are not as numerous as those on the debit side, because the ordinary disbursements of an office are usually paid on set dates, except for the payment of transfers and such little bills that can be paid when presented, and the daily bank deposit.

We have now described a fair outline of what a day-book is used for, and about what entries come within its scope. A book for this work should be always of the regulation cash-book form as is furnished by the company. Many managers use a slip of paper for this daily balance, but a book is the proper and only reliable way, besides providing a daily record that can be preserved indefinitely.

The cash-book is the next book of importance for use in the work of a telegraph office, and must necessarily contain a complete record of all receipts and disbursements of the business of each day. The figures entered in this book are totals of the classified receipts and disbursements that appear in telegraphic bookkeeping. It will be necessary to review these in their regular order of entry, and as

the cash-book is used in the make-up of still another book which will be described later, the several entries are arranged as follows: Debit side. "For Telegraph Receipts," "This line," "Other line," "Cables," "For Transfer Receipts," "Principal," "Premium," "Tolls," "For Other Receipts," "Guaranteed Messages," (I have found it of advantage to enter the guaranteed messages separately, giving date and place of destination, for the purpose of checking the report at the end of the month) "City Line Messages," "Gold and Stock," "Rentals," "Cash from Superintendent or Treasurer" (which occur occasionally when there is a large transfer to pay and not enough money in the bank for the purpose), "For Collections, previous month and current month." "Miscellaneous" will cover all other receipts not mentioned in the classified list, and with this entry the formation of the debit side is concluded.

The credit side disbursements are: "Paid Other Lines," "Refunds," "Uncollectible Messages," "Salaries," "Rents," "Light and Fuel, Repairs," "Miscellaneous," covering the expenses not in the classified list; "Transfer Payments," "Government Messages Sent Paid," "Cash Remitted to Superintendent or Treasurer," and "Charged Accounts."

The purpose of the cash-book is to show a complete record and total of each day's business, and as is the case in large offices, when the figures for "This Line," "Other Line" and "Cables," are not made up for one or two days later, the cash-book is held open until such time as these total figures can be completed. All entries on the debit or credit side that are cash transactions, can be found in the day-book, and the total amounts can be transferred to the cash-book, after the day-book has been balanced. Correct figures for changed accounts must be obtained for the credit side of cash-book before closing the cash-book.

We now have about all the items that are found in the general run of telegraph offices, and may now close the cash-book for the day. To illustrate, let us assume that the initial entry is being made on the first day of April. Footing up the debit side the figures show \$600.00; footing up the credit side the figures show \$450.00, a deficit of \$150.00. Why this discrepancy? Simply because this amount represents the cash business done during the day, or cash balance, and should be on hand to balance the day's account, and by entering the words "cash balance," under the \$450.00 total on the credit side and footing up the credit side again, it will be found that it agrees with the debit side at \$600.00. April 2nd is opened by bringing the total debit side figures of \$600.00, and placing them in the right hand column of the book on the debit side, top of page. The classified entries for the day are recorded one column to the left of this. On the credit side, the \$450.00 should be brought forward (not \$600.00, let it be remembered) and placed in the last column to the right at the top of the page. The classified entries are recorded one column to the left, or similar to opposite side of the cash-book, when April 2nd has been completed, in the same manner as April

1st as to the classified entries. The total entries on the debit side are found to be \$700.00. This amount is placed in the right hand column, and will be found to be directly under the previous day's amount, name—\$600.00. The two amounts are then added together and placed at the bottom of the page thus making \$1,300.00. This amount represents the total business for two days, and by carrying forward the \$1,300.00, and adding to it the total business for April 3rd, the total business of the month up to and including April 3rd, is found. By repeating this process each day the figures at the end of the month will show a grand total of all debit business done during that month.

Taking the credit side of the cash-book on April 2nd and footing it up, credits are found to the amount of \$500.00; this is placed in the column to the right and found to be under the \$450.00, the sum carried forward from April 1st. The total of credits to date would then be \$950.00, the difference between this amount and the total debits of \$1,300.00, being \$350.00, which represents the amount of cash which should be on hand, or the "cash balance." By again entering the cash balance of \$350.00 under the total credits of \$950.00, and adding them together, a balance is found with the debit side of the cash-book. Repeat this process daily, and when the cash balance shows the limit permitted to be held, which varies in different offices, remit to the treasurer, taking credit for that remittance in the classified entries, the effect of which is to swell that day's credits, but reduces the "cash balance" carried.

### The Railroad.

Following the lead of the Illinois Central, Burlington, Alton and other western railroads, the management of the Lake Shore and Michigan Southern Railroad Company has practically decided to construct a private telephone system along its road to connect the division terminals. There will be ten separate telephone stations between Chicago and Buffalo, and at the larger points, such as Chicago, Toledo, Cleveland and Buffalo, direct connection will be made with the company's private exchanges which serve the local offices in those cities. Two No. 8 copper wires will be used, they being strung on the telegraph poles now in use. The telephones will be used for general business that does not necessarily require a written record, and trains will be governed by telegraph, as at present.

T. M. B. ASSOCIATION.—Assessment numbers 406 and 407 has been levied by the Telegraphers' Mutual Benefit Association to meet the claims arising from the deaths of Anthony P. Prichard, at Tacoma, Wash.; Thomas E. Ryan, at White River Junction, Vermont; Joseph M. Nye, at Inkster, N. D.; Harry B. Walker, at Richview, Ill.; Wm. H. Guilford, at Syracuse, N. Y.; Wm. H. E. Clapp, at Boston, Mass.; Harold S. Blair, at Kansas City, Mo., and Edward O. Alyea, at Newark, N. J.

**Personal Mention.**

Mr. W. E. Gilmore, general manager of the Edison interests at Orange, N. J., has returned from the South after an absence of six weeks.

Miss Geraldine, the daughter of George H. Fearons, the general attorney of the Western Union Telegraph Company, New York, will be married on May 6 to Mr. Edward Simeon Skillin.

Mr. John Burry, electrical engineer of the Stock Quotation Company, New York, and inventor of the Burry Printing Telegraph System, has returned from a trip of a month to Switzerland, where he went to visit his mother.

Mr. Dennis J. Hern, up to a short time ago superintendent of the Mutual District Messenger Company of Boston, Mass., and one of the best known old time telegraphers in New England, has been appointed Health Commissioner of the Hub.

Mr. John I. Sabin, president of the Pacific States Telephone and Telegraph Company, an old time telegrapher, has returned to San Francisco from Chicago, Ill., to reside. Mr. Sabin's company now has about 40,000 telephones in San Francisco and over 161,000 on the Pacific Coast.

**New York Visitors.**

Mr. F. Carney, Western Union Telegraph Company, Boston, Mass.

Mr. C. A. Darlton, superintendent of telegraph, Southern Railway, Washington, D. C.

Mr. I. W. Copeland, manager of the Western Union Telegraph Company, Troy, N. Y.

Mr. C. F. Ames, superintendent of the Western Union Telegraph Company, Boston, Mass.

Mr. J. M. Creamer, manager of the Western Union Telegraph Company, Baltimore, Md.

Mr. E. J. Nally, general superintendent of the Postal Telegraph-Cable Company, Chicago, Ill.

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

Mr. C. C. Adams, general superintendent of the Postal Telegraph-Cable Company, Atlanta, Ga.

Mr. J. P. Althberger, superintendent of the Western Union Telegraph Company, Philadelphia, Pa.

Mr. Joseph Maxwell, assistant superintendent of the American District Telegraph Company, Buffalo, N. Y.

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

Mr. L. W. Storrer, general superintendent of the Postal Telegraph-Cable Company, San Francisco, Cal. Mr. Storrer was accompanied by his wife.

Mr. E. W. Campbell, of Pittsburg, Pa., manager of the telegraph department of the American Sheet Steel Company and of the American Tin Plate Company.

Mr. R. H. Dyer, Jr., of the Postal Telegraph-Cable Company, Buffalo, N. Y. Mr. Dyer was accompanied by his wife, a bride, and the visit to New York was a part of their wedding trip.

**Obituary.**

Felix A. Duffie, manager of the Postal Telegraph-Cable Company, Kalamazoo, Mich., died on April 10, from the effects of an operation.

A. S. Parmelee, aged sixty-eight years, formerly manager of the Western Union Telegraph Company at Owego, N. Y., died at that place on April 22.

E. J. Udell, aged sixty-five years, died at Rantoul, Ill., on April 16. He was for many years an operator at that point, but for several years past has been editor and proprietor of the Rantoul News.

Martin W. Griffin, manager of the Western Union Telegraph Company at Lockport, N. Y., up to last year when he resigned on account of ill health, died in that city on April 18. He was fifty-three years of age.

Daniel C. Shaw, one of the best known of the old time New England telegraphers, died suddenly in Bath, Me., on April 22. Some twenty or more years ago he was night manager of the Western Union Telegraph Company in Portland and was recognized as one of the most proficient operators in the country. After a long service in Portland, Mr. Shaw went to Bath and assumed the management of the Western Union office there until five or six years ago when he resigned and went to Philadelphia, going into the main office of the company in that city. A few months ago his health began to fail and he was obliged to leave the Philadelphia office. Going east he accepted a position on the Boston and Maine Railroad, but soon was obliged to abandon work altogether and returned to his old home. He was about sixty years old. He was formerly and for many years a prolific writer on telegraphic subjects, the author of many delightful telegraph stories which obtained a wide reading.

**Standardize the Telegraph.**

Dr. A. D. Campell, of Cleveland, O., an old timer and a reader of TELEGRAPH AGE, in a recent letter writes:

"I was much pleased with your editorial 'Standardize the Telegraph,' in the issue of February 1, and heartily agree with your views expressed therein. The companies have all been standing in their own light, and have driven many of their better educated operators into other more profitable, and congenial fields, until now enough men of real ability are hard to find."

### Typewritten Train Orders.

The announcement has recently been made that the Remington Typewriter Company has placed upon the market a new machine known as the Remington Train Order Special. This machine, the purpose of which is fully indicated in its name, is certain to arouse the deepest interest of all railroad men.

The advantages of the typewritten over the penwritten train order seem almost too obvious to require comment. First and foremost is the legibility of the writing. The two reasons which have already enabled the typewriter to displace the pen in the commercial world are its superior legibility and its superior speed. There is no use to which it is possible to put the typewriter in which legibility is a more absolute essential than in train order work. The consequences which may follow and which in some few cases have been actually known to follow the misreading of a handwritten order need hardly be described. Handwriting, illegible compared with typewriting even under the most favorable conditions, is especially so in the case of train orders, for a number of well understood reasons.

First and foremost among these reasons is the necessity for making a considerable number of copies at a single writing; in other words, for heavy manifolding. In the case of handwriting the requisite number of copies can only be obtained by the use of the stylus and even then only with the heaviest pressure. Under such conditions speed even from the standpoint of handwriting is impossible, and every operator will testify that such writing is fatiguing to the last degree. As a consequence legibility must inevitably suffer.

Another objection to the penwritten or rather stylus written train order is the character of the paper which must be employed. Even with the stylus it is impossible to obtain the requisite number of manifold copies unless the most delicate tissue is used. This paper must be read and referred to under all conditions and in every kind of weather. Under these conditions the extreme destructibility of light tissue is a very serious drawback.

The great power of the Remington Typewriter as a manifolder is a matter of common knowledge to all users of the writing machine. This fact makes it fundamentally a machine well adapted for this purpose, therefore it is but natural that the manufacturers of this typewriter should be the first to place on the market a Train Order Special. It is perfectly easy on the Remington machine to get the requisite number of clean, legible copies at a single writing on paper of sufficient strength, body and toughness for every purpose.

On the subject of legibility little need be said. "As legible as print" describes accurately the kind of work turned out by the writing machine. On the Remington Train Order Special the gothic

style of type is employed which is even better than ordinary writing machine type for this purpose. This character is very open in form thus insuring the absolute legibility of every copy even under the heaviest manifolding.

The keyboard of the Remington Train Order Special is designed with particular reference to the requirements of the work. The characters used on this keyboard and their arrangement have been prepared with a view to facilitating the highest speed in the writing of train orders. This keyboard is also designed so that the machine may be employed with perfect ease for any other kind of writing which may be required of it. In its capacity for all kinds of work the Train Order Special does not differ from any other Remington machine. The quality of universal adaptability possessed by the Remington is an important one from the standpoint of the purchaser, especially in the cases where only one typewriter is available for all writing of every kind. And this will of necessity be the case at a large percentage of the stations where the Remington Train Order Special will be used.

### The Cable.

Mr. F. A. Hamilton, the well known cable expert, has been appointed electrician on the Commercial Cable Company's steamer Mackay-Bennett, vice Mr. Charles C. Priest, who has been assigned to duty as electrical engineer of the same interests with headquarters at New York, during the absence of Mr. Charles Cuttriss in the Philippine Islands.

Mr. Edward M. Duncan, the marine agent of the Direct Cable Company, New York, was married on April 22 to Miss Florence Beatrice McQueeney, of Brooklyn. They went to Old Point Comfort on their wedding trip. Among those present at the ceremony were W. O'Keefe, of the Commercial Cable Company, and Mrs. O'Keefe; W. G. Tintle, of the Western Union Cables, and Mrs. Tintle, and W. R. Montgomery, of the Anglo-American Cable Company, and Mrs. Montgomery.

### Cheerfulness Pays.

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NEW YORK, May 1, 1903.

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The amount of information contained in each issue of TELEGRAPH AGE of the utmost practical value to the progressive operator who is ambitious to succeed, to acquire a more thorough knowledge of his profession, and not only to better qualify himself for the position he now occupies, and consequently for advancement, should prompt many to send in their subscriptions to this journal without delay. The first article in

each issue, contributed by Willis H. Jones, under the standing heading of "Some Points on Electricity," contains more positive instruction concerning the telegraph, than can be found anywhere else, and worth more to the operator than many times the cost of the paper itself. Subscriptions should be sent direct to this office, or to any of our agents who may be found with both the Western Union and Postal companies in nearly every large centre in the United States.

We are prepared to furnish a limited number of bound volumes of TELEGRAPH AGE, which embraces 536 reading pages, besides the index, for the year 1902, at the uniform rate of \$3 a volume. The binding is substantial and the lettering is done in gilt. The volume furnishes a complete record for the year named of the telegraph, the cable, wireless telegraphy and other allied interests, the whole constituting an interesting work of reference of the highest worth to all telegraphers, libraries, etc., to which the carefully prepared cross-index lends additional value. Single copies of the index for volume XIX, covering the year 1902, may be had at ten cents apiece. Our friends who require copies of the bound volume, or of the index alone, should send in their orders promptly so that they may be filled while the supply lasts.

## Telegraphic Journalism.

The initial numbers of The Journal, the official paper of the organization known as the Commercial Telegraphers' Union of America, of which A. G. Douglas is the editor, appear to fulfill the hopes and expectations so far as expressed in regard to its advent among the membership of that recently formed order. It is published once a month at Milwaukee, Wis., at a subscription price of one dollar a year; contains twenty-four pages, is well printed, and the general make-up, tone and diversity of matter presented is commendable for a new publication, and indicates that painstaking hands and temperate minds are in control of the enterprise. This is well; we are glad that it is so. If any organized body of commercial telegraphers believe that their interests as individuals, and consequently as a whole, are to be fostered and promoted through the instrumentality of a special publication, it is essential to its welfare that prudence and well considered sober speech should govern its utterances, whether in the editorial or news columns. If the telegraphic union organization is to prosper and grow strong it will be because, first, there is need for such an undertaking, and, second, because leaders wise, patient and discreet of action, dominate its councils. Granting this premise there should be a field for the new journalistic embarkation, and TELEGRAPH AGE, like an older brother, extends the right hand of fellowship, to-

gether with cordial wishes that success may attend its Western contemporary.

It may not be out of place, however, to declare at this time and in this connection, what has often before been stated, namely, that TELEGRAPH AGE, while never an "organ" of any telegraphic interest, has always maintained its position, originally intended by its founder, namely, that of a telegraphic newspaper, pure and simple. Conducted by practical telegraphers, whose sympathies, born and nurtured at the key in the operating room, have ever remained loyal to the craft, TELEGRAPH AGE has stood for what it believes to be the best interests of the fraternity whether at the operating end or climbing the hill of earned promotion. Its pages reflect the best thought, technical and general, incident to telegraphy, both at home and abroad, and convey to its readers the news of the telegraphic world. In its chosen sphere it is representative in the truest sense and its responsibilities within this scope are large. With widening opportunities and more exacting duties to perform incident to growth and the march of events, the future policy of this journal shall be but an enlarged counterpart of its past record. And this will in no wise conflict with or trespass upon the pathway marked out by any other paper with telegraphic specialistic tendencies.

### The International Telegraph Conference.

The official vocabulary, which will be the main subject under consideration at the International Telegraph Conference, which will begin its deliberations at London, England, on May 26, is stirring up commercial circles in many sections of the world. Influential houses and commercial bodies in New York and elsewhere in the United States, are condemning the cable companies for their supposed authorship of this vocabulary, when, as a matter of fact, the cable companies had no more to do with the preparation of this work than has TELEGRAPH AGE. The responsibility rests wholly with the telegraph administrations of the world.

Opposition to the new vocabulary has developed, principally on the ground that it may not contain many of the words in the several cable codes now used, and that, owing to the growing complexity of modern business methods, a compulsory adoption of an official vocabulary of code words would tend to restrict the use of the cable as an instrument of trade. Moreover, exporters say, a new vocabulary will do away with numberless private codes consisting of "made-up," or spurious words, in that they are not to be found in dictionaries of any language.

The signatories to the International Telegraph Convention will be all the Governments of the world which control and operate cable and telegraph lines. The United States Government will not be a party to the convention, as it has no direct interest in telegraph or cable companies. Ow-

ing to the international nature of the business these Governments maintain a central bureau at Berne, Switzerland, where rates are made, all differences arising between the various systems are adjusted, and where records are kept and rules adopted which will benefit all concerned.

In international cabling it has been agreed that a code word containing ten letters or less may be transmitted at a single rate, which, of course, varies with the distance to which it is sent. These words may be selected from eight languages—English, German, French, Spanish, Dutch, Italian, Portuguese and Latin. Words of more than ten letters must pay double rates. Cable code publishers, in making up codes, have been free to use any word in the dictionaries of the eight languages mentioned. In recent years words have been fabricated, spurious words they are called, and these words convey numbers. If the numbers themselves were used they would be charged for at the rate of five figures to a word. The object of employing spurious words, therefore, is to represent figures by letters or by parts of words and so obtain the transmission of a greater number of figures than five at single rates.

The international bureau has declared that spurious words shall not be transmitted, but no objection would or could be made to the representation of figures by bona fide words. According to cablers, this question of whether or not the transmission of spurious words is to be allowed forms the crux of the present agitation. The official vocabulary contains 1,300,000 words, incorporating all dictionary words and words now used by standard codes. While the new book may be sufficiently comprehensive to enable code users to make their present books conform, it is argued that it will do away with all codes composed of spurious words, and therefore restrictions and untold expense arising from the purchase and compiling of new code books will be placed upon cablers.

On the other hand, these codes composed of spurious words have been compiled in the face of the published rules prohibiting them, which have remained unaltered for at least twenty years, and the telegraph administrations have never sanctioned them or knowingly admitted them.

The date for the holding of the International Telegraph Conference in London is May 26. Some additions have been made to the "Propositions" originally published by the Berne Bureau at the suggestion of the delegates.

The following gentlemen will be the delegates of the British Post Office at the International Telegraph Conference: J. C. Lamb, C. B., C. M. G., second secretary to the Post Office; Philip Benton, assistant accountant-general; A. B. Walkley, (secretary's office); and F. W. Home (accountant-general's department).

The Western Union Telegraph Company will be represented by D. Le Rougetel, the general superintendent at London.

Mr. George G. Ward, vice-president and general manager, and Albert Beck, secretary of the Commercial Cable Company, New York, who will sail in a few days for England, will represent both the Postal Telegraph-Cable Company and the Commercial Cable Company at the Conference.

#### **A Fatal Case of Operator's Paralysis.**

There was published in the obituary column of TELEGRAPH AGE of the issue of April 16, the notice of the death of Fred S. Smith, Cairo, Ill., an old time telegrapher whose demise was attributed to operator's paralysis. For four years during the development and spread of this benumbing influence the sufferings of the patient are described as being most severe. This is the first case of this kind that has ever come to our knowledge. We did not suppose that paralysis of this nature ever affected the human system above the immediate parts attacked, nor do we recall in any treatise on the distressing malady any record of fatality.

Inasmuch as this disease manifests itself more especially among telegraph operators, superinduced by the constant manipulation of the key, the question of whether it may be attended with fatal consequences becomes one of more than passing interest.

#### **Spelling Reform Again.**

There is a new outbreak, says the "Fourth Estate," of spelling reform. Earnest persons are writing to the newspapers about it, and some newspapers are trying to begin at home and reform their own spelling, according to the artificial rules of the learned societies.

It is the old story. We are to begin with simplifying the spelling of twelve large and hard words. When we have induced all the users of English to adopt our reformed spelling of these, we are to take twelve more, and so on, until we have lightly adventured all through the dictionary from A to izzard.

Will the earnest reformers never learn that the spelling, writing and pronunciation of the English language are among the things beyond control by statute law or mass meeting resolution?

We do not spell the English language. The English language spells itself, and we have to go along with it. It is a living organism, fluid, growing, changing, like a jelly fish floating in the water. We talk wisely about laws of language; but the wisest men tell us that they know little about them.

If the English language, or any living language, have a formative, shaping force, it is the general, unconscious consent of its users, as vague as it is irresistible, as fluid and shifting as language itself.

When a language begins to yield to the shaping hand of the learned academies it begins to die. When it is dead you may spell and pronounce it any way you like, as we spell and pronounce Latin and Greek; but not before.

#### **Municipal Electricians.**

Alfred Jackson, electrician in the fire-alarm repair department of the City of Chicago, died in that city on April 16, aged twenty-two years.

Patents Nos. 725,602 and 725,603 for a circuit breaker for fire-alarm systems, and a regulator for fire-alarm systems, respectively, have been awarded jointly to Daniel T. Spring, Andrew Long and Geo. H. Ebeling, of Wheeling, W. Va.

During the year ended December 31, 1902, as shown by the annual report of City Electrician Ellicott, of Chicago, Ill., the Bureau of Fire-alarm Telegraph, that city, placed 239 miles of wire under-ground and rebuilt 141 miles of old lines with copper wire. The office equipment was rebuilt and improved and is now of the most modern character.

Owing to a disagreement with Mayor McNamee, Charles F. Hopewell has resigned the superintendency of wires and lamps in Cambridge, Mass., after serving seven years. Mr. Hopewell asserts that the mayor ordered a cut in the salaries in the wires and lamps department and then stated that Mr. Hopewell was responsible for the reduction. Timothy C. O'Hearn has been appointed city electrician in that city to fill the vacancy.

The official report of the seventh annual convention of the International Association of Municipal Electricians, which met on October 7, 8 and 9, 1902, at Richmond, Va., has made its appearance. It is a volume well printed and carefully compiled, of over 240 pages. It gives a complete account of the proceedings of the meeting, including the several addresses made, the papers read and the verbatim record of the discussion which followed each; the reports of the various committees, the photographs of officers and the full text of the constitution and by-laws, altogether a volume that will be of value and interest to a wide circle of readers. The work reflects credit on the enterprise and careful work of the secretary of the association, Mr. Frank P. Foster, of Corning, New York.

#### **The Telegraph Cheaper Than The Mail.**

It is remarkable how much telegraph business is transmitted by private concerns over their leased wires, writes a superintendent of telegraph. Houses which employ none but first class operators and conduct their business in an intelligent and economical manner, state that they are enabled to handle messages at an actual cost of not over two cents each. The rate is so low that it does not pay to make use of the mails. Of course addresses and signatures are cut down to one or two letters each where the volume of business to handle is large, but the fact remains nevertheless that in handling private wires understandingly the telegraph is cheaper than the mail.

You can't afford to be without TELEGRAPH AGE.

### Highway Crossing Signal Apparatus.

The Railroad Supply Company of Chicago and New York are installing highway crossing alarms on nearly all the principal roads in the United States, Canada and Mexico. The success of this alarm, which is called the Chicago Crossing Signal, is probably due to the extreme simplicity of the apparatus. We present herewith illustrations of the principle used, Fig. 1 being a simple track relay which is adaptable to practically any crossing. This relay is very similar to an ordinary telegraph relay, having all adjustments practically identical with same. Fig. 2 represents the bell used with the Chicago Crossing Signal, its mechanism being in the up-

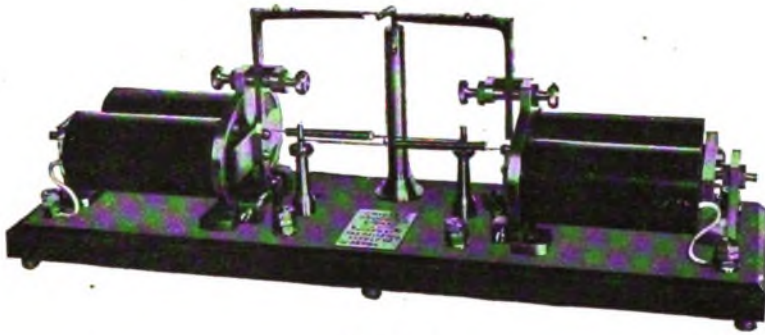


Figure 1.



Figure 3.

per half of the iron casing and the gong in the lower half which is so perforated that the sound of the gong may travel in all directions.

The principle used with this signal is the well known track-circuit principle, simply bonding the track along each side of the crossing and placing a cast iron battery chute at the further extremities of each of these track circuits. This battery chute, Fig. 3, contains two cells of gravity batteries. The cuts show practically all of the important parts of the signal. It will be noticed from them that a lineman or anyone familiar with ordinary telegraph work can install and maintain these signals.

The Railroad Supply Company have had a representative at all telegraph superintendents' conventions during the last few years, and the company this year will be represented by Mr. E. W. Vogel, Signal Engineer, who will have with him a complete exhibit of the apparatus.

Some one remarks that if the best man's faults were written on his forehead, it would make him pull his hat over his eyes.

### A Wireless Telegraph Newspaper.

"The only newspaper in the world publishing sure-enough dispatches transmitted by wireless telegraph," is a top line appearing in "The Wireless," published by the Los Angeles (Cal.) Times at Avalon on the Island of Santa Catalina, off the coast of California. The copies that reach us show a unique little four page sheet which manages to print considerable news in paragraph form. This is all transmitted by wireless telegraphy across the intervening forty miles of water separating the island from the main land. As the paper contains an editorial and has advertising patronage it may be said to be a venture of promise.

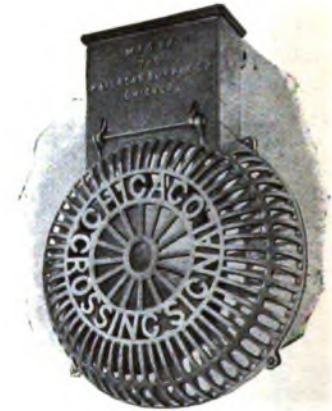


Figure 2.

### Preserve Your Papers.

By taking a little trouble, when TELEGRAPH AGE first comes to hand, it may be preserved to form a permanent and valuable addition to the reading matter with which all individuals should be supplied. We furnish a neat and attractive cloth board binder, which will be sent by mail, prepaid, for \$1.00. It has good, strong covers, on which the name TELEGRAPH AGE is stamped in gold, and means by which each issue may be securely held as in a bound book. One binder may thus be made serviceable for several years, and when the successive volumes, as they are completed, are bound in permanent form, the subscriber ultimately finds himself, for a moderate cost, in possession of a most valuable addition to any library, embracing a wide variety of telegraph, electrical and general information, and timely and original illustrations. Save your papers.

If you wish to know all about the instruments you work, invest \$1.50 in a copy of Jones' Diagrams.

### The Magnetic Club Dinner.



It was a memorable occasion in the annals of the Magnetic Club of New York when at its Spring dinner, held at the Hotel Vendome on Saturday evening, April 18, Col. Robert C. Clowry, president of the Western Union Telegraph Company, was entertained as the guest of honor. The date was the fifteenth anniversary of the founding of the club, and it is safe to say that no such meeting in point of numbers and in enthusiasm had ever previous-

ly been held. As a tribute to Col. Clowry it was a distinct and hearty expression of the high esteem so generally felt for the distinguished guest of the evening. Officials and men of the Western



COL. ROBERT C. CLOWRY.

Who was the guest of honor at the Magnetic Club Dinner.

Union, the Postal and of the cable companies, those resident, and others coming from a distance, together with a number of well-known manufacturers and dealers in telegraph supplies, supplemented by a few invited guests, among whom were members of the press and officials of the city, made up a sympathetic company of two hundred and fifty or more, all of whom vied with each other in contributing to the heartiness and cordiality of the reception. Rival telegraphic interests were laid aside and forgotten, as is usual and becoming when men meet socially, particularly among Magnetic members, and good fellowship reigned supreme. What with the dinner itself, with the grouping of congenial spirits about the various tables; the interspersing songs, some paraphrased to produce merry hits on

men and events incident to the occasion, which were received with roars of laughter; the concluding speeches, all breathing happy expressions of fraternity and brotherhood, the time passed most delightfully, and the hour was late when the company finally said good night after all present standing and with joined hands, united in singing "Auld Lang Syne," a version written by Marion H. Kerner, one of the governors of the club.

Prior to the announcement of the dinner friends crowded about Col. Clowry in the reception room, and here for an hour all welcomed and paid him their respects. The banquet room presented a brilliant scene. It was set with small tables, each decorated with candles and a miniature telegraph pole with cross arms and insulators. Miniature insulators were distributed among those present as souvenirs of the occasion, while the Yvette punch was served in full-sized glass insulators. Over the entrance door appeared in large letters the motto of the club, "Are you happy," while high on the wall back of the head table was a large magnet, inside of which was the symbol "73," the whole glowing with electric lights. At this table sat Mr. F. W. Jones, the president of the club, who presided, with Col. Clowry sitting at his right. Others about the table were W. H. Baker, Melville E. Stone, J. C. Barclay, H. D. Estabrook, George G. Ward, Col. A. B. Chandler and C. P. Bruch.

Letters of regret were read from Thomas A. Edison, Andrew Carnegie, W. E. Gilmore, George H. Fearons, L. C. Weir, Thomas F. Clark, Frank A. Munsey and Charles H. Mixer.

At the conclusion of the dinner President Jones rapped for order, and in a few graceful remarks introducing Col. Clowry, he referred to the important positions the latter has filled for so many years in controlling the telegraph operation and development in this country, particularly in the western part, and of the exceedingly important duties he performed in the United States Military service between the years 1861 and 1865 in Missouri and the southwest, for which services he was appointed to a captaincy by President Lincoln, afterwards being brevetted as a Lieutenant Colonel; and that up to the present time Col. Clowry has always been highly esteemed by his associates and subordinates as a man, not only of extraordinary capacity and industry, but also one eminently fair in all his dealings, and approachable and courteous to all of his employes.

Col. Clowry rose amid much applause, the entire audience acting on the impulse of the moment also rising and joining in singing the Star Spangled Banner, after which the Colonel responded as follows:

You will, I think, make due allowance for the statements of Mr. Jones, when I tell you confidentially, that he originally came from Chicago, and is rather partial to people who hail from that "windy city."

It is said that Franklin drew the lightning from Heaven, and that Morse harnessed it and taught it the English language. It is well known that Edison in-

vented the quadruplex, but it is not so well known that Mr. F. W. Jones, of Chicago, made such improvements and additions to it as to make it a practical commercial success.

I am not an after dinner speaker, but claim to be a patient listener, and would greatly prefer to hear others speak on this occasion rather than to attempt to say anything myself.

My experience has taught me that in order to do anything well one must have had a good deal of practice in that particular line of business. Now, it may be said that listening requires no preparation, but I must differ from this view of the case. I am sure that many of the gentlemen present will agree with me when I say that it requires a good deal of preparation for a young man to listen intelligently to the speeches of a Morse sounder, as it was my fortune to do for eight years. It is true that the remarks made by that little instrument were delivered in a rather monotonous and metallic voice, but they were generally interesting, and often instructive and eloquent. These speeches shocked my youthful mind with stories of the horrible human slaughter of the Crimean war, between Russia and the allied armies of Great Britain, France and Turkey, and made me familiar with the almost unpronounceable names of Russian statesmen and officers. How well I remember the thoughtfulness and consideration of the sending operator in slackening his speed when he came to hard names like Gortchakoff, Menchikoff, Sevastopol, etc.

In those eight years the little sounder told me many stories of happiness and misery, and if I occasionally felt a thrill of delight, or dropped a tear on the paper, my experience was, no doubt, common to many of those present here to-night.

I believe that there is no better business school for the young man than telegraphy, and the careers of many of the leading business men of this country confirm this belief. It is thought that fully eighty-five per cent. of the railway managers in the United States were telegraph operators in their younger days, and I am constantly meeting men prominent in every branch of business who served an apprenticeship at the key, and in all cases they are proud of their former occupation.

I desire to congratulate you on your name—"The Magnetic Club." To be sure I have never been able to fully analyze Electric Magnetism—but there is another kind of magnetism with which I am somewhat familiar. I have felt it here to-night. I find that the atmosphere of this hall is pervaded with the delightful magnetism of sociability and good fellowship, and I am quite sincere when I say that I am deeply touched by the very kind greeting and generous hospitality which you have extended to me this evening.

In introducing Mr. Estabrook, the solicitor of the Western Union Telegraph Company, Toastmaster Jones told in a humorous way about the courtship of Miles Standish, and how his friend, John Alden, was induced to "speak for himself," and then stated that the next speaker, Mr. Estabrook, was a descendant of John Alden, being the eighth generation, and that his ancestors had come over in the Mayflower, in charge of Captain Jones, who was the ancestor of the toastmaster.

In his opening remarks, Mr. Estabrook expressed a regret that he had not inherited his ancestor's hypnotic influence with the ladies; that it was true his ancestors had all come from the Mayflower, but that he was surprised to learn that the Joneses also originated on the Mayflower, because he had hitherto believed that the old lady was right when, after reading the sign, "The Jones Manufacturing Company," she exclaimed, "There! I always wondered where all the Joneses came from!" Continuing, Mr. Estabrook

said that he had tied the souvenir baby insulator to his coat-button in the hope that it would protect him against the chain-lightning toastmaster, but just why the Yvette punch had been served in an insulator he could not imagine; for, while good, it was not dangerous; that it evidently took more than Yvette punch to prompt the "boy choir" in the rear of the room to report progress on the menu; that just as his attention had been called to the big sign over the doorway, "Are You Happy?" a joyous yell went up, "We have squab," which was proof conclusive that somebody was happy; that he observed by the program, however, that squab was to be accompanied by a "chestnut dressing," and he surmised that Mell. Stone was to be called on to recite some of his stories.

Mr. Estabrook said in part:

From the bouquets that have been tossed back and forth, I judge that the Magnetic Club is a mutual Admiration Society, and that the name "Magnetic" is, perhaps, a modest way of proclaiming your own attractiveness.

This is evidently a heart to heart talk among gentlemen who have to do with electricity, and if there was only a Jacqueminot or an American Beauty suspended over this table, as a sort of symbolic promise that whatever was said here to-night was said "under the rose," I should, myself, feel tempted to indulge in a few heartfelt sentiments, particularly concerning your guest of honor. I have known him for a great many years, and he is worth knowing. Every man who has made a success of his life is worth knowing, and worth studying too. If I were to declare in a single word the secret of Col. Clowry's success, that word would be, "fidelity"—faithful, loyal, aggressive work in the interest of the employer whom he has agreed to serve. Such work will always succeed.

I am persuaded that the doctrine of work, honest, ungrudging work, is the doctrine of success to-day, yesterday and forever; for so long as the world endures and is governed by the laws of evolution, so long must the worker survive, and the laggard perish; and the more brains and good will you can put into your work, the more it will make for your own happiness and the uplift of the world.

If I were to declare in a single word the secret of your guest's strength and health and happiness, that word would be "temperance"—the "golden mean" that Confucius talks about. I doubt if there is a clerk in Col. Clowry's employ who, if he were compelled to lead the simple, sane, sanitary life which his chieftain leads through choice, would not vote it a colossal bore, and die of ennui. The fact is that most of us are possessed by a demon of unrest that chafes at discipline. We seem to secrete a moral, or perhaps I should say immoral, dynamite that must explode periodically in a toot. But in the language of the Sultan of Sulu, "The cold grey dawn of the morning after is no time for mirth and laughter." The longer I live, the more am I convinced that all virtues are summed up and focused in the virtue of temperance—temperance in everything. Mark Twain intimates that a man can even be intemperate in telling the truth, and Lord knows, Mark was never accused of this delinquency. Ben Franklin placed temperance at the head of his list of the thirteen virtues, and if you will study that list you will find that it absorbs the other twelve: for, on analysis, temperance simply means the mastery of self.

So, you see, the secret of this man's success and happiness is no secret after all. It is the familiar case of the man who, in control of all his faculties, devotes them conscientiously and unremittingly to the work in hand. It is the case of the man who has always been willing to earn more than he receives, and such a man

is bound to succeed—laws, tariffs, trusts, The Crime of '73, or what not to the contrary notwithstanding.

Now, it may be that our success seldom develops as rapidly as our ambition, and thank heaven this is so; for the few in this world who have attained to that hopeless misery, like Nero or Alexander the Great, have gone mad in the very excess, delirium, I might say, impotence, of power. But God is good, and I defy you to name one in this country who has ever wholly failed, deserving to succeed.

However, I did not intend to make your guest the subject of a sermon. I am afraid our strenuous President's disposition to sermonize is contagious. I merely wished to state that I have known your guest for many years, and that he was a man well worth knowing.

Mr. Estabrook then related how, notwithstanding he was Colonel Clowry's brother-in-law, he had become attorney for the Postal Company, and that he might still have been with the Postal Company if the guest of honor had not suddenly awakened to the fact that a house divided against itself was liable to collapse; and concluded his address as follows:

Now, and henceforth probably, I am, like the rest of you, interested in electricity. Everybody is interested in electricity. Everybody is directly or indirectly affected by it, and the Lord only knows what it is yet to accomplish. When I was Regent of the Nebraska University one of the professors made a requisition for a large sum of money to enable the Agricultural School to conduct some experiments in raising crops by electricity; he said that it had been successfully done in Germany. I told the learned professor that Nebraska was not Germany, and that I did not think her soil needed that sort of manure; that all we needed was water, and lots of it, and that if he was possessed of some necromancy through which he could conjure up on occasional shower I was with him "for the old flag and an appropriation," but that I did think we could manage to survive without electricity. And yet I wronged him; for we do need electricity in all its forms. We need the electricity of the clouds—God's lightnings, cleaving sluiceways through the heavens, that the waters of the firmament may gush in torrents to the earth. We need the electricity of heat—sheet lightnings, that go shuddering across the sky, suffusing the cheek of night as with a blush. How sudden cool the air! Every leaf and twig and blade of grass puts on its coronet of dew; every flower holds up her chalice to the dripping stars. We need the electricity of motive—that lightning of the mind, glimpsing to us new paths of duty leading onward to the future. We need the electricity of love—that lightning of the soul, thrilling along the fibres of our being, making every human heart a telegraphic relay in that grand circuit of humanity whose ground wire lies buried in a different sphere from ours.

And America may have all this! She has her men and women, her freedom and her institutions. God has only to pitch the key, and our prairies sing with a harvest. Yes, God and our Fathers have done their part; fellows citizens, may we do ours!

The next speaker was Col. A. B. Chandler, chairman of the board of directors of the Postal Telegraph-Cable Company, who briefly and with much feeling, which found a ready response among his auditors, referred to his long connection with telegraphy, eulogized the character and career of Col. Clowry and expressed the hope that he might be able to meet again with the club a year hence.

Mr. Melville E. Stone, the general manager of The Associated Press, in his remarks which followed, paid a very handsome compliment to Col. Clowry when he said that in the event of a dispute ever arising between The Associated Press and the Western Union Telegraph Company, he

would be very willing to leave a settlement of the matter entirely in Col. Clowry's hands, satisfied that whatever the decision might be it would be just and fair.

State Senator W. C. Burton, also spoke briefly.

Mr. C. P. Bruch, the first president of the club, was down on the programme to respond to the toast "Permanent Magnets," and the following gentlemen were also prepared to address the members, but were practically shut out for an opportunity on account of lack of time: Mr. W. J. Dealy, Mr. Wm. H. Baker, Mr. Geo. Gray Ward, Mr. Belvidere Brooks, Mr. J. C. Barclay and Hon. Julius M. Mayer.

Among those present were:

Atlanta, Ga.—B. S. Price.  
 Baltimore, Md.—J. M. Creamer, C. Selden.  
 Boston, Mass.—C. F. Ames, F. Carney, M. J. Cook, F. M. Ferrin.  
 Chicago, Ill.—W. I. Capen, C. L. Clevenburg, E. J. Nally.  
 Dallas, Tex.—S. M. English.  
 Jersey City, N. J.—J. B. Bertholf.  
 Minneapolis, Minn.—H. A. Tuttle.  
 Philadelphia, Pa.—J. W. Benckart, Hon. G. W. Dunn, F. E. Maize, W. E. Vanarsdall.  
 Pittsburg, Pa.—E. W. Campbell, M. W. Mead.  
 San Francisco, Cal.—L. W. Storrer.  
 Trenton, N. J.—Karl Roebing.  
 Troy, N. Y.—I. W. Copeland.  
 Washington, D. C.—C. A. Darlton, W. E. Peirce.  
 Wilmington, Del.—J. W. Aydon.

New York City.—J. F. Ahearn, G. W. E. Atkins, S. F. Austin, W. J. Austin, W. H. Baker, J. C. Barclay, D. H. Bates, J. R. Beard, G. W. Blanchard, E. H. Bowen, John Brant, T. Brennan, A. R. Brewer, H. J. Brewer, O. Brewer, C. H. Bristol, R. E. Bristol, B. Brooks, G. Brooks, T. A. Brooks, C. P. Bruch, E. B. Bruch, Jesse H. Bunnell, Hon. W. C. Burton, E. S. Butterfield, W. H. Butterfield, J. Calhoun, W. J. Carroll, P. J. Casey, Col. A. B. Chandler, A. E. Chandler, F. E. Clary, J. F. Cleverdon, R. N. Cleverdon, W. S. L. Cleverdon, Col. R. C. Clowry, M. R. Cockey, C. W. Conklin, J. W. Connolly, J. Costelloe, F. E. Coyle, T. L. Cuyler, Jr., T. J. Donovan, M. M. Davis, W. J. Dealy, Henry Dealy, F. W. Dillingham, W. H. Doherty, B. M. Downs, J. H. Driscoll, L. Dresdner, H. C. Duvall, W. Eastlake, A. P. Eckert, W. S. Eckert, T. C. Eipper, J. W. English, H. D. Estabrook, G. F. Fagan, R. E. Fagan, Wm. Finn, T. E. Fleming, L. B. Foley, J. Forson, W. D. Francis, D. Fuchs, J. W. Fuchs, J. J. Ganter, D. J. Gallagher, G. Ganss, J. J. Ghegan, E. P. Griffith, Dr. L. R. Hallock, M. W. Hamblin, G. E. Harding, E. J. Hart, H. F. Hawkins, B. R. Hawley, F. J. Hutton, J. A. Hennaberry, T. M. Hennaberry, J. A. Hill, W. H. Hodgins, Wm. Holmes, Geo. A. Holle, E. F. Howell, G. Irving, W. H. Jackson, G. R. Johnston, F. W. Jones, S. F. Jones, A. F. Kelly, James Kemptster, M. H. Kerner, Frank Kitton, Joseph Knittle, V. G. Knittle, W. T. Larkin, J. Leahy, C. F. Leonard, J. Levin, D. J. Ludwig, D. W. McCanceney, J. A. McClary, O. McCullen, W. G. McCullen, W. B. Mc-

Curchy, J. F. McGuire, F. E. McKiernan, J. McParlan, W. G. Magowan, D. F. Mallon, George T. Manson, Wm. Marshall, F. C. Mason, Wm. Maver, Jr., Hon. Julius M. Mayer, C. E. Merritt, S. Fisher Miller, J. Montgomery, E. M. Mulford, W. J. Mundell, D. J. Murphy, F. D. Murphy, R. J. Murphy, Benjamin Nachmann, J. D. Needham, O. J. Nourse, M. J. O'Leary, C. F. Pearce, Frederick Pearce, H. G. Pierson, E. C. Platt, G. F. Porter, A. E. Price, E. J. Rankin, E. Reynolds, H. E. Roberts, J. H. Robinson, Geo. Roehm, C. Ruffer, J. B. Sabine, Epes W. Sargent, E. Sawyer, R. W. Scheffler, F. J. Scherrer, W. D. Schram, J. W. Schmults, C. Schmults, T. P. Scully, W. Seguin, H. H. Sherman, H. L. Shippy, C. Shirley, T. G. Singleton, D. Skelton, J. F. Skirrow, Herbert Smith, T. J. Smith, Melville E. Stone, D. C. Sullivan, J. B. Taltavall, T. R. Taltavall, W. H. Ten Broeck, Percy Thomas, W. H. Turner, G. H. Usher, J. B. VanEvery, E. H. VanEvery, W. A. VanOrden, D. E. VanOrden, W. B. Vansize, J. C. Watts, A. J. Wise, E. J. Willyoung, M. T. Wilbur, J. C. Willever, Geo. G. Ward, W. J. Watson, H. S. Young.

### The New Telephone and Telegraph Bureau at the White House.

BY WALDRON FAWCETT.

Reprinted from the "Electrical Review."

The telephone and telegraph headquarters, or, as it is officially designated, the Telegraph and Cipher Bureau, is easily one of the most important adjuncts of the new White House offices in Washington. The quarters at present occupied by what has been so aptly termed the President's "intelligence office" are not as commodious as those apportioned to this division of the Presidential establishment when the Executive Offices occupied half of the second floor of the White House proper, but the equipment of the new telephone and telegraph bureau surpasses in many respects the appointments previously available.

It is significant that the growth and development of the National Government may be clearly traced by means of the expansion of the functions of this office. During the Civil War the President was dependent upon messenger service between the White House and the War Department, a block away, the Government wires converging at the last-mentioned building, and there being at the White House no direct communicative facilities. Later the exigencies of governmental administration resulted in wires being run direct to the White House, and on more than one occasion during the great railroad strike in Chicago President Cleveland sat at one end of the telegrapher's table in the White House, while the General commanding the army sat opposite, and these men actually conferred by wire with the army officers in command in the western metropolis.

It was, however, during the administration of the late President McKinley that the Telegraph and Cipher Bureau attained by rapid development a degree of perfection that has made the unique

institution the marvel of every foreign governmental official who has visited the White House in recent years. Indeed, M. Cambon, formerly French Ambassador at Washington, went so far as to attribute much of the success of the United States in the Spanish-American War to the facilities for quick communication afforded by this splendidly equipped department.

Sixty-five wires converge at the Telegraph and Cipher Bureau. The arrangement is such that it is possible to secure a direct wire, either telegraph or telephone, to any city at any time, reserving it for governmental business as long as desired. There is provided a wire for direct communication with the President whenever he is absent from the city and another wire affords an exclusive line for the transmission of confidential cipher business between the President's office and the cable offices in New York. As a rule, cablegrams are despatched through the New York offices of the cable companies, but there have been instances in which the White House



COL. BENJAMIN F. MONTGOMERY.  
In charge of Government Telegraph and Telephone Bureau.

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operators worked direct with the terminal offices of the Nova Scotia cable stations.

The private telephone system, which has its headquarters at the White House office building, consists of three separate trunk lines, with seventeen miles of exterior lines, giving direct wires to the nine executive departments of the Government, the Government Printing Office, the Library of Congress and other branches of the Government. There are, moreover, a number of separate telephone stations at the White House, located in the kitchens, the private apartments, the stables and elsewhere. The entire system is controlled by a switchboard in the central exchange of the bureau. The headquarters of the police and fire departments are, of course, reached by means of the wires of the Washington telephone system, but private wires connect the White House with the Senate and House of Representatives, so that the President is enabled to at any time communicate confidential messages to members of either house of Congress.

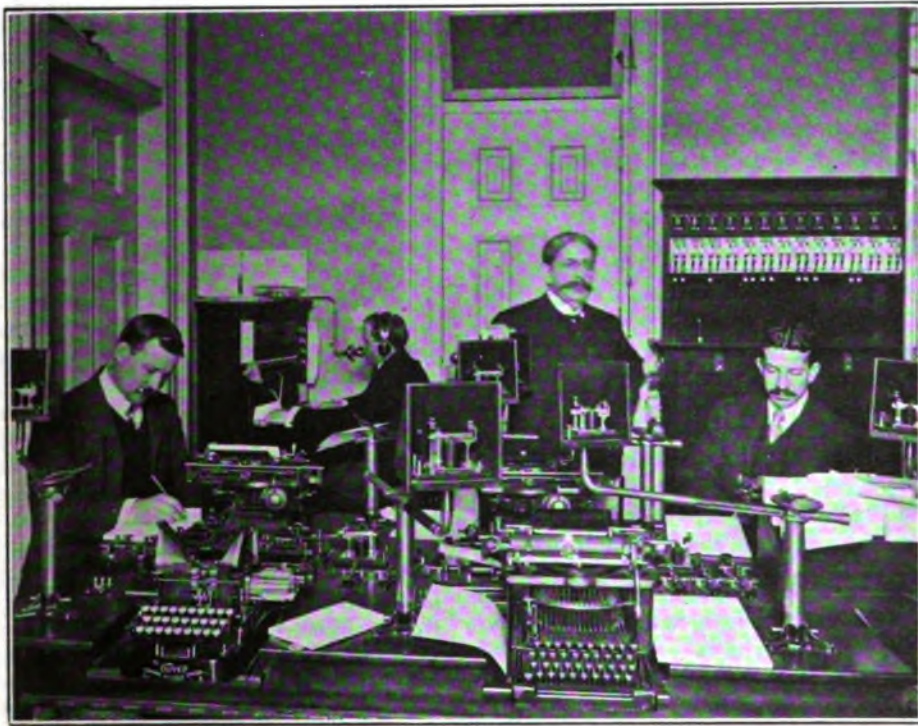


To ensure secrecy, the system of wires which connects the President's office with the desks of the various members of the Cabinet at their respective departments is automatic in its action. Then, too, not only is the White House telephone exchange a central office exclusively under Government control, but all the operators are Government employees, and practically no confidential business passes through the city central office. However, the telephone system, although under Government control, was installed by a private corporation which merely leases the equipment to the government.

Method and concentration are the keynotes of the administration of the telephone and telegraph headquarters at the Presidential mansion. At times unusual expedients have been resorted to. For instance, on occasions operators receiving long tele-

graph office in the Government service which is in operation continuously—and this makes it necessary for the operators to work in three "shifts" of eight hours each. The Telegraph and Cipher Bureau is under the direction of Colonel Benjamin F. Montgomery, an officer of the Signal Corps, United States Army, who is specially detailed for this duty and who has served as "intelligence officer" at the White House for so many years that he is justly regarded as one of the veterans of the staff of the Executive Offices.

All of the telegraphers at the White House are what are known as "code men"—that is, capable of handling messages which are in cipher. Telegraphic messages are received in ten different codes. The State Department has three codes, for use chiefly in confidential communication with American



TELEPHONE AND TELEGRAPH BUREAU, WASHINGTON, D. C.

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phonic messages have repeated them word by word to graphophones to be transmitted to the President at his leisure and in a few instances graphophones of carefully gauged speed have been used to record long messages clicked off by the telegraph instruments. Resort has been made to this method only when the office has been rushed with work, and when the operators welcomed the means which enabled them to record the incoming messages in such manner that they could be transcribed when opportunity offered.

The system employed has enabled the performance by half a dozen White House telegraphers of work that under less favorable circumstances would require the combined efforts of fifteen or twenty men. The White House telephone and telegraph headquarters is never closed—indeed, it is the only

representatives abroad, and the War and Navy departments each has three codes. With all of these the White House operators must be familiar, since many messages prepared by the secretaries of State, War and Navy are sent to the White House for Presidential approval, and, when this sanction is obtained, are despatched over the White House wires. In addition to the nine codes enumerated, the President has a private code in which messages are transmitted to and from the Chief Executive when he is touring the country or absent from Washington for any other reason. All codes are subject to change at any time.

The volume of business transacted by this telegraphic and telephonic clearing-house is well nigh incomprehensible. During the Spanish-American War the bureau handled nearly half a million tele-

grams, fully three-fourths of which were of a confidential nature. As evidencing the resourcefulness of the bureau it may be cited that within fifteen minutes of the time the late President McKinley was shot at Buffalo, the signal officer at the White House had secured two exclusive wires to Buffalo—one a telegraph wire and the other a long-distance telephone circuit. During the last illness of the late President more than five thousand messages passed between the White House and the Milburn residence at Buffalo.

The bookkeeping connected with the administration of the telephone and telegraph establishment is no inconsiderable task. The messages originating in the various departments which are sent out over the White House wires must be charged to their respective sources, and in the case of the White House messages a separate account must be kept of the personal messages of the President and members of his family as distinguished from the official communications. Many of the important wire communications from the White House are repeated in order to ensure accuracy.

Presidents and high Governmental officials have frequently, in cases of emergency, made the Telegraph and Cipher Bureau their temporary offices. Thus during the exciting days of the Spanish-American War, the President, the secretaries of War and the Navy sat for hours at the elbows of the telegraphers, directing in person the military operations thousands of miles distant, and so perfect were the arrangements that during the advance on Santiago the President was enabled to communicate from Washington in less than twenty minutes with the officers on the firing line. When the President is absent from the Capital and some members of the Cabinet are in Washington they almost invariably go to the bureau to communicate with him and frequently "long-distance Cabinet meetings" have been held in this manner. The President also goes to the bureau when he presses a button which sets in motion the wheels of an exposition. President Roosevelt, who declines to have a telephone in his private office, wishing to avoid the annoyances caused by the ringing of the bell at inopportune moments, necessarily makes frequent trips to the telephone booth in the bureau.

### Telegraphic Codes of Foreign Governments.

It will readily be understood that when governments use the telegraph wires for communicating with their own ministers, as is very frequently necessary, there is need for extreme secrecy—such secrecy, indeed, as is not to be obtained by any ordinary code systems, and therefore it happens that the secret telegraphic and cable systems employed by the British and other governments are among the most complicated that are in existence, says Tit-Bits.

Never has the British Government had more use for these secret systems than during the past few months, when one of its pillars, Mr. Chamberlain, has been at the other end of the world and has been

transacting much of the business of the colonial office from his stopping-places in South Africa. All matters which could not be properly settled without consulting him have immediately been communicated to him from Downing street by code cablegram, and the expenses incurred in this manner are said to be among the greatest on record.

Generally the code which is thus employed by the foreign and colonial offices is that which is known as the five-figure code, and which, though not difficult to decipher when in the proper hands, is a very tough puzzle for those who have no business with a message which is hidden in it.

Both the sender and the recipient are in possession of two dictionaries, one of which gives first of all the code numbers in order, so that any one of them could be picked out in a few seconds as in an ordinary dictionary, and the word equivalent of it. The other dictionary, which is for the use of the person who is sending the message, and who wants to put his English into code figures, gives every word first and the code equivalent of it afterward.

Every word is represented by a group of five figures, different and different arrangements of them, standing for different words. Thus the dictionary may give 16429 as standing for the word "colonial" and 83752 for "General Botha;" while the other dictionary used by the recipient would put "Uganda" first and, perhaps, the code group number 47849 as its equivalent afterward, "Constitution" being represented by some such group as 42801.

The names of the addressees and the sender are always written, or, rather, the former is, the other being merely suggested, so that though the recipient knows quite well from whom the message has come, not many others can do more than guess. In this way a complete message which Lord Lansdowne, as foreign minister, might have sent to Mr. Chamberlain in South Africa would read as follows: "To Chamberlain, Johannesburg—10895 67390 84763 82401 07803 53829—Foreign."

When received by the colonial secretary he would know that the secretary for foreign affairs had sent it, and by the help of his dictionary he would see that the message "Quite agree with suggestion about cape," or some other equally plain sentence.

In this way some exceedingly long messages are continually being sent from Downing street to all ministers in the country and abroad, and the bill for a single one of them has more than once exceeded £500.

Secret Government telegrams of this description take precedence on the cables of all other messages, and whenever one is being sent a pilot cablegram is sent along in front of it to clear the wire, and to see that it is not interfered with in any way. Also on every British cable a message from the British Government has precedence over the message of any other Government.

As a single mistake among all these multitudinous figures may either alter the sense of the message or make it altogether incomprehensible, orders are usually given for every such message to be repeated back, so that it may be checked and everybody quite

satisfied that it has reached its destination safely and just as sent.

It is known that there are secret service agents everywhere who are willing to pay high prices for codes and coded messages. Therefore, the codes are changed right through from beginning to end at frequent intervals. In France, where the Government uses the five-figure code in just the same way, a cabinet noir, as it is called, is kept as a department of the postoffice, and whenever a foreign code telegram passes along the wires, which is not a message direct from or to the French Government, a staff of the most expert code decipherers in the world take it in hand, and, by applying every possible solution to it, try to get at its hidden meaning. Often they do so, and then if the news thus discovered is of the slightest importance, it is sent along to the Government departments of the Quai d'Orsay.

Among others who have found themselves trapped in this way when using codes on the French wires was the famous Gen. Boulanger.

The German and Russian Governments employ five-figure codes of their own for their secret telegraphic and cable messages, and the Kaiser personally has a very complete set of his own, which are quite distinct from those used by the members of his Government. Even when his majesty is aboard his yacht and it is at anchor he frequently has a telegraph wire laid to connect it temporarily with a telegraph office, and through that with a cable company, so that he may be in constant communication with the Government headquarters in Berlin. On such occasions, unless the messages are of a merely formal or congratulatory character, they are always sent in the Kaiser's codes.

The secret codes of the Turkish Government have the reputation of being the most complicated and difficult to decipher of all those used in Europe. All the code letters and numbers which are employed in a message are jumbled together, and there are no divisions apparent between the different words. Thus it often takes a very long time to decipher such a coded message; but, despite the extreme difficulty, mistakes are very rare, and when they occur the responsible operators or officials are severely punished.

Some such confusion of words and figures, for example, as this: "sktb8suq59d5tv438terhpla6" might stand for a sentence conveying a most important instruction upon foreign policy from the Sultan to one of his responsible ministers. This is called a cryptocode.

### The Latest Edison Storage Battery Patent.

Thomas A. Edison has been granted a patent, according to the *Scientific American*, for an improvement in his reversible galvanic battery in which an alkaline electrolyte and insoluble electrolytically-active materials are used. The invention relates particularly to the oxidizable element, and consists in the use of cobalt oxide, preferably mixed with metallic mercury or with metallic mercury and copper or silver, whereby a great proportion of the cobalt oxide is kept in

electrical contact with the electrode and made electrolytically active in an alkaline solution to form the oxidizable element on discharge. The invention also consists in the combination of such an element with a suitable depolarizer furnishing oxygen on discharge in an alkaline electrolyte, so as to form a complete reversible galvanic battery.

In order to produce the new element, Mr. Edison says he prefers to proceed substantially as follows: "Dried oxalate of cobalt is first produced in any suitable way and is ignited and kept at a low temperature in the air until it has been wholly decomposed to form the anhydrous oxide of cobalt. This oxide is then mixed with preferably about 15 per cent. of precipitated oxide of mercury if an electrode is to be obtained composed of cobalt and mercury, or, if desired, it may be mixed, preferably, with about 25 per cent. of finely-divided metallic copper and 6 per cent. of precipitated oxide of mercury if the resulting electrode is to be formed of cobalt and a combination of copper and mercury. These proportions, of course, may be varied; but those indicated give good results. By increasing the portion of mercury, or of mercury and copper, a large proportion of the cobalt is rendered active; but the increase in efficiency is secured at a sacrifice of lightness and economy. Silver may also be employed in place of the copper; but it possesses the objection of being too expensive at the present time for economical use. The mixture of oxide of cobalt and oxide of mercury or of oxide of cobalt, metallic copper, and oxide of mercury is then mixed thoroughly, formed into briquettes, and utilized in any desired manner, preferably by being supported in perforated nickel-plated pockets or receptacles, which in turn are crimped in position within plates or grids, as I have described in patents already granted to me.

"An electrode containing a mixture of cobalt and mercury, or of cobalt, mercury, and copper or silver, is preferably employed in an alkaline solution of, say, 20 per cent. of potassic hydroxide in water, opposed to a depolarizing element containing nickel hydroxide as the active material mixed with foliated or flake graphite. When such a combination has been charged and recharged several times, its average voltage is about 1.10 volts. When such a combination is in a fully charged condition, the nickel hydroxide is raised to a very high state of oxidation, and the cobalt is reduced so far as its active particles are concerned to the metallic state. On discharging, the nickel hydroxide reverts to a lower condition of oxidation, while the metallic cobalt is oxidized. Owing to the relative ease, as compared to cobalt, with which mercury and copper reduce, the added mercury or copper, or silver, if used, will be reduced to the metallic state when the battery is first charged, so as to procure good electrical contact between the active cobalt particles. Since the cobalt on discharge oxidizes much more readily than either mercury, copper, or silver, the latter materials remain in metallic form, and their

presence serves wholly to assist electrical conduction between the particles of the active material.

"Although it is preferable to add a readily-reducible metal, like mercury, copper, or silver, or a combination thereof, to the cobalt for the purpose of maintaining electrical contact between the active materials, it will be of course understood that any insoluble conducting material, preferably in flake form, such as flake graphite, can be used for maintaining the cobalt particles in electrical contact."

### Earth Currents.

BY JOHN F. RICHARDSON.

The disturbance on telegraph circuits by earth currents, or "aurora," as it is commonly called by telegraphers, will become a very frequent cause of trouble during the next few months on lines running East and West, and I should like to have the telegraph experts throughout the country make as close an observation as possible and suggest any remedy that is found beneficial in overcoming the interruptions. These periods, lasting three or four months, occur about every eleven years. The first one that I remember was during the Winter of '81-'82. The next came during the Summer of '92, and continued until late in the Winter. The cycle of 1903, has just made its appearance, but it will no doubt be very much in evidence before the end of the year. The main lines of the Canadian Pacific Railway Company's telegraph run almost due East and West and we have had a good opportunity of observing the peculiarities of these currents. In 1892 on one occasion the current from the earth was so heavy and continuous that we did business over a wire 485 miles long for fifty-five consecutive minutes with the line connected to the earth without battery at either end. I made several tests with a voltmeter on a line 435 miles long connected to earth at each end. The current changed from negative to positive at intervals of from fifteen to twenty minutes, and registered as high as 40 volts on either pole. At times we were obliged to make a metallic circuit of two wires, and I took advantage of an old theory and installed a duplex or quadruplex on these metallic circuits, with no connection with the earth whatever. With one or two exceptions, this overcame the difficulty. The telegraph line connected to the earth at each end forms a shunt for the earth currents, and theoretically, the metallic should eliminate the disturbance entirely. In practice, however, the line has many escapes to earth of varying resistances throughout its entire length, and when the earth currents are very heavy, a slight interference is felt on multiple sets even on the metallic circuits. During this disturbance in 1892, I was engaged on the electrical work in connection with the exchange of time with Greenwich and the establishment of the longitude of Montreal. There were four eminent astronomers at this work, one from Greenwich observatory, one from McGill College, of Montreal, and two from the Dominion Government. I had opportunities of observing the outward signs of this internal commo-

tion, and found that when the currents through the earth were the heaviest, the dark spots on the sun were the most prominent and the aurora most beautiful. Where is the connection between these three? Does the earth in its revolutions upon its axis, manufacture electricity, and does it take nearly eleven years for the earth (like a huge lyden jar) to become fully charged, and then does this accumulation discharge at the North Pole, forming the aurora? This is only a suggestion of a possible theory, but it does not explain the appearance of the sun spots at the same time. I would like to know what experience others have had in this direction, and what theories are advanced for these phenomena.

Montreal, April 20, 1903.

### The Telegraph to Acre.

A telegraph line will soon be constructed placing in communication with the outer world the South American region of Acre, whose name has been heard so often lately on account of its having been leased by Bolivia to an Anglo-American syndicate for the exploitation of its immense forests of rubber trees. The news from Acre takes a whole month to reach Manaos, on the Amazon River, the nearest station whence telegrams can be sent to other parts of the world. The distance between Manaos and Acre is not so great, after all, as the crow flies; but the difficulties of travel are considerable, especially during the season when water is low in the affluents of the Amazon leading to Acre and when the trip has therefore to be made on foot, across deadly swamps and through dense forests. Brazil is permitted by the recent arrangements with Bolivia to occupy the Acre territory, and the Rio Government is naturally anxious to be in prompt communication with it. The President of the Brazilian Republic has held conferences with Senhor Bulhoes, the Minister of Finance, and with the Minister of Public Works, and it has been resolved that the telegraphic line toward Acre shall be constructed immediately, the first section going from Coqueta to Manaos.

### Alaska Cable Ready in Autumn.

General Greely, chief of the Signal Corps, has announced that within a month the telegraph system of Alaska will be finished, and by Autumn the cable connecting Seattle with Juneau will be in operation. The United States cable ship Burnside will reach Sitka about June 15, and, after running a cable from Skagway to Haines Mission, will lay the big cable southward thirteen hundred miles, in two sections, to Seattle. It is thought that messages will be sent by November 15. A gap of only fifty miles exists between the eastern and western branches of the Alaska telegraph system. One line extends up the Yukon River from St. Michael's to the mouth of the Tanana, and two hundred miles above on that river. The other line is from Valdes to Eagle City, near Dawson. A branch of this extends down the Tanana to meet the other.

**Civil Service Pensions—Are They Worthless?**

[The following, written by Phillip Bunner, lately appeared in the *Civil Service Magazine*, London, Eng., a journal devoted to the welfare of telegraphers in Great Britain. It treats its subject in an original and striking manner, and will be read with interest, especially by those who of late have given attention to the question of pensions in the telegraph service in this country.—Editor.]

Now that the deferred pay commission is an accomplished fact it may be interesting to debate the question whether the present system of superannuation is worthless—I mean worthless from the point of view of the civil servant. The Government employee is a much-envied mortal. When he states that he gets an insufficient salary he is told to thank God that he is in permanent employment. When he laments that he cannot afford the necessaries of life, he is reminded that he is entitled to a pension—providing, of course, that he has sufficient sense to retain his vital breath until he reaches the age limit. Thus it can be seen that the pension system is valuable to the Government in many ways. In the first place, the prospect of a pension depreciates wages. Pensions are given not as benevolence, but as withheld salaries. Men require most money in middle life, when expenditure is highest. The State says in effect: "We will make you save, but you shall not enjoy your stored-up earnings except under certain conditions." Those conditions are—docility, good behavior, and very long life. A civil servant goes short until sixty years of age in the hope that after that period he will revel in idleness—and scarcity. John Morley once said that young men of twenty never contemplated the possibility of reaching sixty years of age. The civil servant is the exception to this sweeping but truthful generalization. He not only philosophically contemplates becoming sixty, but he looks forward to that period most anxiously, counting the time and calculating his superannuation allowance meanwhile.

The possibility of pensions tells with the public and press when a claim for higher wages is considered, and this, of course, is to the benefit of the department. Probably the chief gain to the State is that the system is an insurance against the striking of men in the mass or of evil conduct of the individual. Three strikes at least would have occurred in the telegraph service alone since 1870, but for this fact. Men of middle life, who have social responsibilities, are unwilling to take action that might result in the loss of their deferred pay. Thus the State has an enormous advantage over most employers, and the continuance of the system is assured, if only on this ground. As for the civil servant himself, it is clear that the older he gets the more timorous he becomes. I often liken the life of a civil servant to those unhappy beings whom Addison describes in the "Vision of Mirza." There are the same anxiety and shuffling, the same pitfalls into which the young, vig-

orous, and imprudent fall. Then the decrepitude of the survivors as they pass from arch to arch in the endeavor to reach the goal of their ambition; the feverish anxiety as they near it, and, alas! the very few that enjoy it. The State service takes a youth from the nation, and frequently models him, so that he becomes a staid, decorous piece of animate furniture for office use. For obtaining industrial peace within its walls at a cheap price the State has devised no better plan than the existing pension scheme.

From the departmental side the pension scheme is not worthless. The men's point of view must, however, be considered. The employees know that their demands for increased wages are handicapped by the pension schemes, but they believe that their future is safeguarded. The one overshadowing terror of old age for the great portion of England's millions is the fear of the workhouse, or at the very least some measure of rate-aided relief. Even the poorest Government official has an inward feeling of happiness that he is preserved from this catastrophe and he often fails to count at what a cost this nightmare is dispelled.

I cannot discover a single other advantage that the pension system possesses. It saves the money of the workers compulsorily, but it does not distribute fairly. It is a huge lottery. The many pay for the few, and the peculiarity is that the many who die as a rule leave relatives who greatly need assistance.

I do not advocate any abandonment of our pension rights. Rather, I believe that the civil service should fight in order to obtain the power to control its own deferred pay. It is monstrous that a man should suffer deductions for twenty, thirty, or forty years, and then, dying, his heirs-at-law should receive nothing.

But the worst-paid sections of the civil service should not relax their agitation for higher wages because of the question of deferred pay. It has been given in evidence before a Committee of the House of Commons that a young man paying a yearly premium of \$8.25 per annum from the age of twenty and upwards, could receive a pension at sixty-five years of age of \$2.50 per week. Many thousand telegraphers, sorters, and sorting clerks receive annual increments of \$25 or \$30. Upon actuarial calculations a yearly contribution of \$33 from the age of twenty would give an old age pension of \$10 per week at sixty-five years, or almost the sum a telegrapher or sorter will get after forty years' service. The Post Office superannuation is conditional upon many things, and is forfeited if a man leaves the service. If \$33 per annum can give this pension it is very clear that the superannuation scheme is a cheap investment for the Post Office department. It follows also that it is dear for the worker. It should also suggest to civil servants that what they most need is more wages, or in other words, control over their own earnings. At present a generous department saves some portion for them. If they placed pay

reform in the front part of their programme, and made up their minds, they could secure their desires. They could then invest the increase as they thought fit, and would be less dependent upon the good-will or caprice of their employers. The old tradition that the State generously gives pensions to its worn-out industrial soldiers is grotesque in its absurdity. But the statement is repeated so frequently that I believe many persons believe it to be true, and it rests with civil servants, if they desire justice, to see that the real facts become known.

#### Then and Now.

A few weeks ago, when Marconi's system of wireless telegraphy was used by the President of the United States to extend greetings to his Majesty King Edward VII, the press expressed itself decorously upon the matter, but did not rise to any great height of enthusiasm over the feat of spanning the Atlantic with electric waves. The marvels of science have ceased to surprise.

It was far different in 1858, when the first electric cable was laid between Great Britain and the United States.

The public was half incredulous. Many persons did not believe that the transmission of intelligence beneath the sea was possible; and when the great achievement became a reality, and Europe and America were united by telegraph, one newspaper broke forth with the refrain: "Glory to God in the highest; on earth peace, good-will toward men."

Official messages immediately passed between Queen Victoria and President Buchanan, and the great accomplishment was widely celebrated not only in the United States and Great Britain, but also in Canada.

The author of "Public Men and Public Life in Canada" says that processions, illuminations, bonfires, balls, dinners and speech-making, in which all classes of people joined, took place in many Canadian cities, towns and even important villages.

But the most imposing demonstration took place in New York city, the home of Cyrus W. Field and the other chief promoters of the enterprise. As an evidence of the immense enthusiasm displayed in New York the inscription on one of the flags displayed may be quoted:

"Lightning Caught and Tamed by Franklin; Taught to Read, Write and Go On Errands by Morse; Started in Foreign Trade by Field, Cooper and Co.; With Johnny Bull and Brother Jonathan as Special Partners."

—Youth's Companion.

No telegrapher, no matter what his position may be, who values his place and aspires for promotion based on all-around practical knowledge, can afford to be without "Pocket Edition of Diagrams and Complete Information for Telegraph Engineers and Students." See advertisement.

#### Aid Society Election.

One hundred telegraphers, members of the Telegraphers' Beneficial Association of the United Railroad of New Jersey and the West Jersey and Seashore Railroad, met in Trenton, N. J., on April 15, the occasion being the twenty-third annual meeting of that organization.

The election of officers resulted as follows:

President, William Ettenger, Elizabeth; vice-president, W. H. Wilmot, Lawrenceville; secretary and treasurer, W. H. Clarke, Elizabeth; trustee, F. P. Abercrombie, Jersey City; executive committee, H. T. Vauls, Elizabeth; W. T. Swem, Trenton; W. X. Garrison, Camden; E. P. Bruere, Trenton; J. S. Baugh, Camden; auditing committee, I. A. Van Dusen, Elizabeth; E. S. Mullin, Germantown Junction; W. H. Buckelew, New Brunswick.

The total membership of the association is 400. During the year there were five deaths and \$1,500 was paid out in benefits. The organization has been in existence since 1880, and in that time 67 members have died and the total death benefits paid aggregate \$20,000.

Following the business meeting there was a dinner and speech making. Telegraphers were present from New Jersey, New York and Pennsylvania.

#### Directory of Annual Meetings.

Association of Railway Telegraph Superintendents will meet on May 13, 14 and 15, at New Orleans, La.

Commercial Cable Company meets the first Monday in March, at New York.

Gold and Stock Life Insurance Association meets the third Monday in January at New York.

Great Northwestern Telegraph Company meets the fourth Thursday in September at Toronto, Ont.

International Association of Municipal Electricians meets at Atlantic City, N. J.; time not yet selected.

Magnetic Club, business meeting, meets the second Thursday in January at New York.

Old Time Telegraphers and Historical Association meets at Milwaukee, Wis.; time not yet agreed upon.

Postal Telegraph-Cable Company meets the fourth Tuesday in February at New York.

Telegraphers' Mutual Benefit Association meets the third Wednesday in November at New York.

Train Despatchers' Association meets June 16, 17, 18, at Nashville, Tenn.

Western Union Telegraph Company meets the second Wednesday in October at New York.

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.

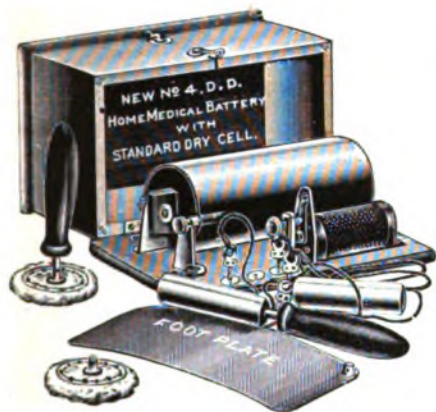
THE NAME

“**BUNNELL**”

on telegraph or other electrical apparatus is positive assurance that it is the best



The Finest Relay Ever Constructed



We have recently made a number of important improvements in our telegraph instruments and switches which place them very far ahead of anything heretofore designed, in efficiency, reliability, durability and finish.

Write or call and see them and have their merits explained.

MANUFACTURERS OF

J. H. Bunnell & Co.'s Standard Instruments—Steel Lever Keys, Relays of the various well-known designs—such as Box Sounding, Polarized, Pony and Pocket forms. The latest improved types of Main Line Sounders, Giant Local Sounders, Repeaters, Switches, Lightning Arresters, Bells, Batteries, Burglar Alarms, Annunciators, &c. A full line of Electric Light and Power Apparatus and Supplies

IF INTERESTED IN TELEPHONES WRITE US

OUR APPARATUS GUARANTEED

OUR PRICES ARE LOW

OUR MEDICAL BATTERIES ARE THE MOST POPULAR MADE

SEND FOR CIRCULAR

WE ARE PIONEER  
MANUFACTURERS OF

**DRY BATTERIES**

TRY A SAMPLE "MASCOT"  
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Our New Japanned and Nickel-Plated

**"BEEKO" BOX BELLS**

Are Above All Others in Appearance and Quality and Below  
All Others in Price

**OUR SUNSHINE LAMPS ARE WINNERS**

**J. H. BUNNELL & CO.**

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The Standard for  
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will not crack when exposed to the severest changes in temperature. They have the endorsement of the best electrical authorities in the world, and are unequalled in quality, durability and efficiency. Acknowledged to be the best

## For Telegraph and Telephone Lines.

Samples and  
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Tape, Candee Weather Proof Wires.

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WILLARD L. CANDEE, / Managers.  
H. DURANT CHEEVER. /

GEO. T. MANSON, Gen'l Supt.  
W. H. HODGINS. Secretary.



### To the Defence of the Messenger Boy.

From the Williamsport, Pa., Sun.

At last justice has been done to the telegraph messenger boy. For many years the man with a sunny streak in his makeup and the humorous papers have had their fling at the messenger boy, caricaturing him as possessing the slowness of the tortoise. He has been pictured as reading a dime novel from the opening chapter to the final paragraph in which the villain was made to bite the dust, pursuing this literary recreation while in the act of delivering a message half a mile from the telegraph office. He has been portrayed as being snugly ensconced behind a dry goods box while numerous undelivered messages reposed in his coat pocket. In fact he has been criticised and reviled and held up as a terrible warning to other boys until he has become an object of pity and commiseration to those who do not know how very hard this butt of unjust ridicule and doubtful humor works in order that he may quickly deliver such messages as may come into his hands.

Chief of Police Evans has been informed by numerous timorous citizens that the Williamsport messenger boys ride their bicycles through the streets at a dangerous rate of speed, and the chief has informed Manager J. H. Kenney, of the Western Union Telegraph Company, that the boys must not go at such a mad pace. Mr. Kenney feels gratified to know that the ancient slander uttered against messenger boys has at last been refuted, and as he is as desirous of having the public protected as he is of seeing that important messages are promptly delivered, he will direct his boys to modify their speed. The matter will be satisfactorily adjusted between the city authorities and the telegraph company. The public will not complain if the boys do not ride their bicycles recklessly fast, and the boys themselves will obey orders now that they have demonstrated the fact that they cannot justly be classed as "slow pokes" or be called snails without doing them grave injustice.

### A Close Shave.

"The nearest I came to being killed and not knowing what happened me," said George Drury, of Jamestown, N. Y., to the Buffalo Times, "was away back in 1874, when I was foreman of a bridge crew of the Santa Fe Railway. From Great Bend, Kansas, to Hutchinson, there is a steep grade. While switching cars one night at Great Bend a train crew let five cars, loaded with cattle, break away from them and away these cars went over the track, speeding faster and faster down the hill toward Hutchinson. The men knew that a passenger train was due to leave Hutchinson about that time and a frantic rush was made for the telegraph operator to try and prevent the train from leaving. To their horror they learned from the operator that the passenger train had just left, with fifty-two persons aboard, of whom I was one. The five loaded

cattle cars could be seen running down the valley, gaining speed every minute, and in less than half an hour they would meet the passenger train and a terrible collision, with loss of life would have to be chronicled. Between the two stations was the little village of Peace where a telegraph operator was on duty only during the daytime. Standing on the depot platform at Peace at the moment when the operator at Great Bend was telling the Hutchinson operator of the flight of the cattle cars, was a farmer who had been an operator. He listened to the click of the key inside the window and at once took in the situation. Seizing a rod of iron he broke the lock of the switch and pulled the lever just in time to sidetrack the five cars. A few minutes later we pulled into Peace and were informed of the hair-breadth escape. It was a close call for fifty-two of us and all due to the fact that an old operator happened to listen to the click of the telegraph sounder as all old telegraphers are wont to do when in and around railroad stations.

### The Emancipation of the Country Telegraph Operator.

The country telegraph operator is to be emancipated, says an exchange.

For generations he has furnished inspiration for melodramas. With his office full of picturesque bandits intent on manipulating the combination of the safe; with the cannon-ball express due in nine minutes; with his eyes blindfolded, and his hands tied behind him, he has backed up to the key and clicked off the message that brought down a trainload of detectives from the city, that saved the treasure in the safe, spared a thousand precious lives and won immortal fame.

All this the country telegrapher has had to do on his own time. He got not a cent of extra pay from the company for being bundled out of bed by the bandits. The company would not honor his requisition for revolvers and cartridges, even though he had to work eighteen hours a day trundling trunks from the storeroom to the platform, tending babies in the waiting room, chasing the engine with yellow "flimsy" orders, and acting as agent for seven different express companies.

All this is to be changed now, it is reported, and the operator hopes to secure extra time for all overwork.

"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.

Subscribe for TELEGRAPH AGE, \$1.50 per year.

### 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.

The current information of any office will, if carefully chronicled, furnish a welcome digest of news that will be read with pleasure and satisfaction by thousands, and this limit should constitute the legitimate contents of all letters. And we wish that our correspondents would avoid the too frequent habit, at all times a bad one, of abbreviating words in writing. This is a peculiarity among telegraphers, we know, but what may be plain to the writer, and for local interpretation, is usually a mystery to the editor, and is apt to lead to error in the printed statement.]

MONTREAL, QUE., GREAT NORTHWESTERN.

New arrivals: H. A. Hall from Moose Jaw, Northwest Territory.

Resigned: Geo. Moss, Allan Clarke, Appleton Anderson.

### PHILADELPHIA, PA.

My motto—Honorable Dealing—Boys, DON'T BE BLIND. Examine and investigate the merits of the No. 6 Fay-Sholes, and No. 3 Fox typewriters for all kinds of telegraphic work. Booklets, prices, and easy monthly payment plan upon application to me. All kinds rented at \$3.00 monthly. SPECIALTIES: Remington's and Smith's fitted with reversible rolls, \$40 and \$45. BEAR IN MIND NO "MILL" NO WORK IN D. A. Mahoney, Western Union, Philadelphia.

### WESTERN UNION.

The annual euchre, hop and banquet of the Electrical Aid Society, which was held April 15, outshone in every respect, notwithstanding the inclement weather, anything of the kind heretofore given by the society. The number of tickets to be sold was limited to 750, and that number was disposed of readily. Although there was a big demand for more it was not complied with and thereby was avoided a repetition of last year's jam. While of course there was a crowd, yet there was not a semblance of overcrowd and there was room aplenty. The ladies were all handsomely gowned and the gentlemen were all in evening dress. King Joy and merriment reigned supreme all the evening. Old acquaintances were renewed and new ones formed. Interchanges of wit and repartee were "sent" hither and thither and were well "received." After the progressive euchre, which was played "a la Yetman" style, a delightful hop was indulged in with many "balances" to steady the sweeping "current" of dances. The "Quad"-rilles

were a trifle complicated and some of the "dux" and beaus, but after a few "breaks" everything "came O. K." Last but not least came the banquet. The tables were piled with many good things of which everybody "took a few." "Time" was entirely forgotten and the "rush" for home was not begun until the wee sma' hours of the morning, when "30" was received by all with much regret.

George W. Morris has resigned his position as best operator of the Eastern section and will try his fortunes elsewhere. J. V. Berger succeeds Mr. Morris on the East, and O. M. Pennypacker is being initiated into the mysteries of the switchboard to succeed Mr. Berger on the North.

Much sympathy is expressed and extended to Chief Clerk Harry Wobensmith in the death of his nine year old daughter which occurred recently.

A daughter has been born to Daniel M. Brides.

That veteran knight of the key, Mr. Joseph Greene, has been confined to his home for several weeks on account of illness.

W. W. Donnelly, who has been on special work throughout this district for the past six months, is again at his desk directing city and suburban line work.

Since R. C. Murray has been elevated to the position of general wire chief his hustling abilities and achievements prove him to be the right man for the place.

Miss E. L. Thompson, who has been manager at Princeton, N. J., for a number of years, has asked to be relieved of the managerial duties of that office. Her request was reluctantly complied with and Mr. Thomas E. McGettrick, of Trenton, N. J., is now in charge. Miss Thompson will remain as operator until about July when she will retire altogether to enjoy a well earned rest. Miss Thompson was a capable official and will leave the Princeton office with a record that she can point to with pride.

### POSTAL.

The rush of Spring business is more marked this year than ever before and the insatiable desire of some of our men for extra is more than gratified.

The recent annual meeting of the Electrical Aid Society was another pronounced success, due to the indefatigable efforts of a committee of hustlers who had charge of the arrangements.

Mr. R. Barton, our manager at Lancaster, Pa., was among a number of visitors who came on to participate in the Aid Society's festivities.

The responsibilities and experience of an acting manager were faithfully met and enjoyed by Mr. Howard Baker, who has just returned from Altoona, Pa., to resume his accustomed duties in this office.

Mr. Carl Jansen, the efficient night clerk at the Broad Street Station office, was absent a few days on account of illness.

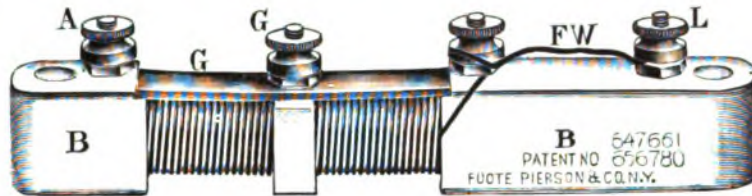
Business at the branch office on 10th street

# Foote, Pierson & Co.

A FEW OF OUR POPULAR TELEGRAPH SPECIALTIES

## The Argus Lightning Arrester

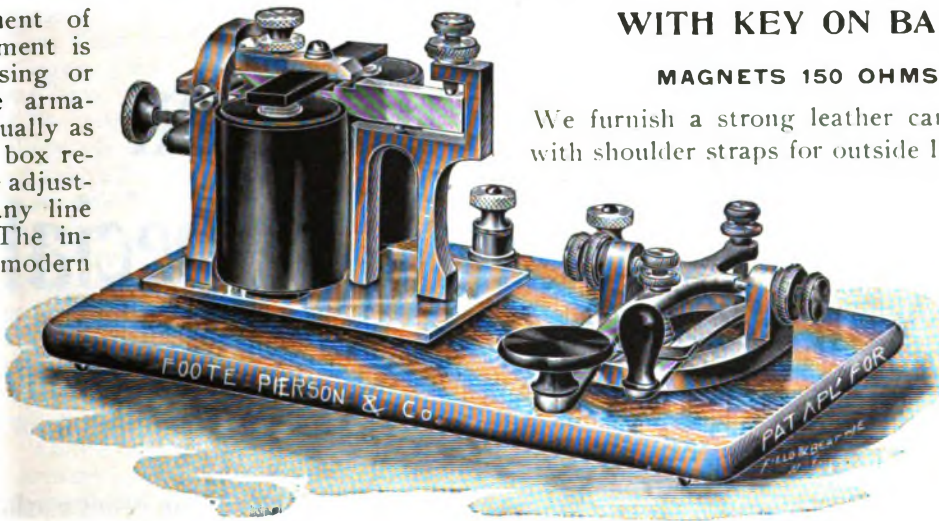
The most reliable and efficient protection to instruments and cables against lightning ever known.



It interrupts lightning of any degree without grounding or disabling the line. It is always ready.

## Our Main Line Telegraph Combination Instrument

The adjustment of this instrument is done by raising or lowering the armature. It is equally as delicate as a box relay and can be adjusted to meet any line conditions. The instrument is modern in design and its use has made the box relay and pocket relay almost obsolete as it is cheaper and far better.



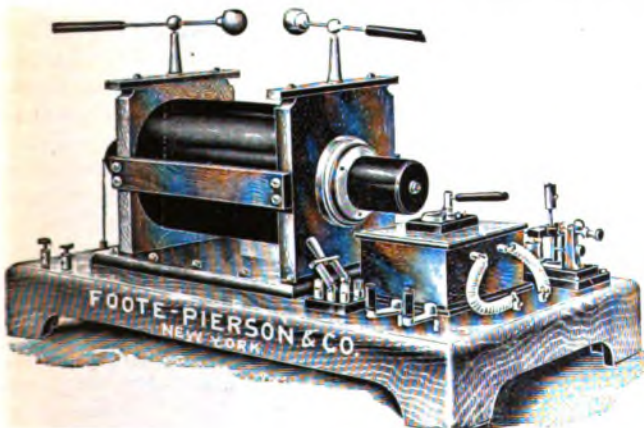
WITH KEY ON BASE.

MAGNETS 150 OHMS.

We furnish a strong leather carrying case with shoulder straps for outside line testing.

It makes the most convenient and efficient instrument for this purpose known.

## Coils for Wireless Telegraphy



WRITE FOR OUR NEW CATALOGUE.

## THE DELTA Portable Testing Sets

A full Line of Measuring and Testing Instruments in Stock.

For all around work. Universally used by Railway Telegraph and Telephone Engineers.



**FOOTE, PIERSON & CO.,** 82-84 FULTON ST., NEW YORK CITY, U. S. A.

## **Absolute Reliability**

under all conditions of service, makes the

# **Remington Typewriter**

the ideal machine for telegraphic work.

# **The New Remington Train Order Special**

retains all the good points for which the Remington  
is famous and adds a few of its own.

## **The Keyboard**

is arranged to facilitate the highest speed in train order work.

## **The Type**

is made especially for the requirements of heavy manifold-  
ing. The characters are open in form, thus insuring the  
absolute legibility of every copy.

## **The New Remington Train Order Special**

has the same adaptability as the regular Remington models  
for all other kinds of writing. It constitutes a complete  
typewriter equipment in every office where it is used.

**Remington Typewriter Company**

**327 Broadway, New York**

above Chestnut, is being well cared for by the painstaking manager, C. W. Chapman.

### CHICAGO, ILL.

Typewriters, all makes, lowest prices, easy monthly payments. Write us for catalogue and literature. Notice new address. Telegraphers' Typewriter Company. O. T. Anderson, Manager. Monon Building, 324 Dearborn street, Chicago, Ill.

### HARRISBURG, PA., POSTAL.

No. 7½ North Third street has for many years been the home of this company, but it has never before been so well equipped for transacting the generous business which it has so long enjoyed, as at the present time. The artistic signs, designed by Assistant General Manager C. P. Bruch, which adorn the large plate glass windows, are very attractive and receive much favorable comment; and well indeed they may, for they were executed by artists sent here from New York for that special purpose, and illuminated signs guide the traveler aright when the shadows have lengthened into night.

The interior of the office planned by Mr. John F. Skirrow, the division electrician, is very handsome with its fittings of oak with paper to match and its tiled floor and counter with plate glass top. There is ample room in the front of the office for the many newspaper correspondents who file their specials here and a good share left for transients. Back of the counter are the desks of the receiving clerk, cashier and manager, together with the telephone booths. At the right is the massive switchboard frame which contains the two 50-wire switchboards, legboards and every appliance of the very latest Skirrow design. To the rear of the manager's desk an enclosure is arranged for the messenger boys, while back of this enclosure is the call and delivery department with everything bright and new, and still back of this are the two handsome octette tables with lockers for typewriters and instruments arranged for working quadruplex or single and equipped with Skirrow extension arm resonators. To the right of these tables and close to the switchboard are the quadruplex and repeating instruments, all handily arranged.

We are the proud possessors of five quadruplex sets, two polar duplex, two half repeaters and four single repeater sets.

The basement also came in for a share of the transformation. It is provided with spacious cupboards for supplies and storage. Here also is located the dynamo room with its switchboard with full equipment of ammeters, voltmeter and switches for the dynamotors of which we have six, three running nineteen hours each day, with the other three in reserve.

All the work incident to these improvements was done under the skilful guidance of Mr. D. H. Gage, Jr., the district electrician. Master Mechanic Begg made the switchboard frame and other wood work. These two gentlemen were humorously dubbed the "Disturbance Department" on account of the noise

they made in the execution of their work. It is worthy of mention that business went on as usual in the office while all these changes were being made.

Messrs. Gage and Begg made many friends while here and genuine regret was expressed by the entire force when the time came for them to leave. They were assisted in the work by chief lineman Boyer, James Lightner and other local electricians; even Night Manager Conover had a finger in the pie.

The personnel of the office is as follows: C. E. Diehl, manager; J. H. Gingrich, assistant manager and chief operator; F. M. Von Neida, traffic chief; H. W. Ritter and D. H. Germer, work the first Philadelphia duplex, which by-the-way now rivals the bonus wires of the larger offices. E. J. Singiser looks after Pittsburg and the ways west; W. V. Davies is cashier with an eye open for The Cumberland Valley and Northern wires; Mr. Hollenberger and Mr. Pentz assist in looking after the other local wires.

E. J. Conover is night manager, assisted by the following: Messrs. G. A. Ritter, Humer, Miller, Howe, Banks, Kloss and very often it is found necessary to call out the entire day force.

Charles Books is day counter clerk and book-keeper, and Adam Goodyear performs the same duties at night. Charles Hill is call clerk, having charge of our twenty messenger boys. George Colestock is office boy. Raymond Cook is day delivery clerk and Eugene Bryan night delivery clerk. Miss Jennie B. Wright has charge of the office at the Capitol being assisted during the busy hours by Messrs. Conover, Crist and Shook. Mr. Roy Vannaman has charge of the office at the Pennsylvania Railroad depot, and Mr. John Capello at the Loc-hill Hotel.

### ST. LOUIS, MO., WESTERN UNION.

Charles Jost returned April 12 from Hot Springs where he has been the past Winter. Mr. Jost will resume his position at the different St. Louis race tracks.

The race track telegraphic corps embraces the following: W. L. Roberts, correspondent; Charles Jost, assistant correspondent; George Goehringer, manager; Joseph Barry, H. Weyerman, E. L. Polakoff and Charles Rapp, operators.

Joseph Holle, H. C. Clark and Frank Garosky have been assigned to the base ball parks.

E. L. Polakoff returned April 15 from a trip to Little Rock; he also spent a week at Hot Springs.

Miss Bertha Ruby is now with us, coming from the Postal Company.

Miss Lula Koch resigned April 15 and was married April 29, to Patrick Stevens.

M. A. Hawley, division chief lately served on jury, the first time in his experience.

Mr. Jenkins has spent a vacation of two weeks at his home.

### SAN FRANCISCO, CAL., WESTERN UNION.

Arrivals: Messrs. V. O. Davis and Chittenden; B. C. Valkenburg, Detroit, Mich.; L. W. Harris

and W. S. Clark, Salt Lake City, Utah; Wm. Gardner, Los Angeles, Cal.; G. G. Burke, St. Paul, Minn.; G. H. Mellen, Tucson, Ariz.; E. L. Rector, Reno, Nevada; Miss M. Gilbert, Spokane, Wash., and Miss Helen Carson from an extensive trip through the East.

Miss Minnie Sanquist, our clever and efficient clerk, is back at her post again from a visit north where she went to attend her sick mother who has now recovered.

Mr. Will R. Mitchell, who for sometime held down the Examiner leased wire, has accepted a position with The Associated Press this city.

We are pleased to note that our old friend Mr. Benj. Riley is back with us again at the race track.

It will be news to many to learn Mr. Ernest Dozier is a benedict, he having married Miss Lillian Knowles, of Berkeley.

Mrs. Dotty Yoel and Miss Laura Hogan work the Sacramento circuit.

### NEW YORK CITY.

"My Old Virginia Home Upon the Farm," "Utopian Waltzes," and all popular music, 18c. each. Pianos sold \$1 per week. B. L. Brannan, 195 B'way, N. Y.

### WESTERN UNION.

Mr. J. M. Taylor, chief operator of the Western Union Telegraph Company, Indianapolis, Ind., has been appointed chief operator of this office. This is a newly-created position and Mr. Taylor will have direct charge of the force and of the division chiefs, and will be third in authority in the operating department, the ranking positions being Manager A. E. Sink and Assistant-Manager T. M. Brennan.

Mr. E. C. Cockey, superintendent of supplies, who has been absent from his office since last November, owing to illness, visited his numerous friends at 195 a few days since. He was heartily welcomed by all who saw him. Mr. Cockey is now able to be at his office in a business capacity almost every day.

Mr. E. J. Hart, a well known member of the profession, has returned from Florida where he has spent the Winter.

Mr. T. B. Yarborough, for over twenty years a prominent member of the Augusta, Ga., force and one of the best known operators in the South, is on the waiting list. The transfer to New York was made necessary owing to sickness.

Miss K. F. Kelly, for twelve years manager of the office at Platt and Pearl streets, has been appointed manager at 693 Broadway, vice Miss Lawler.

Mrs. Cora A. H. Mauer, who works the "fish" wire, was recently the recipient of a basket of fine lobsters from her admiring friends in the Fish Wharf, Boston office. The lobsters were served in the lunch room to Mrs. Mauer and her associates.

Mr. A. L. Bougher, whose general typewriter advertisement appears on another page, has transacted business with this journal for twenty years. Mr. Bougher's name has probably been on our agents' list longer than that of any other member of the fraternity. Those who desire goods that

represent, will find that satisfaction will be the result of any dealings had with this gentleman.

Miss Olive Elsie Williams, and Mr. Arthur DuBois Robinson were married at the home of the bride, Hillsdale, N. Y., on April 15. The bride was formerly with the Postal at Hartford, Conn., and the groom was for many years with the Western Union at the same place. They have the hearty good wishes of many friends.

Mr. Charles Jacobson, well known in American District Telegraph circles in this city, having been manager of various important uptown offices for the past twenty years, has been promoted to the management of the circular department of the company at 62 Vesey street.

In view of the present large waiting list, which will be greatly augmented with the advent of the summer season, it has been suggested that it would be equally advantageous to the company and its employees were a room provided for the use of the latter. Under present conditions those waiting assignment are compelled to loiter in the operating room much to their own discomfort and annoyance to those actually employed. The only other alternative is the street or the saloons. A waiting room would provide rest and a place for innocent recreation in the shape of games. The installation and permanent maintenance of a small library would, no doubt, serve to make lighter the employees enforced idle hours.

John Doyle, of this office, has been granted a patent for an improvement in telegraph keys. It consists of abandoning the front posts of the key to make and break the circuit and to arrange the back contact point of the key to perform this operation, the idea being that the key in its normal condition would be closed except when it is depressed for operating purposes. To open the Doyle key it is only necessary to depress the lever. Mr. Doyle's aim has been to furnish a self-closing key.

B. Longstroth, chief operator of the telegraph department of the American Can Company, New York, had a daughter born to him on April 26.

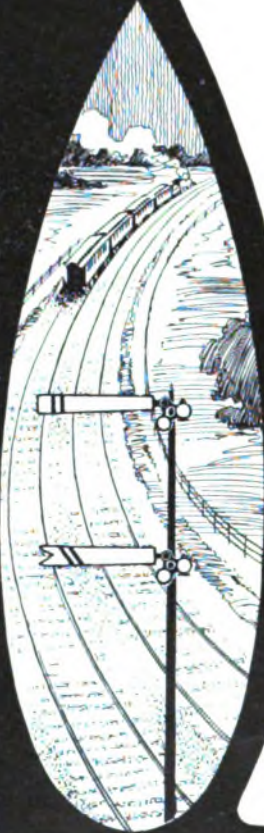
POSTAL.

The Postal Telegraph-Cable Company has just closed a long-term lease for a three-story and basement building with 50 feet frontage on Desbrosses street, 175 feet deep, running through to Watts street, which is being fitted up for the company's supply department. The building will be steam heated, electric lighted and equipped with electric elevators and other apparatus necessary for handling goods in the most economical manner. The offices of the superintendent of supplies and purchasing agent, Mr. W. D. Francis, will be on the second floor of the Desbrosses street end of the building, Nos. 12 and 14, and will be commodious and convenient. The building is very centrally located, being within a very short distance of several cross-town and north and south car lines, including the elevated. The building will be connected with the general telephone system and also with the private telephone system of the Postal Company. There will also be sev-

**THE  
RRS**

**AUTOMATIC ELECTRIC SIGNALS  
THE CHICAGO CROSSING  
SIGNAL FOR HIGHWAYS  
AND BLOCK SIGNALS FOR  
PROTECTION OF MAIN LINES,  
YARDS, CURVES ETC.**

**THE  
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**BRANCH-HOUSES  
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NEW YORK  
CINCINNATI  
ST. LOUIS  
MONTREAL**

**THE  
RAILROAD SUPPLY  
CO.  
CHICAGO**

**BRANCH-HOUSES  
~ AT ~  
DENVER  
OMAHA  
ST. PAUL  
SAN FRANCISCO.**

**JOHN A. ROEBLING'S SONS CO.**  
**OF NEW YORK**

MANUFACTURERS OF

**Telegraph  
 and Telephone**

**WIRES**

OF EVERY DESCRIPTION

**IRON, STEEL AND COPPER WIRES**

**Underground  
 Submarine  
 and Aerial**

**CABLES**



**WIRE ROPE and CABLES for ALL PURPOSES**

117, 119 & 121 Liberty Street, NEW YORK

H. L. SHIPPY, Treasurer.

WORKS: - - - - TRENTON, NEW JERSEY.



eral telegraph wires running into the building and a public telegraph office will probably be opened on the ground floor on the Desbrosses street side, for the convenience of patrons in the vicinity.

Mr. Jos. Pucci has returned after a long and severe illness.

Arrivals: Miss Kate Nugent, Mrs. E. R. Gardner and J. M. Twigg.

Messrs. J. G. Good and C. P. West, the Buffalo bonus team, are back from a week's visit to friends in Richmond, Va.

E. J. Fullam and H. S. Williams are absent on vacations.

Resignations: Mrs. L. Fitzpatrick, Miss M. Cleary, E. D. Rowland, W. W. Ward, Wm. Hege-man and H. M. Sylvas.

Mr. R. W. Vollbracht, Jr., for many years connected with the auditors' office of the company, has been appointed assistant auditor of the North American Telegraph Company, at Minneapolis, Minn.

Mr. Charles P. Bruch, who acted as chairman of the late meeting of the general superintendents and other officials of the company, was voted a gavel by them, in honor of his very acceptable services. It will be made of wood contributed from the various States presided over by those present, including California, Minnesota, Texas, Illinois, Georgia and New York.

Col. A. B. Chandler, chairman of the board of directors, has taken up his residence for the Summer on his farm in Vermont.

The Wire-Tapper is the name of a play soon to make its appearance at the Third Avenue Theatre. This theatre is under the management of Martin J. Dixon, an old telegrapher.

### The Telegraph Tournament.

Mr. F. M. McClintic, of Dallas, Tex., the winner of the Carnegie medal, at the Atlanta tournament in 1892, in a letter to TELEGRAPH AGE makes some statements that ought to receive due consideration by those authorized to act in the matter. He says: "Noticing in TELEGRAPH AGE that preparations are being made for a tournament to be held in Philadelphia, I want to ask you, through your columns to assist the telegraphers to an intelligent understanding as to what may be expected at the tournament. In the New York tournament of 1898, and again at Atlanta in 1902, there was much confusion over the matter to be used in competition, and we Westerners were thought to have had an undue advantage because we had been practicing on the matter entitled "Command of Gideon." As the "Command of Gideon" is the matter which has been used to decide all championships in the five minute class, I think it would be well if the tournament managers would so announce, in order that every telegrapher who wishes to contest may have the same opportunity to practice with it. In the ten minute class at Atlanta, different matter was used, and if we are to have an

accurate test, it should be used again. At any rate, will you not kindly take the matter up and get the tournament people to make a specific announcement?

"TELEGRAPH AGE of March 16, 1902, contains the matter used both in five and ten minute classes.

"It is to be hoped that the ruling with regard to the Carnegie Medal, which, under the present arrangement, can never be won outright, will be rescinded. There is no cash prize with it, and while the honor is quite nice, it does not buy a little cottage, or the baby a new pair of shoes. The responsibility of keeping it safely is also a serious matter."

### New Western Union Office at Dallas, Texas.

With the dawn of Easter morning, the Dallas, Tex., Western Union office shed its primitive clothes and came out in 20th century attire. So systematically had every detail been arranged, that not the slightest hitch occurred.

Considering the fact that two sections of the switchboard of 50 wires each, and considerable of the old apparatus had to be moved from the old to the new office, wires cut in, and instruments set in place so as to prevent interruption to a number of train wires passing through this office, it required more than ordinary tact and ability to perform the work of removal.

An up-to-date dynamo plant took the place of 8,000 cells of chemical battery and was planned and installed by Mr. L. McKisick, of Chicago, electrician for the Western division. Mr. McKisick also superintended the wiring of the office, assisted by Chief Operator W. P. Davis, City Foreman L. W. Alexander, and Foreman Geo. B. Sherwood and gang.

This office is now as finely equipped in all details as can be found anywhere.

There are 16 dynamos, one alternating current 500 volt generator, a 150 wire switchboard with more than 100 wires in place, and 8 or 10 new lines now in course of construction; 21 quadruplexes, 3 duplexes, 8 sets of single line repeaters, 6 race repeaters, 4 half sets (side lines) and 50 single instruments. The office itself has a forty-foot frontage and a depth of 80 feet, with plenty of light and an abundance of fresh air, 125 lockers, and tables with typewriter cabinets.

Although the dull season is now on, the office is handling from 11,000 to 15,000 messages per day with a force of 80 men. This great volume of business can now be handled more expeditiously and with a great deal more satisfaction to all concerned.

### What Little Wales Can do When it Tries.

There is a little post office in Wales that rejoices in the short name of Llanfairpwllgwyngyllgogerychryndrobwil-Llantysiliogogoch. As a rule, natives abbreviate this all-day-and-all-night name to Llanfairpwllgwyngyll, although it is considered great fun by occasional tourists to send telegrams and letters to their friends in which the

whole name is written. However, the British Post Office Department, which controls telegraph lines, charges 10 cents additional on telegrams bearing the complete name.

Don't borrow your neighbor's paper; subscribe yourself for TELEGRAPH AGE. You can't afford to be without it.

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

### Amos L. Bougher.



AMOS L. BOUGHER.

Amos L. Bougher, operator of the night force of the Western Union Telegraph Company at 195 Broadway, New York, has had a somewhat diversified career. Born at Riegelsville, N. J., on July 19, 1864, at the age of fourteen he was working as a telegraph operator on the Amboy division of the Pennsylvania Railroad. In 1883 he became the night manager of the American Rapid Tele-

graph Company at the Girard House, Philadelphia, Pa. In 1885 while employed as agent and operator of the Central Railroad of New Jersey at Tremley, N. J., it was due to his efforts that a post office was established at that point, of which he was made postmaster. In 1888 he left the telegraph to enter other business, was elected a justice of the peace serving in this capacity for three years, dealing out proverbial Jersey justice with sagacious integrity. During this time he was again instrumental in establishing a post office, this time at Centreton, N. J., which in compliment to himself the Government gave the name of Bougher, appointing Mr. Bougher as postmaster.

He never overcame his predilection for the telegraph, and from its first issue has been a constant reader of TELEGRAPH AGE. Mr. Bougher is possessed of a natural business shrewdness which he employs to good advantage in his present position. He has built up an excellent business in the sale and renting of typewriters among the operators at the main office of the Western Union Telegraph Company, New York, and elsewhere. He also acts as an agent for TELEGRAPH AGE, for

which he receives orders as well as for Phillips Code, Jones' Pocket Diagrams and all other telegraph and electrical books.

#### INFORMATION WANTED.

The editor of TELEGRAPH AGE would like to obtain a photograph or a picture of Patrick Henry Burns, the old time telegrapher who was born at Fishkill Landing, N. Y., and who took part in the sending tournaments of 1896, making a record of 2,731 words in an hour. If any one has such a picture or knows of one, he will confer a favor by communicating with us.


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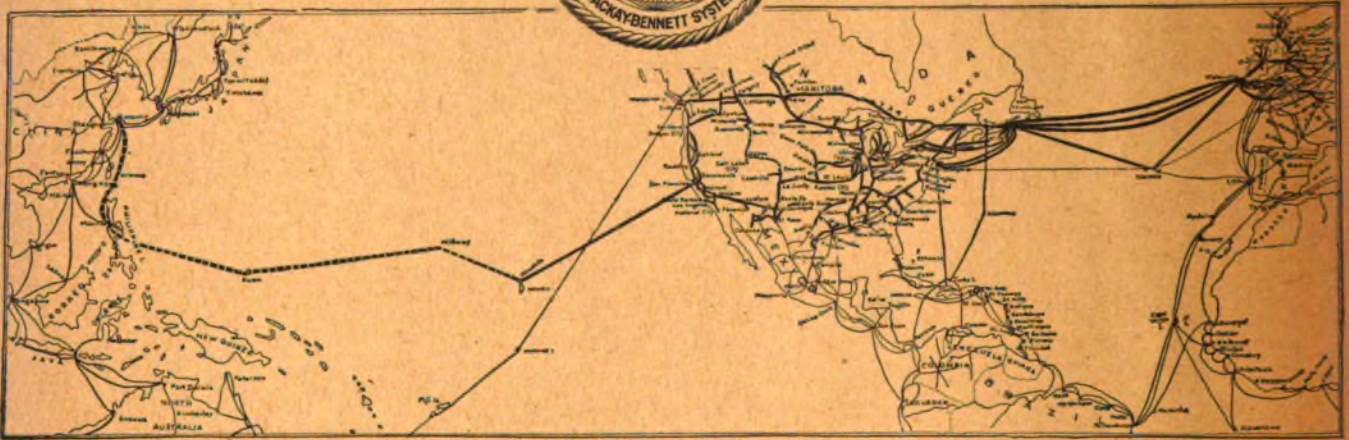
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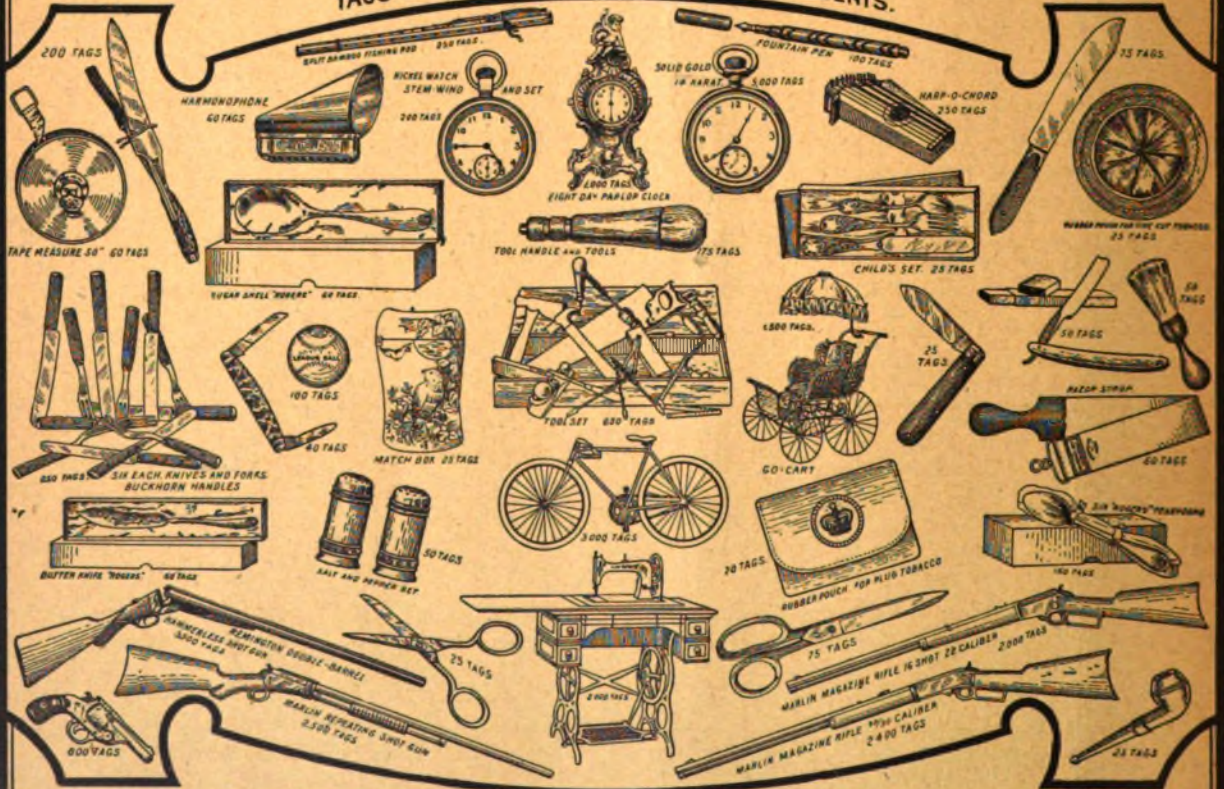
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# THE TELEGRAPH AGE

No. 10.

NEW YORK, MAY 16, 1903.

Vol. XX.

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## Recent Telegraph Patents.

A patent, No. 726,566, for a printing telegraph, has been obtained by William P. Phelps, of Merchantville, N. J.

A patent, No. 726,693, for a telegraph alarm system, has been awarded to Charles K. Jones, of Tuscomb, Ala.

Patents Nos. 726,725, 726,734 and 726,736 for synchronous code telegraphy, have been granted to Edwin F. Northrup, of Philadelphia.

## Annual Meeting.

At the annual meeting of the Atlantic and Pacific Telegraph Company the following directors were elected: R. C. Clowry, Thomas F. Clark, J. B. Van Every, John T. Terry, George J. Gould, Russell Sage, A. R. Brewer, B. Brooks and G. W. E. Atkins.

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

## SOME POINTS ON ELECTRICITY.

BY WILLIS H. JONES.

### A Three-Wire Repeater.

In reply to numerous requests by readers of this journal for a description of a three-wire repeater we herewith illustrate and explain the manner in which such a device is arranged and operated by Mr. Frank Kitton, assistant electrical engineer of the Western Union Telegraph Company:

The purpose of this repeater is to simplify the connections and manipulation of a repeater when working three wires into each other. It consists chiefly of a peculiar combination of the local circuits, and is adaptable to any of the different forms of repeaters in common use. The principle can also be applied to operate a single wire into two duplex or other systems, or for working three duplex wires into each other. Ordinarily when it is desired to work three wires into each other two sets of repeaters are used, but the combination is more or less inconvenient. The three-way repeater has the advantage of having but one relay in each wire to be kept in adjustment.

The accompanying diagrams, Figs. 1 and 2, make its operation plain. In the quiescent condition of the repeater, that is to say, when all points are closed, the local circuits (see Fig. 1) may be traced as follows: The current starting from the dynamo or other source, flows through the contact points of the eastern relay, ER to C, where it divides, one-half going through the magnet of ST' and its lamp L' to the ground. The other half traverses the coil of magnet ET, lamp L2, button B, and contact points of SR to the ground. The front contact points of transmitters, ET and ST', hold the west and the south main circuits closed, while similarly the local circuit is maintained intact through relay WR and transmitters WT and ST.

Referring to Fig. 1, the open contact points of relay ER and transmitters ET and ST', indicate that the operator east has his key open or is sending to the west and south. While the east line is open it is necessary that WT and ST should be held closed in order to preserve continuity through the points of these transmitters, and this is accomplished as follows: ER being open breaks the local circuit which in turn opens ET and ST'. The back contact points of ET opens the extra magnet of WR, the retractile spring of which holds the points of WR closed and preserves the local circuits, and consequently the main circuits through transmitters WT and ST. In like manner the back contact points of

ST<sub>1</sub> opens the extra magnet of SR and holds the armature of SR closed, thus maintaining the local circuit through WT.

from the local circuits through the transmitter ET and lamp L<sub>2</sub>, WT and lamp L. These two transmitters open because the currents from

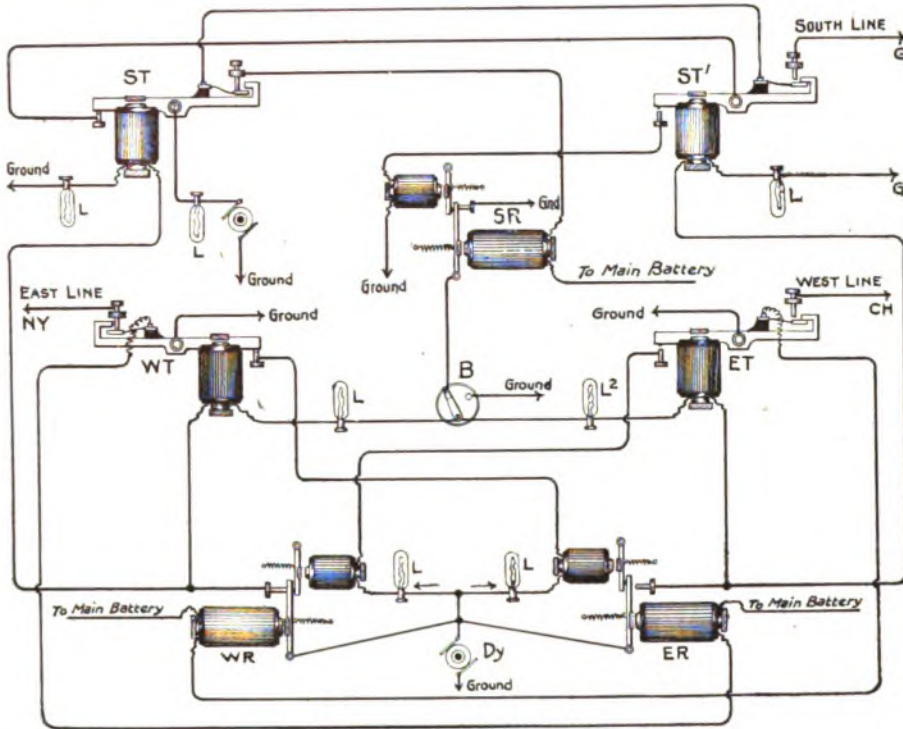


FIGURE 1.

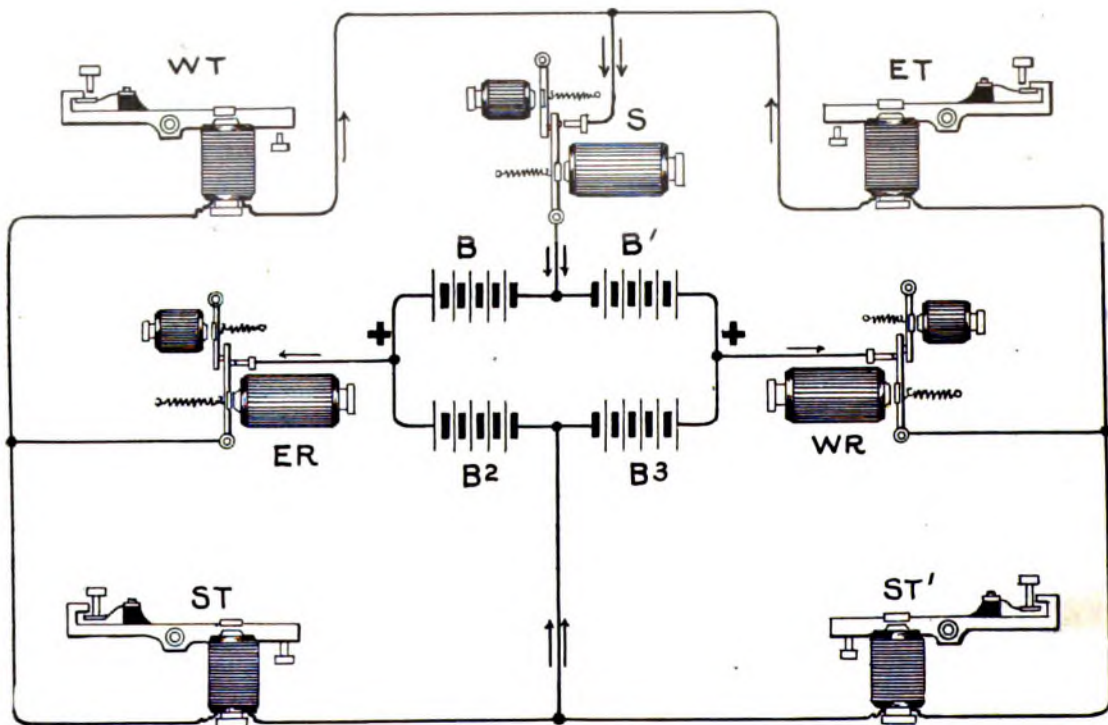


FIGURE 2.

For example: Should the southern office operator desire to break, the opening of his key opens relay SR, which in turn disconnects the ground

the battery in the two circuits are opposed in polarity and their effect is therefore nil. It is plain, then, that whenever SR is operated, both



the western and the eastern transmitters, WT and ET, are actuated and thus repeat into the east and the west wires. The western office, through the medium of relay WR controls transmitters WT and ST, and repeats into the east and south.

The system is readily adapted to gravity batteries and the local connections are illustrated separately in Fig. 2. The main wire connections are omitted in order to avoid confusion of lines and to make the diagram as clear as possible. In this diagram two rows of eight gravity cells each are shown connected in multiple, but any low resistance battery may be used, provided its normal internal resistance is sufficiently small. Under the latter conditions the battery cells should be arranged in series instead of in multiple.

In Fig. 1 relay S is open, the lever of which, it will be seen, opens eastern and western transmitters, ET and WT. Transmitters ST and ST' are held closed by relays ER and WR through the portions of battery marked B2 and B3. Transmitters ET and WT are operated by relay S, because the currents flowing through them from B and B' are in opposition as shown by the directions of the arrows. A study of the diagrams makes the operation of the repeater plainer than further explanation.

**The Railroad.**

Among the recent railroad promotions, recorded in the Railroad Gazette of May 1, are the following: E. A. Hornbeck, to be general manager of the San Diego, Cuyamaca and Eastern Railway; T. W. Geer, to be manager of the Tifton, Thomasville and Gulf, and Perley N. Place, to be superintendent of the Pere Marquette at Saginaw, Mich. All of these men began life as telegraphers.

**Electrical Engineers' Annual Meeting.**

The annual meeting of the American Institute of Electrical Engineers will be held on May 19, when the following is the programme: Annual reports of officers and committees; Introduction, President Scott; "The Experimental Basis for the Theory of the Regulation of Alternators," by B. A. Behrend; "The Heyland Motor," by C. A. Adams, Jr. Some very important announcements are also expected.

**Rapid Telegraphy in Germany.**

According to a cable dispatch from Berlin, the German Government has decided to introduce the Antin Pollak system of rapid telegraphy on several lines. The system will be used first between Berlin and Frankfort-on-the-Main. As a result of experiments extending over many months it is stated that 40,000 words an hour can be sent by this system.

**Annual Reports.**

MEXICAN TELEGRAPH COMPANY.

The annual report of the Mexican Telegraph Company for the year ended Dec. 31, 1902, is issued, and is as follows:

Assets:	
Plant .....	\$1,855,164
Cash .....	205,117
Investments .....	1,013,153
Treasury stock .....	87,400
Steamship "Mexican" .....	35,482
Spare cable .....	30,927
Sundry debtors .....	115,322
<b>Total .....</b>	<b>\$3,342,565</b>
Liabilities:	
Capital stock .....	\$2,000,000
Earnings invested in plant.....	31,654
Received from sale of treasury stock ....	38,493
Sundry creditors .....	43,070
Proposed Jan. dividend .....	47,815
Surplus .....	1,181,533
<b>Total .....</b>	<b>\$3,342,565</b>

CENTRAL AND SOUTH AMERICAN TELEGRAPH COMPANY.

The annual report of the Central and South American Telegraph Company for the year ending December 31, 1902, compared with the previous year is as follows:

	1902.	1901.	Inc.
Gross . . . . .	\$1,002,571	\$982,053	\$20,519
Expenses . . . . .	388,031	*432,335	44,304
<b>Net . . . . .</b>	<b>\$614,540</b>	<b>\$549,718</b>	<b>\$64,822</b>

\* Decrease.

The company last year expended from net earnings \$94,192, for renewals of cables, leaving a surplus after 6 per cent. dividends (\$463,536) of \$56,812. The directors of the company are as follows: T. Jefferson Coolidge, Francis L. Higginson, James A. Scrymser, W. R. Grace, E. D. Adams, W. D. Sloane, Charles Lanier, W. G. Hamilton, J. L. Riker.

**Recent New York Visitors.**

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

Mr. W. S. Logue, of Chicago, Ill., general manager of the Edison interests. Mr. Logue was accompanied by his wife.

Mr. C. A. Darlton, superintendent of telegraph of the Southern Railway, Washington, D. C. Mrs. Darlton accompanied her husband.

Mr. Charles A. Tinker, formerly general superintendent of the Western Union Telegraph Company, New York. Mr. Tinker has just returned from a three months' trip in California, and has gone to his Vermont home.

Where there is energy there is always success.

### Personal Mention.

Mr. J. C. Barclay, assistant general manager of the Western Union Telegraph Company, New York, went West, May 10, on a business trip of a week to Chicago and other points.

Mr. H. Durant Cheever, one of the managers of the Okonite Company, New York, and Mrs. Cheever, sailed for Europe on May 2. They will spend several weeks in London and Paris.

Mr. Frank W. Mack, formerly superintendent of the eastern division of The Associated Press, gave an interesting lecture in New York recently before the members of the Aldine Association, on "The Greenroom of Journalism."

Gen. Edwin S. Greeley, of New Haven, Conn., well known as a former manufacturer of telegraph apparatus in New York, was elected president of the National Society of the Sons of the American Revolution at the session of the congress of that organization, held in New Haven, May 1.

### General Mention.

A daughter was born on April 18 to Mr. J. W. Hayes, of the Hasty Messenger Company, Portland, Oregon.

Mr. George E. Wilde, of the Western Union Telegraph Company, Peoria, Ill., has been appointed Superintendent of Streets, by the Mayor.

A Western Union manager in Texas in renewing his subscription, writes: "Please continue to send me the only telegraph paper for I need it in my business."

The Sioux Falls, S. D., Western Union office, C. A. Crane, manager, has lately been given a Chicago local wire. St. Paul and Sioux City heretofore did the relaying for this point.

Miss H. A. Flohr, manager of the Western Union office at New Britain, Conn., is absent on an extended vacation. Her place is being filled by Mrs. Florence Card, from the New York office, and lately from Porto Rico, where she was in the Government service.

### Municipal Electricians.

Three new operators have been appointed for the Fire Alarm Telegraph Department of the City of New York in anticipation of opening a branch fire alarm station at 176th street. The successful applicants were Egbert C. Chamberlin, of New York; Wm. G. Linson, operator at Coney Island for the Long Island Railroad Company, and John F. Nolan, of the Postal Telegraph-Cable Company's delivery department, New York. Each will receive a salary of \$1,200 per annum.

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### Resignations and Appointments.

Mr. O. T. Moore has been transferred from Eufaula, Ala., to the managership of the Western Union Telegraph Company at Athens, Ga.

Miss Anna L. Gibbons has been appointed manager of the Western Union Telegraph Company at Rondout, N. Y., vice C. B. Melott.

Mr. J. A. Merchant, manager of the Western Union Telegraph Company, at Victor, Col., has been transferred in like capacity to Cripple Creek, Col.

Mr. W. S. Seiferd, manager of the Postal Telegraph-Cable office at Tiffin, Ohio, has resigned, and will hereafter work for the same company as operator in Cleveland.

Mr. Edward Purney, an operator in the Akron, O., office of the Western Union Telegraph Company, has been promoted to the managership, vice Emil Grob, transferred to Sandusky. (See Letters from Agents).

Mr. Geo. H. Kendrick, with the Western Union Telegraph Company, at Pittsburg, Pa., for the past twenty years, resigned May 1, to accept a position with the Allegheny County Light Company as chief inspector of incandescent lights.

Mr. Charles E. Lay, chief operator of the Western Union Telegraph Company, at Clarksburg, W. Va., has been transferred to Pittsburg, Pa. The vacancy at Clarksburg has been filled by Mr. McWhorter, of Camden-on-Gauley.

Mr. W. J. Slater, manager of the Postal Telegraph-Cable Company, Louisville, Ky., has been appointed superintendent of the same interests with headquarters at Louisville. A biographical sketch of Mr. Slater appeared in TELEGRAPH AGE, August 16, 1902.

Mr. W. A. Porteous, manager of the Postal Telegraph-Cable Company, at New Orleans, La., has been promoted to be superintendent of the newly created district to be known as the Sixth, Southern Division, with headquarters at New Orleans, the same to take effect on June 1.

### Canadian Telegraph Construction.

The Great North Western Telegraph Company last year re-constructed 307 miles of line, and strung 90 miles of new lines. There were used 2,438 miles of iron wire, of which 1,238 miles were strung on the Great North Western lines, and 1,200 miles on the lines of the Grand Trunk Railroad; and 742 miles of copper wire.

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### Wireless Telegraphy.

Sir Oliver Lodge, in a recent speech, said that the crews of steamers not equipped with wireless telegraphy and not having an operator on board have a grievance against the owners.

A practical demonstration of its system of wireless telegraphy was made at the offices of the De Forest Wireless Telegraph Company, 86 Wall street, New York City, on April 27. Sending and receiving sets were set up in different rooms, with miniature antennæ, and messages written by visitors were sent from one room to the other accurately and with ease. The De Forest system uses an alternating current, furnished by a small motor-generator, and raised to a high potential by a transformer, for setting up the electrical oscillations in the sending antennæ. The receiving station consists of an antennæ, a suitably adjusted receiving circuit, and the De Forest anti-coherer. This system is being tested practically, and over twenty stations are already erected. The Federal Government has equipped six stations with this apparatus, which are now ready for operation, and fourteen additional stations are under construction.

Mr. G. Marconi arrived in Rome recently from London, and a new agreement between him and the Government has been made public. The agreement will include the establishment of a system of twelve stations of the average range of 300 kilometers. All the stations will be ready a year from next July. Two of them are to be an augmentation of those already erected at Punta di Vela and Montemario, and will be exclusively for military use. The others, for both military and commercial use, will be erected at Capo di Leuca, near Gaeta, at Elba, and at Asinara. Under the new agreement Signor Marconi cedes his apparatus to the Government free of charge, but with the following stipulations: Receipts from the coast stations are to be paid in to the National Treasury; receipts from dispatches sent from ships provided with the Marconi apparatus will go to the Marconi Company; moreover, the State will receive a fixed tax of one lira per message above the usual cost of telegrams.

The wireless telegraphic news service of The Times, says The Electrician, of London, Eng., is apparently making little progress. Two months ago the Marconi Company was complaining that, while it was in a position to open to the public a system of wireless telegraphy across the Atlantic, the English Post Office refused the necessary facilities. A contract for the regular transmission of news by this new system was, however, entered into by The Times, but it has not yet been shown that the company has been able to transmit and receive daily telegrams for the service of a single newspaper, much less to supply the needs of the general public. As soon as the Marconi Company can give proof of its ability to provide an efficient public service, it is felt that

the English Post Office will not stand in its way; but a spasmodic transmission of short telegrams, such as is at present being effected at long intervals, does not entitle the company to ask a Government department to act as receiving agents for it.

### Obituary.

George E. Carlisle, a well known Buffalo broker telegrapher, died in that city on May 6 of brain fever. He was forty-two years of age.

Miss Mary A. Henry, eldest daughter of the late Prof. Joseph Henry, died suddenly on April 10, at Seville, Spain. Mr. Henry was the first head of the Smithsonian Institution, and the inventor of the electro magnet. Miss Henry had been engaged for several years in collecting the scientific, literary and personal papers of her father, with whose work she was sympathetically familiar, and fortifying his claim to the discovery of the essential principle of telegraphy. Two sisters survive her. Miss Henry's death appears to have been without warning of any sort. She went to bed apparently in her usual physical condition and died before morning. She took an active part in the Henry-Morse-Vail controversy, a few years ago.

### The Publishers' Press.

The annual meeting of the stockholders of the Publishers' Press was held on Tuesday the 12th instant, in the offices of the company, Park Row Building, New York, with President J. B. Shale in the chair.

W. J. Conners, of Buffalo, Harrington Fitzgerald, of Philadelphia, and Wm. C. Bryant, of Brooklyn, were elected as directors for a term of three years. R. St. P. Lowry, of Erie, Pa., was elected for one year to fill out the unexpired term of W. P. Atkinson resigned. Nearly every stockholder was in attendance and the meeting was most harmonious. The reports of the officers of the association showed the business to be in first class condition.

After the stockholders' meeting, the board of directors organized by electing J. B. Shale, president; W. C. Bryant, treasurer, and T. J. Keenan, secretary.

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

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### Frank E. Maize, of Philadelphia.

Herewith is shown a portrait of Frank E. Maize, the first assistant manager of the electrical bureau of the City of Philadelphia. Mr. Maize, who was born in Huntington, Pa., on September 24, 1862, began life as a telegrapher, entering the service in his native place in July, 1876. Going thence to Philadelphia he served the Western Union Telegraph Company in that city as an operator from March, 1877, until October, 1879. He then found employment with the Edison Telephone Company until that concern became merged with the Bell Telephone Company in the Spring of 1880, when he returned to the Western Union. Here he remained until February, 1884, leaving to accept the position of night manager of the Baltimore and Ohio Telegraph Company, a position he filled with great



FRANK E. MAIZE,

The First Assistant Manager of the Electrical Bureau of the City of Philadelphia.

acceptability for three years and until that company was absorbed by the Western Union in 1887. On October 1, 1888, Mr. Maize entered the employ of the City of Philadelphia, becoming a telephone operator in the electrical bureau, with which department he has since been connected. After a year's service as an operator, he was on November 1, 1889, advanced to the position of inspector, a post he continued to hold until December, 1901, when he was further promoted to the responsible place of first assistant manager. Mr. Maize is a highly competent official, is an expert in his line, and enjoys to a marked degree the confidence of his official superiors and associates. He is a member of the Masonic fraternity, and is identified with a number of telegraphic organizations, being president of the Electrical Aid Society of Philadelphia, a member

of the Old Time Telegraphers' and Historical Association and of the Magnetic Club, of New York, and others.

### Strike of the Messenger Boys at Butte, Mont.

The Western Union Telegraph Company was compelled to close its office temporarily at Butte, Mont., because of a strike of messengers. The authorities of the city could not provide sufficient protection for the employes and the violence was so great that it was necessary to close the place.

Indications pointed to a fight to a finish between the Western Union Telegraph company and the striking messengers, backed by the unions of the city. The striking messengers have in a measure dropped from view and the struggle now is over the question of the recognition of the union, which the telegraph company will not consider.

Subsequently an injunction, broad and sweeping in its character, was issued by Judge Knowles against the Butte labor organizations, and the Western Union Company resumed business.

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"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 colferer, 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.

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**Telegraphic Bookkeeping.****Eighth Article.**

BY W. H. DOHERTY.

After repeating the process described in the issue of May 1, daily, until the end of the month, the grand total of debits and credits for the month of April will be found. In an office where a considerable business is done the accounts of that office cannot be closed on the last day of the month, and are necessarily held open for a week or ten days. Because of this several blank pages should be left in the cash book following the last day of the month, so that any debits or credits belonging in the month mentioned can be entered and carried forward in the same way as if they occurred within the month.

When, finally, the cash book has been closed for the month, there must be no "cash balance" shown on the credit side, as the correct amount of cash to balance the month's account must be remitted to the treasurer before closing the account.

Another book very closely related to the cash book, commonly known as the "Black Book," (it has a black cover), but which properly is the ledger, is the next and last book necessary to be considered in telegraphic bookkeeping. This ledger is a book that is not known to managers of the smaller independent offices, and, much to their disadvantage, as I think. In my opinion, no independent office should be without one. For the benefit of those who are not familiar with this book, I give the order number, (Form 210).

The very great advantage in having a ledger is because of the compact form in which the accounts of an office may be made up in this book, one whole month's debits and credits being shown on one page, so that at a glance one may know how their business is running, and have their accounts at their finger's end, so to speak.

A description of the ledger and its uses will not be out of place. Classified headings are found across the top of the left page for the debits, and, similarly, on the right page, for the credits. These headings are the same as those mentioned in the cash book. On the left margin of both pages will be found the days of the month, from 1 to 31. The records made in the ledger are taken from the cash book, the total of each classified debit or credit being entered under their respective headings, and opposite to the corresponding date. For instance, the first day's entry would show a line of figures clear across the book from left to right. Of course under those headings the fact that no business was done would show blank. The second day's entry would make two lines of figures, the third would make three lines and so on, until the month shall have been finished.

Some long headed official decreed that Sunday business should be embodied with the Saturday account, except when Sunday should be the first

day of the month, then it goes into Monday's business. This arrangement affords an opportunity to use the Sunday date for a weekly balance.

This weekly balance is absolutely necessary, as it will be found otherwise that mistakes are being made in addition, transpositions in carrying forward in the cash book, or in transferring to the ledger. To balance the ledger add the figures under each classified heading, putting the total in red ink in the Sunday date; then take the debit side and draw off all the totals on a slip of paper and foot them up; if the total of all these figures agree with the last total entered on the debit side (which is found on extreme right of debit page last total), then no mistake has been made. If, however, they are found not to agree, go over all the footings on the ledger for that week; then if not found, a comparison of the daily entries from the cash book to ledger should be made, carefully going over each day's footing in the cash book, also examining the figures brought forward each day. The writer has experienced a long hunt in this way for a trifling error, and found, after all, that "figures don't lie," but that "liars can figure."

The credit side is balanced in a similar manner, all the totals under the classified headings being added together, and compared with the total disbursements. Note the distinction—total disbursements, not total credits, as the latter includes the cash balance, or cash on hand.

In the ledger now in use, near the right end of the credit side, will be found three blank columns, which are provided for special credits or disbursements. The writer found it convenient and of much benefit to use one of these columns for his total disbursements, so he could tell on any date what the amount was, and also have the figures he must balance with in his ledger. The amount of cash in bank and on hand that follows this, and that goes with the total disbursements, to make up the total credits, is not always the exact amount of cash that one actually has to his credit, hence the difference between the total disbursements, and the total debits, indicates the amount of cash necessary to have on hand or in bank to balance the office accounts.

By repeating the process described each week, and on closing the month's account, a total will be found for every classified debit or credit that has been handled during the month, and all that it is necessary to do in order to make up the "account current," (Form 4), is to draw off the total figures of each, foot up Form 4 and the account current is complete. No trial balance is necessary, because a balance has been made every day in the cash book, and every week in the ledger. So the "account current" must balance also.

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### The Telephone and Train Dispatching.

At the last meeting of the Pacific Coast Railway Club the principal subject of discussion was the question, "Can the present method of train dispatching be improved, and how?" In reply to this, a letter from B. A. Worthington was read and proved to be very instructive as well as interesting.

After outlining the present method and suggesting minor improvements for the bettering of the system, the letter discussed at some length the use of the telephone instead of the telegraph for transmitting train orders. Mr. Worthington said in part:

"As to whether the present method of train dispatching can be improved by the use of the telephone, movements in this direction have already been made in the East, the Illinois Central Railroad Company having established a telephone system comprising an extensive long-distance line, with copper circuits, the present connection being between the general manager's office and the offices of the different superintendents on the system, the farthest office being 915 miles distant from the general manager's office. The line is not cut in at local offices, but is used entirely for long-distance service, in order to get quick connection with the various division centres. No doubt this line could be cut up into short sections, if necessary, to correspond to the different operating divisions, and the telephone line could be used locally for train movements. There seems no good reason why, if the business could be handled with the same care and safeguards that are given the present telegraph system, that the telephone should not be equally efficient.

"I believe the details of the train orders, with proper safeguards for transmission over a telephone line, could be worked out, as under the present system, train orders are repeated back by telegraph to the dispatcher issuing them; and, while the present telephone system is not as accurate in the transmission as the Morse telegraph, yet, with the improvements that are constantly being made, I am satisfied that the time will come when the Morse system will be entirely abolished in the handling of trains and a telephone system substituted.

"Some new electric lines in the East, which are becoming so plentiful, and which are gradually being merged into lengthy lines, use the telephone system for train dispatching. On most electric lines the positive meeting point is in use, conductors obtaining their orders at meeting points where there are no regular operators. As a rule, however, there are regular agents at such points who obtain the orders, although there are numerous meeting points on such lines where there are no agents. At such points there are telephone boxes, to which the conductors have keys, and where they can procure orders for themselves. Electric lines using this system claim that they find it very convenient.

"I understand also that the Albany and Hud-

son Railroad Company uses the telegraph for dispatching trains, and uses the telephone at points where the trains happen to require orders, and where there are no agents, the conductors obtaining the orders in the manner described by having a key to the telephone box; but the company uses the telephone simply as an auxiliary to the telegraph, and not as their main reliance.

"Personally, I am watching the results of the Eastern experiments with the telephone system with considerable interest; but with the telegraph, I believe the present double-order system is the simplest, the safest, and the best yet devised."

### The Cable.

Secretary Root has granted permission to the Pacific Commercial Cable Company to land its line on the military reserve near Fort San Antonio, Philippines, and to erect a cable station there.

Articles of incorporation for the North American Telegraph and Cable Company, which provides for a submarine cable from Seattle to Valdes and other points in Alaska and thence to Vladivostock, Siberia, have been filed at Seattle, Wash. The trustees named in the articles are Judge Thomas Burke, of the Great Northern Railway; Capt. John J. Healy and Prince Alexis Dolgorukoff, of St. Petersburg. The capital stock is \$5,000,000.

The laying of a duplicate German Atlantic cable was begun May 11 at Borkum (an island in the North Sea, twenty-six miles from Emden), Germany. A large number of persons attended the ceremony and cheers were given for the German Emperor and the President of the United States. In the evening there was a banquet. Patriotic speeches were delivered emphasizing the relationship between Germany and the United States. Congratulatory telegrams were received from the Emperor and many prominent citizens of Germany and the United States.

The Commercial Cable Building Company, owners of the Commercial Cable Building, 20 Broad street, which adjoins the Stock Exchange on the north, have decided to build an annex. It will cover the plot Nos. 22 and 24 New street and Nos. 65 and 67 Exchange place. It has a frontage of 30.2 feet in New street, and of 48 feet in Exchange place. The height of the annex has not been definitely settled. It may be twenty-three stories high, the same height as the main building, or five more stories may be added to the main building and the annex made twenty-eight stories.

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NEW YORK, May 16, 1903.

The amount of information contained in each issue of TELEGRAPH AGE of the utmost practical value to the progressive operator who is ambitious to succeed, to acquire a more thorough knowledge of his profession, and not only to better qualify himself for the position he now occupies, and consequently for advancement, should prompt many to send in their subscriptions to this journal without delay. The first article in each issue, contributed by Willis H. Jones, under the standing heading of "Some Points on Electricity," contains more positive instruction concerning the telegraph, than can be found anywhere else, and worth more to the operator than many times the cost of the paper itself. Subscriptions should be sent direct to this office, or to any of our agents who may be found with both the Western Union and Postal companies in nearly every large centre in the United States.

We are prepared to furnish a limited number of bound volumes of TELEGRAPH AGE, which embraces 536 reading pages, besides the index, for the year 1902, at the uniform rate of \$3 a volume. The binding is substantial and the lettering is done in gilt. The volume furnishes a complete record for the year named of the telegraph, the cable, wireless telegraphy and other allied interests, the whole constituting an interesting work of reference of the highest worth to all telegraphers, libraries, etc., to which the carefully prepared cross-index lends additional value. Single copies of the index for volume XIX, covering the year 1902, may be had at ten cents apiece. Our friends who require copies of the bound volume, or of the index alone, should send in their orders promptly so that they may be filled while the supply lasts.

## Get Out of the Ruts.

It is unfortunate that telegraph operators, especially those employed in the larger cities, where the work is more severe and continuous than in smaller places, are prone to get into ruts. It is unfortunate because the man who suffers himself to be influenced, unconsciously perhaps, by the routine of his occupation, or by whatever cause, to narrowness of thought, of vision, and of action, is intellectually dwarfing his mind and denying to himself a successful business career, the fundamental elements of which he should acquire in his younger and more impressive years. It is pitiful to see men, originally of good parts, succumbing to passive moods and so accepting conditions which we are sometimes told are inevitable—at least in the telegraph service.

This latter statement is not true so far as the telegraph is concerned, although men, by reason of long continuance in a plodding career, may believe it to be. If so, and more's the pity, they have reduced themselves to the level of a drudge. Is that manly? Is it brave? It is not fighting the battle of life with the courage and determination that should inspire every one who would succeed; it is simply an ignoble surrender.

The telegraph has great—more urgent need than ever before of men competent to fill the higher positions within its gift; and yet it is a fact, and we are sorry to make the record, that when these positions offer it is difficult to find the right men to fit them. This should not be so, and we urge upon operators, individually, everywhere, to carefully ponder this situation. It rests wholly with themselves whether or not they shall go forward or remain behind in the race, eventually dropping out by the wayside. We make the subject one of earnest appeal. It is with no desire to lecture or to find fault that we approach this matter, but actuated with a sincere and hearty wish that the telegraph fraternity, with which we ourselves are allied, and whose cause and welfare we plead, shall assert its manhood along the lines of study and aroused endeavor and so fit itself for the occupancy of a higher and broader sphere in life which sooner or later awaits all proper effort.

Get out of the ruts, and quickly.

## Industrial Harmony.

"If fairness is shown between capital and labor; if there be no grinding, no grasping desire to benefit at the expense of misery, there comes a greater respect for the employer than if unhappiness and discontent exist among those whose labor and skill have been the 'open sesame' to the markets of the world. And as it is true that the employer should treat his employes with fairness, so it is equally true that the converse of this proposition should be maintained."

Although Andrew Carnegie generously offered to give one million dollars for the purpose of erecting a single magnificent Union Engineering Building in New York for the various engineering societies of National scope, there appears to

be such a lack of harmony of feeling and purpose among those intended to be benefitted, that danger exists, apparently, of the project being rejected.

#### The Western Union and Pennsylvania Railroad.

The Western Union Telegraph Company has filed a suit in the United States Court at Baltimore, Md., asking that the Philadelphia and Washington Railroad Company, a branch of the Pennsylvania Railroad, be enjoined from destroying the telegraph company's lines. The railroad company requested the Western Union to remove its wires and poles from the line of the road by May 15. This the latter refuses to do, and has asked for an injunction to prevent any forcible action on the part of the railroad company.

#### The Morse Club Dinner.

The Morse Club, of which Gardner Irving is president, will give its annual dinner at the Hotel Vendome, at Broadway and 41st street, on Saturday evening, May 23. The dinner of this club is held on the anniversary of the sending of the first message, May 24, 1844, and as ladies are invited, the gathering is usually a telegraphic social event. Those desiring to attend are requested to inform the secretary, C. J. Power, 195 Broadway, not later than May 20. The club, as usual, will decorate the Morse Statue in Central Park on Decoration Day.

#### Order of Railroad Telegraphers.

The National Convention of the Order of Railroad Telegraphers began its bi-annual deliberations on May 11, at St. Louis, Mo. A large delegation of representative railroad telegraphers is present, and it will require about two weeks for the convention to dispose of the business in hand. The order has been so successful under the management of President H. B. Perham that the reelection of that gentleman, together with his associates, appears to be assured. It is stated that the conservative policy practiced by Mr. Perham has resulted in an increase in the wages of railroad telegraphers amounting to one and one-half million dollars since he assumed office. President Perham does not believe in strikes, thorough organization being deemed sufficient by him to correct existing abuses or to obtain advances in wages.

#### John Costelloe Promoted.

A merited promotion in the Postal Telegraph-Cable Company's service is that of John Costelloe, who has been advanced to the position of superintendent of the commercial news department, with headquarters in New York. Mr. Costelloe was born at Kilkenny, Ireland, and has just past his forty-seventh birthday, which occurred on May 11. He began his telegraphic career when but eleven years of age, on the Cen-

tral Ireland Railroad, and when the government assumed control of the telegraphs, Mr. Costelloe obtained a position at Waterford, Ireland, where he remained in the service for five years, coming to America in 1875 and locating at Virden, Ill.



JOHN COSTELLOE,

Superintendent of the Commercial News Department,  
Postal Telegraph-Cable Company, New York.

He served in the United States Navy from 1877 to 1881, attaining the position of chief petty officer. He resigned to accept a position with the French Cable Company, thence going for two years with the Western Union Telegraph Company. Following this he was appointed chief operator of the Baltimore and Ohio Telegraph Company in the Cotton Exchange, New York.

Mr. Costelloe joined the Postal Telegraph-Cable Company shortly after it started, being made chief operator at the office at 49 Broadway, and has since remained with that company. His first position as manager was in the leather district. From this post he was advanced to take charge of the important downtown broker district, and later to the Cotton Exchange, where he has been for several years, and, which remains his headquarters. It would be difficult to count his friends in that district, his genial nature and affability, combined with his strict application to business, having made him deservedly popular.

Mr. Costelloe is a member of the Magnetic Club, the Old Time Telegraphers' and Historical Association, the Telegraphers' Mutual Benefit Association and several fraternal organizations.

"Pocket Edition of Diagrams," etc., by Willis H. Jones, electrical editor of TELEGRAPH AGE, embodies more practical information concerning the telegraph, than any book or series of books hitherto published. See advertisement.

**Wilson H. Fairbank, Telegraph Line Constructor.**

As a constructor of telegraph lines in this country the name of Wilson H. Fairbank, of Warren, Mass., occupies a unique and honored position. Born at Warren on April 3, 1836, he took his first contract in 1856, at the age of twenty years, to furnish poles for the American Telegraph Company. At this early age Mr. Fairbank displayed the energy and force of character that has since distinguished him throughout his business life, for in forty-five days, five days ahead of his contract time, he delivered to the company over nine thousand poles. The success attending this undertaking determined his future career, which became that of a contractor, in which, particularly in his earlier days, the construction of telegraph lines became almost his specialty. Many of the long and important telegraph lines in all parts of the country were built by him and are monuments to his extraordinary capacity, not only for great undertakings, but as well for their rapid and satisfactory accomplishment. This was illustrated when in 1876 he was employed to locate the lines and buy the poles from Louisville to New Orleans for the Atlantic and Pacific Telegraph Company, a distance of 963 miles. The work was completed in ninety-three days, the fastest construction work, it is said, which had ever been done up to that time. Instances might be multiplied of similar expeditious work executed in behalf of telegraphic interests.



WILSON H. FAIRBANK,

The well known Telegraph Line Constructor.

He had the tact and intelligence, by which rights of way were secured, formidable obstructions overcome, the sturdy, dogged, sleepless fight that finally wins, which enabled him to take a contract for a thousand miles of line of a dozen

wires, and hand it over, a clean, unincumbered plant into the company's hands.

His construction work in connection with the telephone companies has also been immense. His business life has been one covering a very large field of experience and it is said that the accuracy of his accounts was never questioned.

Mr. Fairbank is interested in a number of manufacturing and commercial enterprises, and his country life and affiliations have carried him also into the Grange and Farmers' Club. He is a Mason and an Odd Fellow, in both of which orders he shows a warm interest. He has served in the Legislature of his State with distinction and marked fidelity, both in the House and Senate, and has lately been appointed by Gov. Bates as a member of the Louisiana Purchase Exposition Commission for the State of Massachusetts, a post of honor sought by many.

Although now sixty-seven years of age, Mr. Fairbank is a man well preserved, hearty and of fine physique. He retains pleasant recollections of old telegraphic friends, and in referring to them in a recent letter, exclaims enthusiastically, "God bless them all!"

**The New Western Union Branch Office In The Financial District.**

The Broad Street, or Central Cable, office of the Western Union Telegraph Company, located at 46 Broad street, since the tearing down of its former quarters to make way for the new Stock Exchange building, now completed, moved into its new home in that building on a recent Sunday. It was hoped that the move might have been made on January 1, and in view of that expectation we published on December 1, last, a full description of the office. This important branch office occupies a space, 40 x 160 feet, both on the ground and basement floors, at the south side of the Stock Exchange building, extending through from Broad to New streets. The accommodations afforded here for the enormous business transacted, are very complete. Ample room is also afforded for the American District Telegraph Company and the Gold and Stock Telegraph Company. The conveniences of the new office are many, the equipment embodying the latest modern devices. An important and interesting feature of the new office is a room in the basement furnished with the best instruments for the testing of ocean cables, for this point, it will be remembered, marks the terminal of the two Western Union Cables. This department is under the care of William Finn. Manager P. J. Tierney is to be congratulated on his new quarters.

No telegrapher, no matter what his position may be, who values his place and aspires for promotion based on all-around practical knowledge, can afford to be without "Pocket Edition of Diagrams and Complete Information for Telegraph Engineers and Students." See advertisement.

### A Reminder of Old Times in the Telegraph Service.

The following quaint utterance issued in circular form fifty-two years ago by the superintendent of the telegraph line extending across the State of New York, while serving to recall the crudities of the early days of telegraphing, might nevertheless in the address of the superintendent to his employes, be well emulated in spirit, if not in form, at the present time, for its firm, kindly and dignified tone. The original of the "circular" hangs in the office of Superintendent E. M. Mulford, in the Western Union Building, 195 Broadway, New York:

OFFICE OF THE  
NEW YORK, ALBANY & BUFFALO TELEGRAPH CO.  
NEW YORK, 21ST APRIL, 1851.  
CIRCULAR.

It is felt and acknowledged by all Operators, that Telegraphing, to be done efficiently, must be done systematically, and that there must be a practical head to carry out, and to see the system adopted, executed.

Having had the sole charge of the working and operating department of the line placed in my hands, I send you the accompanying rules for the government and working of the line. As an Operator, I am one of you, and have the same interests; but as a Superintendent, I have the whole interest of the line, not a locality, and whatever rule or order I give as Superintendent, must and will be obeyed—you are alone responsible to me in the matter. You will at once see that on this depends our good government, and respect for each other; and on no other conditions would I accept the office. During the Spring we must expect difficulty at times in carrying part of our rules into efficient execution, especially in working Wire No. 2, but as soon as the work on the line is completed there will be no excuse. We have, that is most of us, long worked together, and I do not mean and have no desire to exercise an undue authority over you, but expect to receive your hearty co-operation in all that I may deem for the interests of the line. Live up to rules in all and every case; any thing not practicable I shall alter immediately. "Obey orders if it breaks owners." We have had the name of the model line for years past, and at this moment stand as well, if not better, than we ever did. It is in your power to make the line still more efficient, and on you, personally, depends the reputation we shall continue to enjoy. Your interest is the interest of the Company. We have a strong opposition to contend against, and it depends on the Operators, principally, whether that opposition shall be successful or not. If we show by our conduct that we are desirous to please, understand our business, and can, and do do it, the game is in our own hands, for there is nothing that can begin to compete with us. I trust therefore to receive your joint aid to have every thing work smoothly, efficiently and in perfect order,

and while thus working together let us cherish a brotherly feeling, and observe a spirit of kindness and forbearance towards each other; "provoking each other" only to excel in the performance of duty. Being at one end of the line I shall have to, and will, and do depend upon you, individually and collectively, to carry out our rules and observe due decorum and order on the line.

#### RULES.

1st. No. 1 will be the through wire from New-York, Albany, Troy, Utica, Syracuse, Auburn, Rochester and Buffalo; each taking their circuits as now done.

2nd. No. 2 will be used as the Way Wire, in place of No. 1, each taking their circuit as usual, including X., Hu., Red Hook Pk. and K. The Offices having two instruments calling those Offices not on No. 1, and the other Offices calling only those they may have business for, New-York commencing, then Albany and Troy, Buffalo, &c., down to New York again.

3rd. No. 3 will be used between New York, Albany, and Troy, or farther as may be thought necessary.

4th. When only one wire working through, the local Offices west of Albany (the trouble being west of that place.) will go on such wire and remain till the trouble is remedied and take their circuit with the others.

5th. When difficulty on either wire, the offices having two instruments nearest the point each side the difficulty will throw out the wire on the side of the trouble and work each way as far as practicable.

6th. Every Office will assemble on No. 1, at the hour of receipts, and remain till receipts and corrections are sent through and then return to their own wire.

7th. No ground wire will be permitted to be used on either wire except in case of trouble.

8th. No one will be allowed to break into any Office for any purpose except trouble, unless a case of absolute necessity, and only at the conclusion of a communication or before commencing.

9th. No contention for circuit will be allowed. When broken, the Office broken must close immediately, but in no case must circuit be taken from any Office without consent being asked and given.

10th. At 2 and 6 P. M., New York time, Report will be announced and must go through; every office will close immediately, and remain closed after answering up except in case of necessity.

11th. Every operator will be on hand at least half an hour before receipt time to try Wires, (New-York, Albany, Utica and Buffalo being trying stations.) who will report those offices not on hand when called on to try Wires.

12th. All trouble in the morning will be reported at receipt time, that all may know, if any; also, all trouble during the day; what, where, when, and by whom repaired, and at what time.

13th. When impossible for West to work with New-York, Albany will be repeating station, and will receive from any Office on either side business for those beyond, whenever they have circuit.

14th. No profane or ungentlemanly language will be allowed on the line; courtesy toward each other at all times must be observed.

15th. No Office will close at night until he has had his regular circuit.

16th. The numerals now in use will be continued and used as usual.

17th. All Rules heretofore observed, contrary to the above, are rescinded; all others will remain in full force and to be observed.

John A. Johnston, Sup't.

### An Up-to-Date Telegraphic Prodigy.

Infantile telegraphic prodigies will not down. Startling stories of wonderful accomplishments by precocious children of tender years, mere babies in fact, continue to come out of the West, and if all be true that is related from time to time, it is no wonder that that favored section of our great country contributes such giants to the telegraph service as has been recently witnessed. Making due allowance for the exuberance of a proud father's feelings, and recognizing the strict regard for exact and truthful statement that always characterizes the utterance of an operator, we reprint a story as we find it in a Kansas City paper which locates its subject at a little station in the new land of Oklahoma. Here it is:

"There is a child out in Oklahoma that makes the conventional prodigy seem ordinary. Compared with this boy wonder the precocious youngsters who whistle patriotic songs at three and play dance music on the piano six months later, are backward. In Watonga no mother who has heard of Glenn B. Peck says anything about her own four-year-old who may recite four prayers or the multiplication table through the twos. Glenn is the up-to-date child wonder; he is a born telegrapher. He has been a telegrapher about two years, having taken up the work when he was two years of age. This is what Glenn's father, agent for the Chicago, Rock Island & Pacific Railway here, says about the young lightning jerker:

"Glenn was four years old the 23d of last January. I am an old telegrapher, having worked at telegraphing for the last twelve years. Glenn's mother has worked as telegrapher for the last eight years, and is at present employed by the Rock Island Company in the capacity of operator at this place, and receives and sends all train orders and transacts all of the business over the wire from this station.

"Glenn began to learn telegraphy at the age of two years. The first time we noticed it was when central office was beating 'time' at noon. He was playing in the office and ran into another room calling to his mother that Herington was giving 'time.' Always after he was able to tell

when 'time' was given and eagerly watched for it. He kept right at it and frequently he would call out some word he heard on the wire, and all this time, understand, he had not learned the Morse alphabet. We had never as yet taught him to 'send' nor had we the slightest idea that he could do so, but one day he climbed on the telegraph table and began to call a near-by office and sign our office call at regular intervals the same as an old telegrapher would do. We questioned him as to what office he was calling and he promptly named it and also told us what letters it took to make the office call. From that day he kept on improving very rapidly, or, perhaps I should say, it naturally came to him. He would pronounce difficult words when he would hear them on the wire. And he would spell words correctly on the wire that he could not spell otherwise. He still does this.

"Imagine our surprise when we came in the office one day and he promptly told us he heard the train dispatcher give a train order and that Nos. 153 and 154 would meet at Watonga. We inquired into this and found out he was correct. Glenn did not study, nor was he taught. Now he can read a train order correctly, tell when operators are sending their wire car reports and tell when Watonga's turn comes. He can tell when other operators 'O. S.' their trains, what office is reporting and the number of the train.

"He frequently calls up Wichita and asks them '5,' which means 'Have you anything for us?' Very often he calls up other offices and tells them to 'copy.' He will call all of the offices he can raise and then, after he gets them all lined up ready to 'copy'—they thinking it is an all-agent message—he will tell them '25,' which means he is busy on another wire.

"Other operators cannot tell his work from that of the regular operator, as he does not send 'hammy' like all beginners, but he makes his letters correctly, exactly like an old telegrapher. A few days ago he called up Geary station and told the operator to 'copy.' The Geary operator told him to wait a minute till he got his 'mill,' and when he had his typewriter ready he told Glenn to go ahead. Glenn then told him '25.'

"The operators at the Wichita Western Union office call him nearly every day. They are very much surprised at him, and it is very hard to make any operator believe he is talking to a little boy four years old. The Wichita operators can now tell his 'hand' from either his mother's or mine; they often call him and ask him to tell some other office on another wire to answer them for a message. He promptly replies 'Art' (all right), and immediately gets on the other wire and calls the office. If successful in raising them, he tells them to answer on No. 2 wire.

"Our division superintendent was in the office here for some time a few days ago. He had heard about Glenn and asked him what he could do. Glenn climbed on the telegraph table and called up different offices and asked questions.

To say the superintendent was surprised would be putting it mildly. He said he had never heard of such a thing, not even of a child three times Glenn's age.

"The only explanation we have to offer is that it is a natural 'gift' or aptitude—simply born in him."

"I believe we are safe in saying that Glenn is the youngest telegrapher in the world, and the youngest one that was ever known. He can cut out and in the switch board, and when the wire is open he can test the wire by 'grounding' and locate in which direction the wire is open."

### Lack of Faith in the Telegraph.

BY R. R. HAINES, LOS ANGELES, CAL.

Hon Benjamin Randall, Congressman from the Lincoln, Maine, district, at the time Prof. Morse had his application for money before Congress, related to me the following incident:

The Professor had a line working from a room in the Patent office building, Washington, to another on the opposite side of the street, by which to illustrate his invention. Two Congressmen from "away out west" believed Morse to be a humbug and a swindler, and they resolved they would show him up and defeat him in his attempt to loot the Government Treasury, as they alleged. They prepared a message, timed their watches, and one took the dispatch to one end of the line to send it, and the other to the opposite end to receive it. The message was sent and received without a "bull" being made in it, and the faithless men were compelled to acknowledge the successful accomplishment of the feat, yet so strong was their prejudice that they voted against the subsidy on the ground that when Morse talked of sending a message ten miles, "it could not be done."

It is a matter of history that Prof. Morse offered to sell his constructed line between Washington and Baltimore, together with his patent, to the Government, for one hundred thousand dollars. The Postmaster-General was directed to investigate and report on the proposition. He returned his "Respectfully Referred" with this note: "The operation of the telegraph between Washington and Baltimore had not satisfied him and that under any rate of postage that could be adopted, its revenues could not be made equal to its expenditures." So the proposition was rejected.

About the year 1852, James Eddy, then superintendent of the Maine Telegraph Company, but residing in New York, obtained concessions for a telegraph line across the continent to the gold fields of California. The plan was to bury an insulated wire by means of a huge plough, across the prairies and deserts. But capital was too shy, and refused to take the bait, and so the people of the Pacific Coast lived in telegraphic darkness until 1861.

The lack of faith in the Atlantic Cable, which led to the organization of a company to build a

line to Europe via Alaska, Behrings Straits, Siberia, etc., I have mentioned in a previous communication. This was the more remarkable from the fact that the "doubting Thomases" were mostly practical telegraph men. And this fact intensifies the wonder, remembering that the telegraph was then ten years old, and many short cables were working successfully in various parts of the world, and that one Atlantic Cable had been laid successfully and worked. It is well remembered that the Russian telegraph managers held to their faith to the last, and prophesied immediate failure of the cable of 1866, even after it had been successfully laid and worked for several weeks. Fortunate for the world Cyrus W. Field never lost his grip. A noted correspondent of the London Times said Mr. Field "compassed land and sea incessantly," until he had the great satisfaction of seeing the vision that had been an inspiration for years, a glorious accomplishment.

I am repeatedly saying that those only who are old enough to remember the transportation facilities extant prior to the invention of the telegraph, can appreciate the work done by Morse and Field. It took the Mayflower three months to complete her pilgrimage to the new world. Columbus was ten weeks in crossing the Atlantic. Benjamin Franklin was conveyed to France in thirty-three days in the colonial war ship "Reprisal", the vessel being crowded all she could bear in the November gales. It is said intelligence of the death of Queen Victoria was passed to San Francisco in less than five minutes. Do my young friends realize the difference, and do they not envy the old timers who have seen whereof they write?

### Co'lin's' Overland Telegraph.

Apropos of the account published in TELEGRAPH AGE on April 1, of the history of the Western Union Russian Extension Telegraph, contributed by R. R. Haines, of Los Angeles, Cal., a reminiscent article of the work of building this line through the forests of the North Pacific Coast, the following, printed under the caption of "Collins' Overland Telegraph," in "The Telegrapher," of October 31, 1864, will be of interest. In view of what has been accomplished by the telegraph and cable since that date in placing all parts of the world in close communication, the reprint reads like a page of ancient history instead of recalling events transpiring less than thirty-nine years ago. Here is the article:

"Our readers undoubtedly are aware that an expedition is fitting out in New York to carry out the grand idea of connecting, by a line of Telegraph, mostly overland, the two great continents. A few facts, of a mere outline character, to suit the limited space of our columns, may be of interest.

"The world is indebted to Perry McD. Collins (who was the chief engineer of the Western Union Extension Telegraph) for the grand inception of telegraphically connecting the two great continents by the way of Russia. Kamscha-

tka, crossing Behring's Straits, thence through the Russian American possessions to Washington Territory, where the line already built will be connected thereto. That the plan was and is feasible, we have abundant evidence in the fact that such eminent telegraphers as J. H. Wade, president of the Pacific Telegraph, Hon. Hiram Sibley, president, and Col. Anson Stager, superintendent of the Western Union lines, most heartily endorsed it, and have given it their unqualified encouragement. The Government of the United States, fully alive to the importance of the proposed line, has, through its officials at Washington, in the Navy Department, and through the officials connected with the Treasury Department, endeavored to facilitate the expedition, and to this end has placed at its disposal a vessel fully armed and equipped, as a representative of our flag, and, if need be, to protect the members thereof in such foreign waters as its course may lead them. The gentlemanly members of the Coast Survey Bureau, at Washington, have most earnestly entered into the objects of the expedition, knowing that results will be practically arrived at, during its progress, of the utmost importance to that branch of the public service, as well as to science and the world. The Smithsonian Institute, also, has been very marked in its liberality in furnishing data from old works, maps and charts in the possession of that excellent National Institute.

"To give our readers an idea of the vastness of the expedition soon to start for the frigid regions, an epitome of the material now being collected will suffice:

"Two ships have been purchased, on board of which are now being placed immense quantities of all kinds of telegraphic material—wire, insulators, instruments, batteries, tools, etc. These ships will be officered and manned by men of large experience as Arctic navigators and seamen, and the vessels themselves will, on arriving in those regions, but renew an acquaintance with an element familiar to them on former whaling cruises.

"A brig has also been purchased; also two large schooners, one of the latter being a very fast yacht of elegant model. A small light draught steamer has also been placed on board one of the above mentioned ships, which is intended to be used in the exploration of shallow rivers and streams, and also as a tender to the fleet.

"Two ocean steamers have been purchased and will be used in connection with the expedition, in promptly transporting supplies, laying cables, etc. Thus the fleet will comprise an armed naval vessel, two ocean steamers, two ships, a brig, two schooners and the tender—eight crafts in all—engaged in the peaceful mission of connecting the great emporiums of the old and new world by lightning.

"There will be employed a large number of persons, particularly selected for their fitness and adaption to the work required. The number of laborers alone will reach some three hundred.

An efficient corps of telegraphic engineers, draughtsmen, topographical engineers and others of attainments essential to success, will accompany the expedition, and it is only necessary to say, in this connection, that gentlemen of the highest merit and of ample experience in their distinctive departments, have been selected.

"The first delegation has already been sent to San Francisco, under the charge of Mr. Edward Conway, which will, it is expected, make explorations as far as possible during the next three months up the Frazer River and adjacent country. The main expedition will not leave San Francisco until about the first of March next, prior to which time the whole fleet will have arrived at that port. A large number of the members of the expedition will leave this port on the vessel belonging to the fleet, but the leading members thereof will reach San Francisco via the Nicaragua route.

"The number of maps, charts, books and other printed matter it has been necessary to con over, compare and to make notes and extracts from, in order to furnish as much information to the leaders of the expedition as possible before their arrival upon the various localities, would appal any but an indefatigable student. Several very important maps and charts have been drafted, none of which have been taken bodily from any one of the heretofore recognized authorities, but compiled from a variety of sources, some of which date back to 1797. A large map on the polyconic plan has been executed by Mr. Frank L. Pope, to be used by the expedition, which contains portions of the two hemispheres never before placed upon paper in this shape. It is considered by competent judges a chef d'oeuvre of draughting, and by those who have traveled somewhat in that region, as the most accurate map extant. Several are in existence, but all have been found more or less subject to criticism for known defects; but these defects have been carefully avoided and rectified by Mr. Pope. It will be of immense value to the expedition, and would most certainly be rarely appreciated by the highest students of geography could it be printed. Among the books obtained for the use of the different members is an edition of the "Chinook Jargon," the idomatic composition of which would seem to throw the ancient Sanscrit into the shade. Its telegraphic transmission, however, is said to be not a very difficult matter, inasmuch as it is comprised mainly of an agglomeration of guttural sounding consonants, which could easily be surmounted by the newly invented repeaters. This may probably furnish another instance to the philosopher who claimed that all new inventions were destined to overcome some ancient specialty, and if our telegraphic system can make the "Chinook Jargon" intelligible, the world of letters and of astute science may well congratulate itself upon a modern scientific conquest.

"Of course, for an expedition which is destined to traverse such high latitudes, and where much

will be dependent upon accuracy of information to be derived only from observations taken only from the heavenly bodies, the very best optical and astronomical instruments will be needed. These have been carefully obtained, and many of them prove to be of rare merit, many satisfactory tests having been made in this city by night and day. If these instruments prove so satisfactory in this climate, subject to the fog and smoky exhalations of this great city, they will most certainly be found to possess the most admirable properties claimed for them by their makers, upon being practically tested in those regions where the smoke of civilization disturbs not the rarified atmosphere so freely inhaled by only the white bear, the walrus and the adventurous whaler.

"To facilitate the movements of the expeditionary force, and also to be prepared to meet the natives in all comity, an experienced interpreter has been attached to the corps. A surgeon has also been put upon the staff, whose medical abilities and advice will no doubt enable the force employed to retain that robust health and physical energy so essential to the success of the enterprise.

"By the above outline, the intelligent reader can easily comprehend the vastness of the enterprise undertaken and will easily discern that a master mind is at the head of the expedition, which grasps at once the various difficulties to be encountered, and provides thoroughly the means of surmounting them. That success to the fullest extent will crown the toils, the dangers, the hopes, the fears and the grand anticipations of the projectors of this stupendous work, there can be no doubt; and, through the blessing of Divine Providence, brought down upon the exertions of this little band, in those far-off Arctic regions, by their own prayers, united with the holy aspirations of the dear ones at home, we all, in common with the enlightened community in which we dwell, shall eagerly listen for the first click of the instrument, announcing that space is annihilated, and that the two greatest Nations of the globe are indissolubly united in fact, as they have been for years in fraternal feeling."

President Lincoln in his message to the Thirty-eighth Congress, December, 1864, had this to say regarding the Russian Extension telegraph:

"The proposed overland telegraph between America and Europe, by the way of Behring's Straits and Asiatic Russia, which was sanctioned by Congress at the last session, has been undertaken, under very favorable circumstances, by an association of American citizens, with the cordial good will and support, as well of their Government as of those of Great Britain and Russia. Assurances have been received from most of the South American States of their high appreciation of the enterprise and their readiness to cooperate in constructing lines tributary to that world-encircling communication. I learn, with much satisfaction, that the noble design of a tele-

graphic communication between the eastern coast of America and Great Britain has been renewed, with full expectation of its early accomplishment. Thus it is hoped that, with the return of domestic peace, the country will be able to resume with energy her former high career of commerce and civilization."

### The Pacific Telegraph.

Although the building of the first telegraph across the North American Continent has frequently been adverted to in these columns, the following, published under the above title, in "The Telegrapher," of New York, October 31, 1864, by a correspondent contemporaneous with the event, possesses a quaint interest that no general article can acquire:

"The first inception of this great enterprise dates from the year 1859, when the measure was first brought to the attention of Congress. A bill in aid of the project was passed after some opposition, and proposals for the construction of the line were advertised for by Secretary Cobb. Mr. Hiram Sibley, president of the Western Union Telegraph Company, who was really the originator of the whole enterprise, put the question to the directors of the company whether they would authorize proposals to be sent in; and so formidable did the undertaking appear, that it was favorably carried only by a single vote.

"After long and tedious delays on the part of Secretary Cobb, the contract for building the line was awarded on the 20th of September, 1860, to Mr. Sibley, president and representative of the Western Union Telegraph Company. This company at once assumed the contract, and furnished all the money expended on the line east of Salt Lake.

"They at once despatched Mr. J. H. Wade, of Cleveland, one of the officers of the company, to California, to confer with the parties on that side, and persons who had traversed the various routes, and determine where and how to build the line, and also to make arrangements with the Telegraph companies in the Pacific States, or such of them as might agree, either for a business connection at the point where their lines then terminated, or to induce them to extend their wires eastward.

"After various discussions the route was at last settled upon. The California Company agreed to assume the construction of the line to Salt Lake City immediately, and, if possible, to have it completed to that point as soon as the line from the eastward reached there.

"It was not an easy matter to determine the best route, but it was finally determined to run via Fort Kearney, Fort Laramie and Fort Bridger; crossing the Rocky Mountains at the South Pass, and thence to Salt Lake City, and from this point via Fort Crittenden to Fort Churchill, thence crossing the Sierra Nevada Mountains to Placerville and San Francisco.

"Mr. Edward Creighton was appointed super-



intendent of construction on the eastern part of the line. Mr. Creighton had already surveyed the proposed route and convinced himself that a line could be maintained over it.

"The directors met at Rochester and organized the company, April 17, 1862, by electing J. H. Wade, president; Hiram Sibley, vice-president, and E. Creighton, superintendent; after which nearly all the wire, insulators and other material had to be made before the construction of the line could be proceeded with.

"The wire used on the line is No. 9, iron wire, galvanized, and the insulators are of glass, protected with a wooden shield, of the pattern known as the 'Wade' insulator. The materials and tools were taken to Omaha, Kansas, at which point everything necessary for the expedition was gathered in readiness to start westward.

"Having in mind the usual manner of constructing telegraph lines, the reader will be able to judge of the labor required to set up two thousand miles of telegraph through a wilderness inhabited only by Indians and wild beasts and a part of which was a desert plain.

"Of the force employed on the Pacific side we have no knowledge—but, for the line from Omaha to Salt Lake City, Mr. Creighton had four hundred men, fitted out for a hard season's campaign, including rifles and navy revolvers for each man, with the necessary provisions, including one hundred head of cattle for beef. These were driven with the train and killed as needed.

"For the transportation of the material and provisions for this army of workmen, five hundred head of oxen and mules and over one hundred wagons were purchased by the company, and these not proving sufficient, other transportation was hired, making the total number of beasts of burden seven hundred oxen and one hundred pair of mules. When all was ready, the party started from Omaha, and set their first pole on the Fourth of July, 1862. The line was completed to Salt Lake on the 18th of October, 1862, and the California party reached the same point six days later, on the 24th. They advanced at the rate of about ten miles per day. The whole line is upon poles, it being thought best to cross the rivers in this manner rather than by means of submarine cables. The wire weighs three hundred and fifty pounds to the mile and the total weight of wire used between Omaha and San Francisco amounts to seven hundred thousand pounds. The posts are of good size, eighty to the mile, more than half red cedar, the balance being mostly pine.

"The country is desolate of timber most of the way. The longest distance poles were hauled in one stretch was two hundred and forty miles. On the high mountains where the snow accumulates to a great depth during the Winter, the posts are extra large, and sufficiently high to keep the wires above the deepest snow. They are also placed close enough together to prevent the wire being broken by an accumulation of snow and sleet.

"The line is worked by Morse's instruments, usually direct from Chicago to Salt Lake, by means of intermediate 'repeaters' at Omaha and Fort Laramie. At Salt Lake the messages are re-written and sent direct to San Francisco. The stations on the line average about fifty miles apart and the whole length of the line is inspected twice a week by persons employed for the purpose.

"The cost of the line averaged about \$250 per mile.

"The section on the California side was built by Mr. Street, of California, at about the same rate of progress, ten miles per day.

"No difficulty has been experienced from Indian depredations since the construction of the line, and it has continued to work almost uninterruptedly since its completion. Even during the late Indian difficulties, which compelled the suspension of the overland mail route, the telegraph line was not in any manner molested by the savages. This is supposed to be owing, in a great measure, to the influence of superstitious fear among them in regard to the wire, leading them to regard it as something of a supernatural character.

"The total amount of business done by this line is immense and has more than fulfilled the most sanguine expectations of its projectors."

#### Directory of Annual Meetings.

Association of Railway Telegraph Superintendents will meet on May 13, 14 and 15, at New Orleans, La.

Commercial Cable Company meets the first Monday in March, at New York.

Gold and Stock Life Insurance Association meets the third Monday in January at New York.

Great Northwestern Telegraph Company meets the fourth Thursday in September at Toronto, Ont.

International Association of Municipal Electricians meets at Atlantic City, N. J.; time not yet selected.

Magnetic Club, business meeting, meets the second Thursday in January at New York.

Old Time Telegraphers and Historical Association meets at Milwaukee, Wis.; time not yet agreed upon.

Postal Telegraph-Cable Company meets the fourth Tuesday in February at New York.

Telegraphers' Mutual Benefit Association meets the third Wednesday in November at New York.

Train Despatchers' Association meets June 16, 17, 18, at Nashville, Tenn.

Western Union Telegraph Company meets the second Wednesday in October at New York.

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.

### The Grand Secretary-Treasurer of the Commercial Telegraphers' Union of America.

Mr. Wilbur Eastlake, the grand secretary-treasurer and member of the executive council of the Commercial Telegraphers' Union of America, is a resident of New York. He is a member of the Postal force and at present is employed on the



WILBUR EASTLAKE,

The Grand Secretary-Treasurer of the Commercial Telegraphers' Union of America.

Postal's telegraphic staff at the New York Evening Post.

Mr. Eastlake was born at Alexandria, Va., nearly fifty years ago, and his features, as shown in the accompanying photograph, reveal the face of a man well preserved and in the full strength of middle life. His is a strong character; he is one of the best and most favorably known operators in the country; is conservative in his views, painstaking and faithful in his work. Mr. Eastlake obtained his education in the public schools of Washington, D. C., and at a private preparatory academy, supplemented by a course at the Columbian University, also in the Capital City. It was during the early seventies that he became a telegrapher, his first employment being at the telegraph office in Willard's Hotel, Washington. He has worked at his profession in many of the cities along the Atlantic Coast, as well as at such points as Omaha, Kansas City and St. Louis, in the interior. In fact he was the master workman at the former point at the time of the telegraphic strike in 1883. Going to Baltimore he became a member of the Corn and Flour Exchange where he made and lost a fortune. For a while he engaged successfully in the hotel business, managing a hostelry at Palatka, Fla., during the winter of 1883-4, afterwards conducting The Arlington Hotel at Ocean Grove, N. J., in the summer of 1884. He came to New York in 1886 where he has since been continuously in the em-

ploy of the Postal Telegraph-Cable Company serving in many capacities—clerk, stenographer and operator. Mr. Eastlake is married and has one child. He takes an interest in politics, is a fluent talker and usually takes an active part as a stump speaker in both state and national campaigns.

### M. W. Rayens Managing Head of the United District Messenger Company.

The United District Messenger Company, 206 Broadway, New York, a new incorporation, capitalized at \$200,000, has for its general manager M. W. Rayens, formerly and for many years the superintendent of the American District Telegraph Company, of New York. The purposes of the new concern, which is largely cooperative, as set forth in its circular announcement, are very broad, for its charter will permit the company to conduct its business along many allied lines, such as messenger, burglar and firealarm, night-watch, cab, carriage and express service and circular delivery, and these several features, will, it is stated, be developed to their fullest extent.

The promotion of this enterprise is due to Mr. Rayens, who has been identified with the telegraph and kindred interests all his life. Mr. Rayens is of Irish birth, and on February 8, last, was thirty-nine years of age. He began life in New York as a messenger boy in 1877, and his



M. W. RAYENS,

Managing Head of the United District Messenger Company of New York.

upward climb through all grades of that service has been paid. He is a master of detail, an expert accountant, an excellent operator and manager, and realizes that the employes of a corporation should have a say in its management. He is a member of the various organizations designed for social and philanthropic purposes connected with the craft.

**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.

The current information of any office will, if carefully chronicled, furnish a welcome digest of news that will be read with pleasure and satisfaction by thousands, and this limit should constitute the legitimate contents of all letters. And we wish that our correspondents would avoid the too frequent habit, at all times a bad one, of abbreviating words in writing. This is a peculiarity among telegraphers, we know, but what may be plain to the writer, and for local interpretation, is usually a mystery to the editor, and is apt to lead to error in the printed statement.]

OKLAHOMA CITY, OKLA., WESTERN UNION.

The recent visit to this place of General Superintendent T. P. Cook and party, which included Superintendent C. B. Horton, and Assistant Superintendent J. C. Nelson, resulted in several changes being made including an advance in the salaries affecting a few of the positions. The operators, however, failed to get a raise.

E. L. Chenoweth has decided that he can find more congenial spirits on his "Klondike Farm" at Francis, Okla., and his signature of "R" is no longer seen.

R. W. Ellsworth resigned April 26 and has gone to Heuvelton, N. Y.

L. O. Ross, from Norman, O. T., and Roscoe S. Smith, from Little Rock, Ark., are our latest additions.

**PHILADELPHIA, PA.**

My motto—honorable dealing. OPERATORS, THROW PREJUDICE ASIDE long enough to look into the merits of the No. 3 Fox, and the No. 6 Fay-Sholes typewriters for "newspaper" as well as "message" work. Booklets, prices and easy monthly payment plan upon application to me. SPECIALTIES—Remington's and Smith's fitted with reversible rolls, \$40.00 and \$45.00, GUARANTEED. BEAR IN MIND—No "mill" no work in this city. Write or wire D. A. Mahoney, Western Union, Philadelphia.

WESTERN UNION.

That misfortunes never come singly was forcibly illustrated recently when Chester, the fifteen-year-old son of Joseph Dolphin, of this office, shot himself in the foot, inflicting a painful, but fortunately, not a serious wound. A week later Mr. Dolphin himself figured in a trolley car accident near Chester, in which he had a narrow-escape with his life, receiving painful injuries

and bruises which confined him to his home for some days.

The death of Daniel Shaw, which occurred on April 22, at Bath, Me., was a sad surprise to his many friends here by whom he was well and favorably known.

Miss May H. Travers has been appointed manager at Lock Haven, Pa., vice E. A. Ryan, who was elected recently to the office of City Auditor of that place.

Franklin Showers has been appointed manager at Lewistown, Pa., vice Miss Fitzgerald, who went to Altoona, Pa., as assistant to Manager J. B. Unglaub.

Recent arrivals: W. J. Seymour, from New York; E. E. Bone, Harrisburg, Pa.; H. P. Hemingway, Pottsville; L. D. Heath, Hammonton, N. J.; Miss D. M. Coxe, Princeton, N. J. Mrs. Gillespie, widow of the late Daniel Gillespie, a well known operator, is also with us.

Among recent visitors were: J. C. Barclay, assistant general manager; B. Brooks, general superintendent, and E. M. Mulford, superintendent, all of New York; and Manager J. M. Creamer, of Baltimore.

The sympathy of many friends is extended to Mr. A. H. Spracklin, whose mother died recently at the advanced age of 86 years.

Mr. J. P. Hyatt, a well known operator, the new editor of the Evening Telegraph, this city, was married recently to Miss Underwood, a charming young lady of Wilmington, Del.

Resignations: W. J. Moore and H. Woerner. POSTAL.

Now that his duties as a state legislator are over, Traffic Chief Geo. W. Dunn has resumed his customary place in the main office.

Conspicuous among the most recent changes, we note the departure of Mr. Wm. Mullen to Chicago; Claude C. Figgs and Albert Goldberg to Pittsburg, and J. Harding to the North American's leased wire.

Frank Holloway, of the first New York bonus wire, has lost about a week, due to sickness.

Mr. Charles C. Dreher, who for a number of years has satisfactorily filled the position as quad-chief, resigned to accept a better offer from the Long Distance Telephone people in this city.

Owing to another attack of rheumatism, Mr. Robt. C. Mecredy, of the Commercial Exchange office, has been laid up at home and Mr. Phil. Sherwood has been ordered to the Exchange to help out Mr. Goldstein, temporarily.

In like manner Mr. Harry Cilley has been taken from the Lehigh circuits and ordered to Chester, Pa., pending the return of Manager W. H. Larkin, who is detained at home by sickness.

NEW ORLEANS, LA. WESTERN UNION.

Departures: J. E. McMahon, to Nashville; W. A. Relf, E. J. Ryan, Wm. Gowland, Joseph Meynier; J. W. McMahon and A. J. Hamm, to New York; L. E. Holmes, to Memphis.

Arrivals: Miss A. Godberry, F. Horne, F. C. Laurendine, T. F. Russell, J. I. Plume, C. M.

Laurendine, J. M. Laurendine and J. A. Ahern.

Robert Dyer of this city died recently in Chicago.

George Lonegan is now the Illinois Central Railroad agent at Kentwood, La.

Miss Laurendine has returned to her home in Scranton, Miss. W. A. Pillow is now in Austin, Texas; Miss Roig is acting manager at Donaldsonville, La; J. F. Thomson, manager of the Maritime branch office, and Miss F. H. Weicks were married in this city in the latter part of May and many congratulations were extended to the young couple.

Mrs. Ross, the estimable wife of our chief, and her charming daughter, have returned from a trip to Birmingham.

Government signals are now handled direct in the Weather Bureau office here. Messrs. Vidal, Dennett and French are the operators; Mr. Feehan, clerk.

There was born lately to Mr. and Mrs. E. A. Friedman a daughter.

SAN FRANCISCO, CAL., WESTERN UNION.

Departures: L. R. Andrews to engage in other business; G. H. Waterbury and Miss Samud to Yosemite Park, Cal.; Edward Dorgan to the Postal; Miss Jennie W. Bacon to the Herald, Oakland; Joseph Pawlasek to the News, this city, and Mr. William J. Hearsch, who has been employed in this office for nearly twenty years, to Vancouver, B. C.

CLEVELAND, O., WESTERN UNION.

Owing to ill health, L. A. Somers, manager of the Gold and Stock department, has been granted leave of absence, beginning May 1. Max Handler, operator on the stock wire, is acting manager during Mr. Somers' absence. Fred Lyons, for a long time inspector for the same department, having resigned, is succeeded by Henry Schleppe, previously employed as ticker operator. The tickers are now operated by Robert Clark and Miss Seibel.

Mr. Nash has been transferred from the operating room to the Gold and Stock department.

We are pleased to note the recovery of Night Chief F. L. Hertzner, who has been at home for two months ill with typhoid fever.

SANDUSKY, O., WESTERN UNION.

H. O. Stafford, manager of the Western Union Telegraph Company, Sandusky, Ohio, died suddenly, April 16th, of heart failure. Mr. Stafford was 63 years of age. He was a veteran of the war, having served four years with distinction. He had resided in this city since the war and had been identified with the telegraph interests for many years. He was manager of the Atlantic and Pacific, also of the American Union until that company was absorbed by the Western Union, and has since been connected with the latter company up to the time of his death, acting as manager since 1901.

Emil W. Grob, formerly manager at Akron, Ohio, succeeds Mr. Stafford. Mr. Grob was formerly employed in this office and is well and favorably known here.

Chief Operator J. A. Cunningham resumed work on April 1, after being absent since the first of last November on account of illness.

The personnel of this office is as follows: E. W. Grob, manager; J. A. Cunningham, chief operator; George Meagher and John A. Meenan split trick men, and T. H. Giesseman on night report.

MONTREAL, QUE., GREAT NORTH WEST-ERN.

Arrivals: R. I. McIver, T. M. Wilson, M. C. Peebles, J. B. Leroux, D. A. Elliott, J. H. Martin, J. Baker and Mr. Delaney. Resigned: W. E. Burris and C. Byrd.

We regret to announce the death of Miss Paterson, one of our most popular lady operators.

John Vautier has recovered sufficiently from his illness to resume his duties.

Fred Coleman is confined to his house with typhoid fever.

BALTIMORE, MD., WESTERN UNION.

On April 25, the operating department was changed from the basement to the fine large quarters on the mezzanine floor of the Equitable Building, a change rendered necessary by increasing business. Many improvements have been instituted, and the office as a whole has been brought up to the full requirements of modern needs. Power is furnished by sixteen motor dynamos, which take the place of 9,000 cells of battery. The new quarters will accommodate about one hundred and sixty operators. Not a joint was missed in the change, and in three hours the entire force was at work in the new room. (One by one the operators, led by Veteran Mar-

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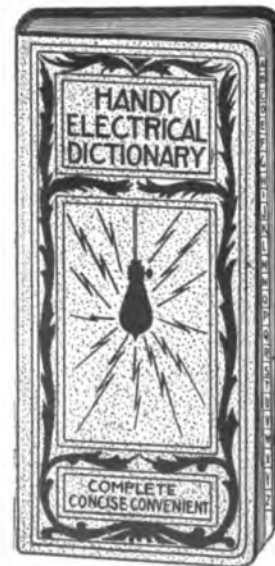
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shall McCord, left the old location and proceeded to the new.

Much credit is due Electrician S. R. Crowder for the smooth manner with which everything moved. Mr. Crowder was ably assisted by Chief Operator L. D. Wilbourn. Mr. C. C. Whitlock, of Richmond, superintended the carpenter work.

Mr. Charles M. Snyder has been appointed manager at Waynesboro, Pa.

Mr. O. H. Smith, operator in the main office, and Mr. C. F. Gilroy, manager of the Eutaw street office of the American District Company, have exchanged places.

Recent additions to the extra force are: Elmer Brookings, Charles H. Rudolph, who has recently returned from the Philippines; A. E. Stough and F. L. Siegman.

Mr. Haden Gentry has returned after a long absence, caused by sickness.

Mr. Philip G. Hess has the sympathy of all in the death of his wife, which occurred last week, after a long illness.

#### DENVER, COL., POSTAL.

As some time has elapsed since our office has been heard from will give you the personnel of our force: F. J. Cavannaugh, manager; J. B. Coggins, chief operator; J. W. Pearson, night chief operator; W. L. Simpson, traffic chief. On the Chicago bonus wire: E. B. Orr, late of Little Rock, and W. L. Hepburn, days, and E. W. Ganley and A. H. McAhren, nights. The El Paso duplex is manned by John Q. Adams and Joseph E. Gill throughout the day and is looked after by William Kieley at night; on the Los Angeles duplex A. H. Herbert, late of Cleveland, Ohio. The Kansas City duplex is handled by J. R. Sennett and Miss M. C. Harn. The way department and city wires are taken care of by Edward Kieley, Katie Owens, Miss Hindman, W. C. Rentfrow and Mrs. Smith.

The removal of Logan & Bryan's relay office from Colorado Springs to this city, added somewhat to the business of this office and all hands are kept busy in consequence during 'change hours. Mr. William P. Sargeant is manager of this office, assisted by Carl C. Wakelee. The operators are: Harry Wakelee, B. F. Fitzsimmons, Henry Burghardt, E. Goodell, J. C. Corum, W. F. DeLaney, Roy Olive and W. F. Wilson.

The sympathy of the force is extended to Manager Cavannaugh, whose mother died at Chicago, April 22. Mr. Cavannaugh was just recovering from an attack of pneumonia which laid him up ten days, but he attended the funeral which was held in Chicago, Sunday, April 25.

We were all glad to see Superintendent Black return to the office, April 15, after a six weeks' siege of pneumonia fever. Mr. Black has recovered completely.

Departures: Messrs. Fleetwood and Patterson, for their homes in Pittsburg; L. L. Oeland to The Associated Press in Leavenworth, Kan., and George F. Randolph, late assistant chief, for New York.

#### CHICAGO, ILL., WESTERN UNION.

Our new assistant manager at the large Board of Trade office, is Mr. Frank W. Sherwood, who has served for the past 15 years in various capacities from check boy to his present position. He was for some years solicitor and manager of the messenger service on the Board floor, also assistant to Loop Chief Williams at the main office, nights. Mr. Sherwood did good service for some months as a member of the Signal Corps at Havana, Cuba, during the Spanish-American war, and afterwards as a civilian in the telegraph department. Mr. Sherwood is a shrewd business-like man and will doubtless make a valuable official. He has an affable manner, a fact which wins him many friends.

Mr. Jesse E. Whitlock has been at home for about a month, suffering from a serious attack of grip. He hopes now to report for business shortly.

Claude Whitlock of the all night force has also been away on sick leave.

William Winters, formerly chief operator for the Postal Company at Vancouver, and lately with Porterfield & Co., Chicago, has the sympathy of all in the death of his wife.

Mrs. Lord has returned permanently to this office from the employ of a broker.

Alfred Dixon, formerly chief of the overland division, and who is now engaged in evangelistic work is at present pursuing his work in the interior of the State.

Miss Helen B. O'Neil of the Buckingham department, and Mr. Barney A. Duffy, of Armour & Co., were married April 29. A large number of telegraph people were present at the ceremony.

#### NEW YORK CITY.

"My Old Virginia Home Upon the Farm," "Utopian Waltzes," and all popular music, 18c. each. Pianos sold \$1 per week. B. L. Brannan, 195 B'way, N. Y.

Typewriters—All makes for rent, and sold on easy terms. Representing 3 typewriter Exchanges, I defy competitors to equal quality of machines or promptness in filling orders. AMOS L. BOUGHER, Western Union Telegraph Co., 195 Broadway, New York.

#### WESTERN UNION.

Mr. Thomas A. McCamman, chief operator at Philadelphia, has been made chief operator of this office. It was announced in the issue of May 1 that Mr. J. M. Taylor, of Indianapolis, Ind., had received the appointment, which was true, but Mr. Taylor preferred to remain in the West. The position is a new one here and the acceptance by Mr. McCamman transfers the services to New York of an exceedingly bright man. A sketch and picture of Mr. McCamman appeared in TELEGRAPH AGE of July 16, 1902.

At a meeting of Amaranth Council, Royal Arcanum, held May 5th, to which Mr. Frank Kitton was unsuspectingly inveigled, there occurred a

happy incident. Much to Mr. Kitton's surprise, Regent Watts requested Past Regents White, Howell and Brannan to escort the former to the Regents' station, where they were met by Hon. Walter C. Burton who, in an eloquent manner, presented to Mr. Kitton, on behalf of Revere Council, Buffalo, N. Y., an elegantly jewelled badge, a mute tribute of the affection and esteem in which he is held by his former associates. Mr. Kitton made a fitting response, and spoke feelingly of his long and pleasant connection with Revere Council.

The office of Mr. W. J. Dealy, superintendent of the Commercial News Department, on the seventh floor, has been reduced in size in order to make a new room for the accommodation of a portion of the clerks attached to the department of Mr. B. Brooks, the general superintendent, whose office is on the sixth floor. On this floor there will be a partial rearrangement of rooms, all of which is being done in order to give an office to Mr. J. C. Barclay, the new assistant general manager, who will then be brought in close proximity to President Clowry.

The entertainment and reception of The Telegraphers' Social and Dramatic Club will be held at New York Turn Hall, 85th street and Lexington avenue, on Friday evening, the 22d inst., at 8 o'clock. The entertainment will be a comedy, in which ladies and gentlemen of the operating force will take part, and for which they have been rehearsing for the past month. A very pleasant evening is promised to those who attend. Tickets and any information regarding reserved seats, boxes, etc., can be had from any member of the entertainment committee. W. P. Brady, chairman.

The telegraph and telephone department of the American Can Company, this city, occupies exceedingly neat and attractive quarters. Direct wires connect the office with Chicago, Toledo, Cleveland, Philadelphia, Baltimore and Pittsburg. The personnel of the staff is as follows: B. W. Longstroth, manager, a telegrapher of twenty years' experience; and operators Elmer Beidelman, Joseph Enright, the Misses C. Conlon, M. Mulchay and M. Mullen.

Seawanhaka Camp, order of Woodmen (C. J. Riley, Council-Commander), which is composed principally of telegraph operators, celebrated its second anniversary by a smoker, at the club rooms, Fraternity Hall, Bedford avenue, Brooklyn, on Friday evening, May 8. The usual songs, recitations, etc., were rendered, and "Senator" W. L. Ives made a few appropriate remarks, in his own inimitable way, which were greatly applauded.

George E. Schryver has resigned from the position as wire chief of the Western switch to take charge of a large farm at Jericho, Long Island, which was recently left to him by a relative. Mr. Schryver leaves with the hearty good will of everyone connected with the department. Mr. Theodore E. McAllister, wire chief on the night force, takes the place made vacant by the retirement of Mr. Schryver.

Dr. G. G. Williams, who has been practicing medicine in Brooklyn for the past thirteen years, has returned to the key.

Conrad A. Meyer, Eastern wire chief, has resumed duty after a long illness caused by his old enemy, rheumatism.

Senator W. C. Burton, now that the New York Legislature has adjourned for the season, has resumed his position as chief operator of the race bureau.

It will be interesting to note that the Telegraphers' Mutual Benefit Association during its entire existence has only suffered a loss of \$9.50 by defalcation. This small loss was sustained some twenty-one years ago. This is indeed a remarkable record when it is taken into consideration that a million and one-half of dollars have passed through the hands of some five hundred different agents since the organization of the association, over forty years ago.

Mr. William Holmes, superintendent of tariff, was a few days ago badly shaken up by a fall while descending a flight of stairs in the building. He carried his left arm in a sling for a few days as one of the results of the mishap.

Mr. J. E. Janney, of Philadelphia, Pa., accompanied by his wife, was a recent visitor.

Mr. John W. Lewis, manager of the Astor House office, has occupied his present position fifty years, lacking a few months. Mr. Lewis is well preserved, and is in reality as vigorous and enterprising as a young timer, which he certainly is. Mr. Lewis began his telegraph career at the same point where he is now located and where he has remained continuously.

NEW YORK, POSTAL.

Typewriters.—All makes for rent, and sold on easy payments; only first class machines rented. AMOS L. BOUGHER, Western Union Telegraph Company, 195 Broadway, New York.

Mr. Francis W. Jones, the electrical engineer of the company, is absent on a business trip in the South.

Mr. John Costelloe, for many years manager of the Cotton Exchange office, has been appointed superintendent of the Commercial News Department, with headquarters in New York City, and has been charged with the duty of general supervision of the commercial news service of the company in the Eastern and Southern Divisions under the direction of the general manager.

Mr. J. J. Scanlon, who has charge of the telegraph bureau at the "World" office, and who is one of the best known operators in New York, is the oldest employee in the Postal service.

Mr. G. W. Barrett has been transferred to regular day trick.

Benj. Hirsch is with us again after a severe illness, resulting from an attack of pneumonia.

City Chief S. C. Dodd is back again after a few days' illness.

Chief Frank McKiernan recently took a four days' trip to Boston.

Mr. J. Howard, recently night chief check, has been transferred to the operating force, and Martin Jurist, formerly assistant day chief check, has been assigned to the vacancy. B. F. McDonald takes Mr. Jurist's old place.

A daughter has been born to Mr. R. F. Stewart.

Mr. E. J. Liston, who for a long time has been employed in this office and worked the early trick at the Fulton Fish Market, leaves May 18, for the far West, where he goes to recover his health. The whole force wish him success and complete recovery of health.

Resigned: C. A. O'Connor, M. E. McKittrick and F. R. Johnston.

### DALLAS, TEXAS.

Having resigned as chief operator and manager of The Associated Press at Dallas, to accept the management of the Fay-Sho Typewriter Company's Texas branch, which includes Texas, Indian and Oklahoma Territories and Shreveport, La., I shall make a specialty of the telegraph trade and will appreciate whatever business the fraternity may turn our way. The Dallas office will be equipped with the most complete repair shop in Texas and a splendid repair man in charge. Typewriter supplies of all kinds will be kept in stock at reasonable prices and prompt attention given all orders.

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### THE ASSOCIATED PRESS.

Mr. H. R. Clark, chief operator of the New York bureau, has just finished a very celebrated map of the leased wire system of The Associated Press. The service penetrates every State in the Union with the exception of five. The map shows the number of wires reaching from point to point, where repeaters are located, and other details that make it of great value. It affords the best illustration of the magnitude of this great news gathering concern ever conceived.

A new office has been established at Albany, N. Y., which is modern in every respect, possessing several sets of repeaters, storage battery plants and all accessories calculated to facilitate a speedy handling of press reports.

The following changes have occurred: E. L. Herdman, of Worcester, Mass., goes to Bridgeport, Conn.; J. W. Luxon, of Bridgeport, to Worcester; J. W. Powers, of New Haven, Conn., nights, to Torrington, Conn., days; G. J. Stryker, of Torrington, Conn., to South Norwalk, Conn. G. W. Burroughs, of Providence, has resigned; G. Larzalere has been appointed at Gloversville, N. Y.,

vice F. E. Crane, resigned; J. W. Walsh has been assigned to the New York State circuit, New York bureau, vice F. Sheehan, resigned.

Information wanted of John H. Walsh, Canadian operator, last heard of in Kansas City six years ago; mother dead. Please communicate with James Walsh, 31 Sidney street, Bangor, Me.

"Boys, give me factory number and model of that old Remington, Smith or Densmore and let me show you how easy it is to own a Fox, Fay-Sholes or Jewett" (all latest models). D. A. Mahoney, Special Representative, Western Union, Philadelphia.

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**FOR TWENTY YEARS** *Telegraph Age* has represented the great telegraphic interests of this country. During this long period, so eventful in the history and development of telegraphy, this paper has endeavored faithfully to advance the welfare of every individual connected with the telegraph. How well this has been appreciated is attested by the fact that thousands of names are still on its books of those who, having drifted into other callings, never have forgotten their former telegraphic experience, or ceased to cherish the friendships and associations then formed. For telegraphers are clannish, loyal to each other and, we are pleased to say, eminently so to their single representative paper, and which, let it be said, has ever sought to be loyal to them.

**THE DEPARTMENT OF CORRESPONDENCE**, so long finding expression in the familiar and chatty pages by which members of the fraternity in all parts of the country are kept constantly and pleasantly informed of all changes and transfers, business and social events, marriages and deaths, occurring within their ranks, has proved to be of abiding interest to thousands everywhere.

**THE TECHNICAL ARTICLES**, highly instructive in character and conveying practical and much-needed information on every phase of modern telegraphy, have won high commendation because of their intelligence and the broad scope of the subjects brought under discussion. **They have been invaluable to the active operator as a practical aid in his daily employment.** The series of articles now being contributed by Willis H. Jones, to which attention is especially requested, are alone worth many times the subscription price of the paper. Mr. Jones is a prominent New York wire chief operator. His articles explain, in simple and easily understood language, the duplex, quadruplex (how to install and balance them), batteries, dynamo machinery, the condenser, galvanometer and electrical testing, switchboard testing, repeaters of all kinds, etc. All sorts of possible combinations that the telegrapher is asked to solve are given painstaking and careful attention.

**THE GENERAL SUBJECT OF TELEGRAPHY** in its many aspects, its progress and development, in this and other countries, has been so treated as to present a vast fund of information. The bound volumes of *Telegraph Age* have come to be regarded as works of reference. They will increase in value as time goes by. The very full and comprehensive cross index published each year, is a most useful supplement to the paper.

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**TELEGRAPH AGE** has always sought to exert a helpful influence to the fraternity collectively, and to the telegrapher as an individual. Now in turn, when it has mapped out for its future a larger, fuller and a more broadly comprehensive course, still ever keeping in view the advancement of the telegraphers' best interests, it appeals to its friends, to the members of the craft everywhere, to render the aid which they alone can give to make this subscription effort supremely successful.

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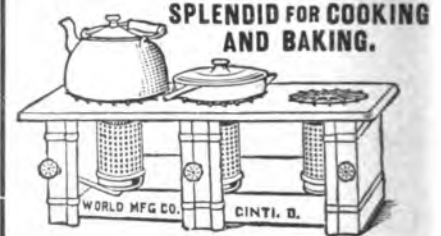
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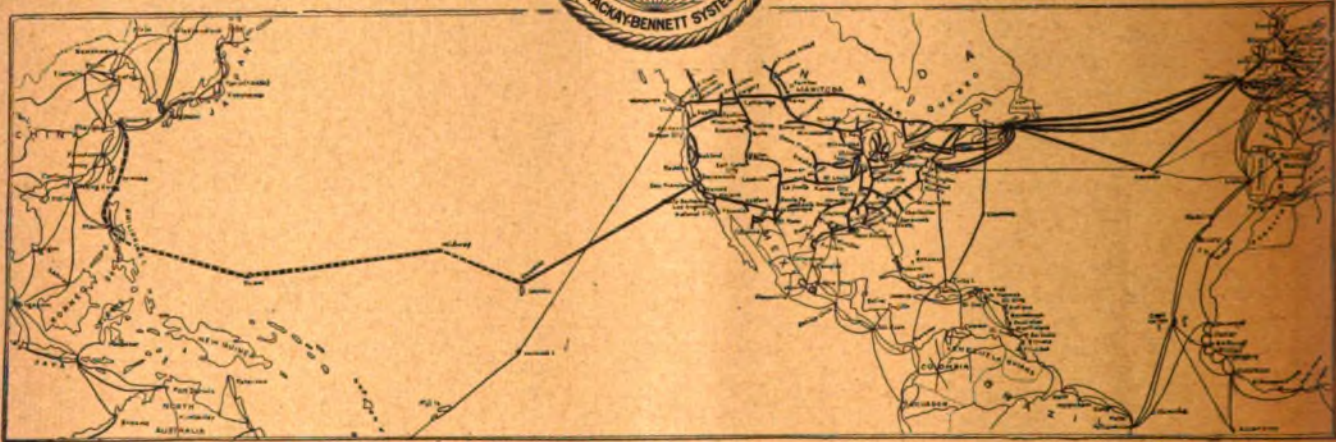
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