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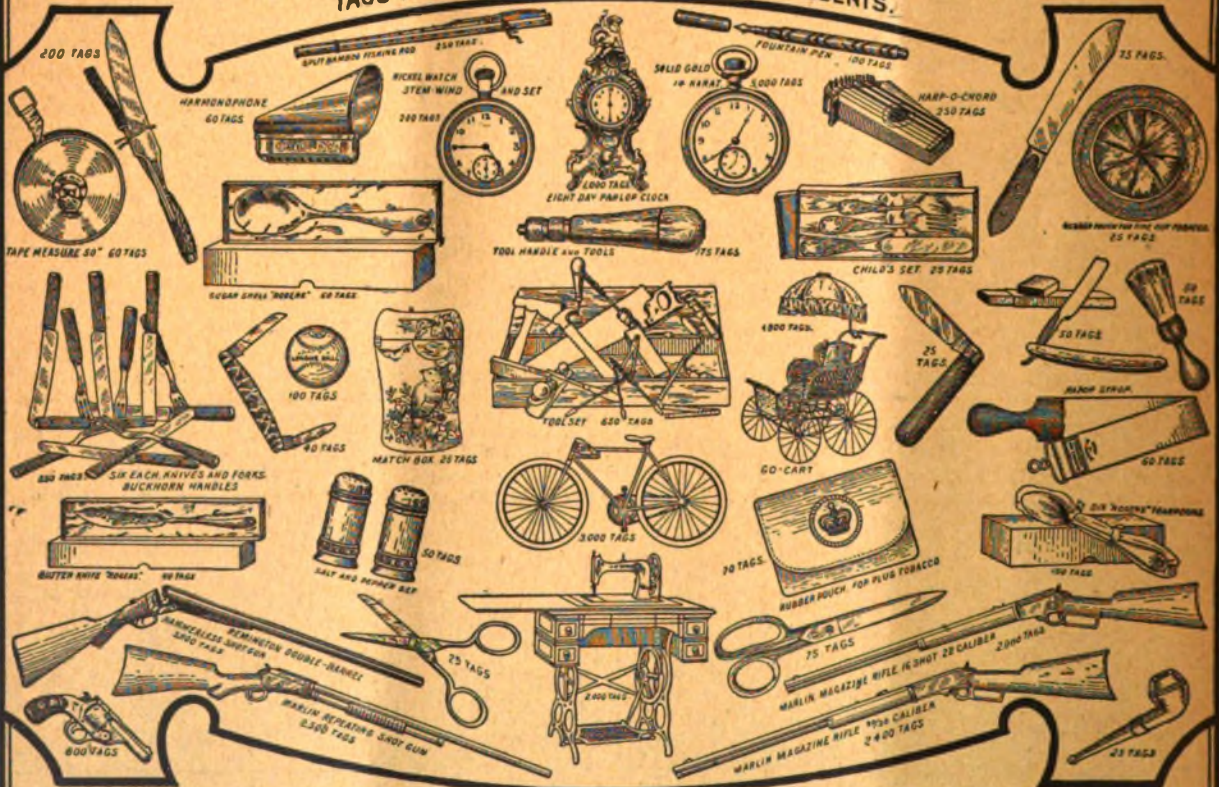
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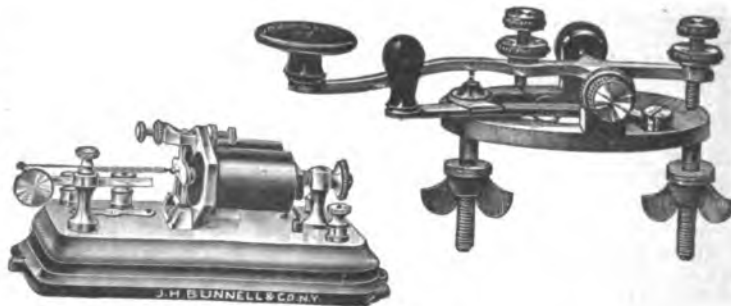
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THE TELEGRAPH AGE

No. 13.

NEW YORK, JULY 1, 1903.

Vol. XX.

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SOME POINTS ON ELECTRICITY.

BY WILLIS H. JONES.

The Barclay Combination Quadruplex Rheostat.

The new combination quadruplex rheostat shown in Fig. 1, now being distributed by the Western Union Telegraph Company, will hereafter be the standard pattern installed for quadruplex apparatus by that company. Aside from its simplicity, the device recommends itself at once to all quadruplex attendants, inasmuch as it relieves them of the necessity of carrying metallic plugs about with them or hunting for the same when the supply runs short.

By referring to the diagram it will be seen how the various coils are combined and connected. The upper circle represents two separate series of coils, those on the left containing 250 ohms each, and the others on the right, 25 ohms. The two half circles are connected together by two movable levers, either or both of which can be shifted to any desired position in the half circle, thereby cutting in or out as many coils as desired. The two coils mentioned compose the artificial line resistance proper, but should the total of 2,-

700 ohms resistance therein be insufficient for a long circuit, an additional, or initial resistance of 2,700 or 5,000 ohms, may be added to the circular combination coils by moving the middle lever of the trio shown below to the disk marked with the value chosen.

In order to ascertain the total resistance contained in the rheostat after taking a line balance, simply add together the figures representing the resistances of the various coils chosen in the line balance.

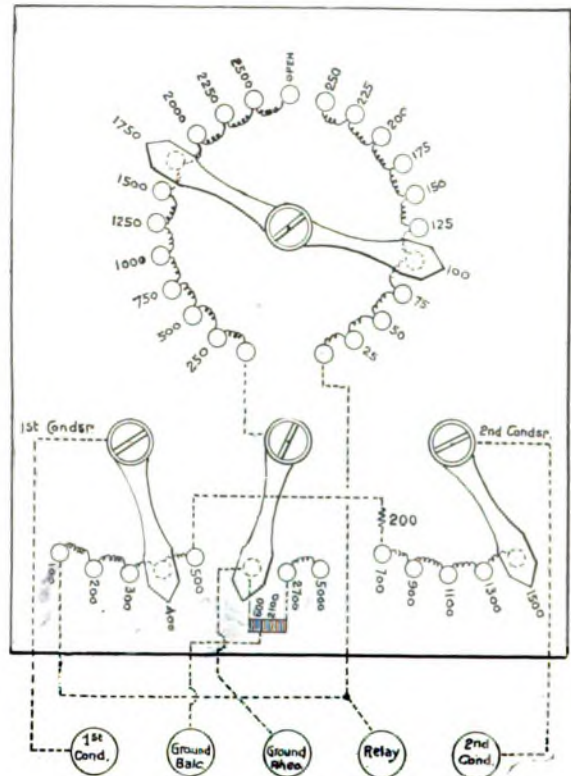


FIGURE 1.

ances on $1750 + 100 = 1850$ ohms. The left and the right hand levers are connected to the first and second condensers, respectively, and regulate the “retarding” resistance interposed between the relay and the condensers. An extra resistance coil of 200 ohms is inserted in the line joining the two sets of retarding coils for the purpose of preventing the two condensers from discharging simultaneously should the two levers happen to rest on the disks marked 500 and 700, respectively, at any time. The charge of the second condenser should always follow that of the first.

It will be seen that when the first condenser responds, the charge takes the shorter route to

the relay at the 400 ohm disk where the lever makes contact, while the second condenser is compelled to traverse as many coils of the right hand series as are cut in, in addition to the 400 ohm coil on the left. This arrangement is always maintained where two condensers are employed in order that by retarding one charge the magnetic effect produced in the relay magnet may be prolonged. The connections of the five binding posts are plainly marked. The middle post grounds the rheostat. The second, counting from the left, leads to the disk in the quadruplex main battery switch on which the lever rests when we "ground" for a distant office to take a balance. It will be seen that the 2700 ohm coil is tapped in such a manner that 600 ohms will be the shortest route to the earth, hence that coil represents the compensating "ground." The wires leading from the condenser disks of course lead direct to a dead ground.

Some time ago a problem concerning the winding of a magnet in two ways, one of which gave twice the magnetizing strength of the other with the same battery power, was submitted to the readers of this journal with an invitation to explain why the proposition could not be

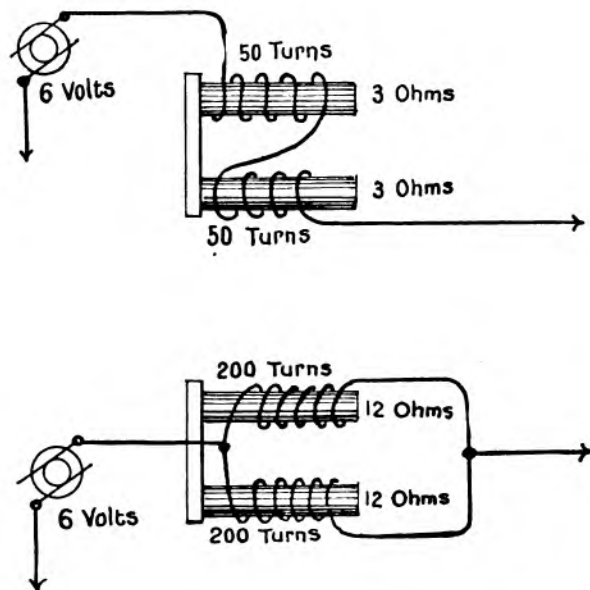


FIGURE 2.

used advantageously in winding telegraph instruments for practical purposes.

The explanation is really very simple, but no comment was made at the time in order that the rule governing the winding of magnets might be better understood by laymen if, when in their perplexity over the problem involved, they might be stimulated to thought and research in the endeavor to reconcile the apparent inconsistency of the proposition. Figure 2 shows the connections and values of the current, coils and battery as given with the problem in this journal on April 16. Judging by the number of replies received, the problem evidently interested many readers.

Some of the explanations were wide of the mark, while others were well within range, but very ambiguous in statement.

About the best answer received is that from Mr. J. S. Creegan, of Albuquerque, N. M., which is as follows:

"In the issue of TELEGRAPH AGE of April 16 you present a correspondent's ingenious method of getting something for nothing, if his figures would obtain in practice, but they would not. According to the figures he gives, the multiple wound coil would be four times as strong as the series wound with the same current. In practice, however, it would be quite different.

"In order to get 200 turns in the same space the 50 turns occupy, the wire would have to be reduced in diameter one-half, and as the resistance is inversely proportional to the square of the diameter, the resistance would be four times as great, making the 200-turn coil 48 ohms instead of 12 ohms; the ampere turns would be 25 instead of 100, in each coil, or 50 ampere turns in the two combined, while in the series wound coils the ampere turns are 100. The series wound magnet, is, therefore, four times as strong as the multiple wound.

"The heating effect of a current of one ampere being sixteen times as great as that of the normal sounder current of 250 milamperes, would alone be sufficient objection to using heavy currents in telegraphy."

Here is another problem that a correspondent submits, illustrated with a sketch, Fig. 3. It is also quite simple, but one which may interest young electricians and possibly give them a bet-

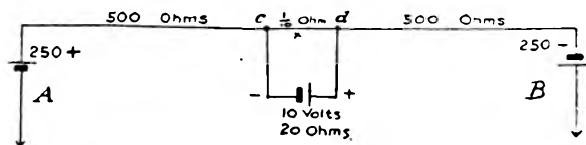


FIGURE 3.

ter understanding of the part an intermediate battery plays in a circuit, through the train of thought he pursues while trying to work out the problem:

"A main line of 1,000 ohms has a voltage of 250 at each end; an intermediate battery of 10 volts and 20 ohms is attached to the main line as shown; the resistance of the wire *x* is a tenth of an ohm, the fall of potential in both the main line and the intermediate through wire *x* is the same; therefore, there can be no current in that portion of the circuit. How does the current from A get to B without passing through *x* or around the 20 ohms of the intermediate battery? If it goes the latter route it is equivalent to saying the intermediate battery increases the resistance of the main line, which is obviously impossible."

"Pocket Edition of Diagrams," etc., 260 pages and 126 illustrations, published by TELEGRAPH AGE, contains just the information that every telegrapher requires, irrespective of his position.

Recent Telegraph Patents.

A patent, No. 730,858, for a telegraph transmitter has been issued to Martin Armstrong, of Kenney, Tex.

A patent, No. 729,873, has been granted to Jules Lagarde, Clermont-Ferrand, France, for a typewriting or similar machine and apparatus for use in connecting therewith.

Business Notices.

J. H. Bunnell & Co., of 20 Park Place, New York, the well-known telegraph and electrical supply house, are sending out to their friends an exceedingly neat clip for desk purposes. It is well made, has a good spring, and the upper handle composed of a circular piece of celluloid, bears the company's advertisement in red letters arranged above and below the familiar trade mark, stamped in dark blue, of a train of cars and the symbol "73." It is a practical device, one that will find a welcome on many a desk.

The advertisement on another page, of the St. Louis Typewriter Exchange, (Incorporated), introduces to our readers one of the largest and best of the establishments of the kind in the great Middle West. It is a corporation that has been established for twenty years, thus carrying the stability, of age, and if this be indictative of strength, as is usually regarded, this concern is amply endowed and comes forward with a guarantee that should command confidence. The business of the exchange is to buy and sell, rent and exchange all kinds of typewriters and to deal generally in typewriter supplies and novelties. Its trade affiliations are extensive, reaching to many parts of the country, and the old rules governing its conduct, namely, truth and integrity, are still as important factors as in all the years of its existence. The company ships machines on trial to all parts of the United States, British Columbia and Mexico, and makes announcement that it has no connection with the typewriter trust. The president of the St. Louis Typewriter Exchange is Carson Albright, and the treasurer and general manager is A. C. Albright, the full address being 211 North 7th street, St. Louis, Mo.

The Train Despatchers' Association.

The sixteenth annual convention of the Train Despatchers' Association of America met at Nashville, Tenn., Thursday, June 16. Mr. A. D. Caulfield, the president if the association, opened the proceedings. He also responded to the Mayor's address of welcome.

The report of the secretary, Mr. J. F. Mackie of Chicago, Ill., showed that the association is making encouraging progress; that six deaths had occurred during the year and fifty-one new members had been added to the roll.

No operator should fail to read TELEGRAPH AGE regularly. It will pay him to do so.

Personal Mention.

General A. W. Greely, chief signal officer of the United States Army, has returned from London, England, where he represented the United States Government at the International Telegraph Conference.

Mrs. Lucy D. Pope, wife of Henry W. Pope, the recent acting general manager of the Bell Telephone Company, at Buffalo, N. Y., died in that city on June 21. The interment was at Great Barrington, Mass.

Mr. W. C. Humstone, up to a year ago superintendent of the Western Union Telegraph Company, New York, sailed for Europe with his family on June 27. Mr. Humstone expects to spend several months visiting the countries of Europe.

Mrs. J. J. Dickey, of Omaha, Neb., widow of the late J. J. Dickey, superintendent of the Western Union Telegraph Company at that point, was in New York a few days since visiting friends while en route to Portland, Me., where she will visit her step-daughter.

Mr. Henry L. Shippy, treasurer of the John A. Roebing's Sons Company, of New York, has chartered the fine steam yacht Zara for this season, and is giving a number of week-end yachting parties, entertaining his friends handsomely, during the period preceding the international yacht races. Mr. Shippy is a member of the New York Yacht Club and the Zara of course flies the colors of this club.

In a recent letter from Mr. Charles A. Tinker, the former general superintendent of the Western Union Telegraph Company, at New York, who is living in quiet retirement at his home in St. Albans, Vermont, he enclosed a photograph illustrative of the pleasures and contentment of his present occupation. The picture depicts him, accompanied by a guide bearing a string of fish, just leaving a small boat that has been moored to the dock on the lake shore. Mr. Tinker, with his trousers turned up, not, however, because it is "rainin'," for it is a clear twilight hour, and with a light top coat thrown over his arm and carrying a fishing rod packed snugly in its case, looks stout and hearty. The photograph bears this endorsement, written in Mr. Tinker's own handwriting: "Returning to Camp Madawaska, Victoria Lake, in Canada, after an afternoon's sport with the 'speckled beauties.'"

General Mention.

The Postal Telegraph-Cable Company, at Detroit, Mich., now occupies new quarters for its main office.

Mr. Frank W. Eitemiller, son of George M. Eitemiller, of the Western Union Telegraph Company, Pittsburg, Pa., was married June 24 at Webster, Pa., to Miss Blanche Cromwell Patterson.

The twentieth annual convention of the Ameri-

can Institute of Electrical Engineers is now in session at Niagara Falls, N. Y., the term of the convention being within the dates June 29 and July 3, inclusive.

Mr. John F. Haas, for some time past of the Western Union Telegraph Company, Nashville, Tenn., has accepted a more lucrative position with the Postal Telegraph-Cable Company, at Memphis, Tenn.

It is reported that the Rocky Mountain Telephone Company which operates in the State of Wyoming, is installing telegraph instruments in many of its main offices in the various towns through which the lines pass. It is said that the telegraph is to be an auxiliary to the telephone.

A poetical drama, entitled "Prometheus," has been written by James G. Burr, a Western Union operator of Laredo, Tex. It is now in press. Those who have read the manuscript say that the work is unique in its way and possesses genuine merit. Its forthcoming publication will be awaited with interest.

Lieutenant F. M. Jones, superintendent of telegraphs for the signal corps, at Manila, prior to his leaving that point for the United States, was presented with a handsome gold watch and chain as a token of the esteem in which he is held by the operators. Lieutenant Jones occupied a conspicuous position as censor at Santiago, Cuba, during the Spanish-American war. He has rendered twelve years of service to the signal corps and is now ordered by the War Department to join his regiment, the 9th Cavalry, stationed at Monterey, California.

Mr. J. Orton Kerby, a well known old time telegrapher, and an ex-United States Consul to the Amazon, has become the vice-president and secretary of the Pittsburg and Amazon Rubber Trading Company, of Pittsburg, a concern which he has been instrumental in organizing, and which is capitalized at \$1,000,000. The company will maintain a branch office at Washington, D. C., and at this point Mr. Kerby, who is a rubber expert, will be located. As rubber is the principal factor in insulating the wires of to-day, Mr. Kerby who, fifteen years ago recognized its importance for such purposes, has since then devoted his entire time to the subject of rubber production. He is familiar with the Amazonian region and has a comprehensive knowledge of its possibilities as a source of rubber supply for the future.

Recent New York Visitors.

Mr. F. N. Roberts, wire chief, Postal Telegraph-Cable Company, Chicago, Ill.

Mr. W. H. Reagan, manager Postal Telegraph-Cable Company, Fall River, Mass.

Mr. J. R. Terhune, superintendent, Western Union Telegraph Company, Nashville, Tenn.

Mr. Frank M. Ewing, acting chief operator of the Pennsylvania Railroad telegraph system, at Williamsport, Pa.

Mr. G. H. Yetman, superintendent of the Boston District Messenger Company, Boston, Mass.

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

Mr. Wm. J. Lloyd, assistant superintendent, Western Union Telegraph Company, Chicago, Ill.

Mr. S. R. Crowder, electrician of the Eastern and Southern divisions of the Western Union Telegraph Company, Richmond, Va.

Mr. Theodore P. Cook, general superintendent, Western Union Telegraph Company, Chicago, Ill. Mr. Cook was accompanied by his secretary, Mr. Morris P. Cook.

Mr. C. S. Rhoads, of Indianapolis, Ind., superintendent of telegraph of the "Big Four" Railroad, and president of the Association of Railway Telegraph Superintendents.

Obituary.

James Creighton, for fifty years a resident of Omaha, Neb., and one of the wealthiest of its citizens, died at his home June 8, after a prolonged illness, aged eighty-one years. He served as County and State officer several terms, and was a member of the firm which built the Pacific telegraph line and had several of the large contracts for grading the Union Pacific Railroad.

Resignations and Appointments.

Mr. J. T. Covington, of New Orleans, has been appointed manager of the Postal Telegraph-Cable Company, at Jackson, Miss.

Mr. R. L. Kemp, manager of The Postal Telegraph-Cable Company at Macon, Ga., has resigned to go into the brokerage business.

Mr. Willis S. Seiferd, formerly manager of the Postal Telegraph-Cable Company, Tiffin, Ohio, has been appointed manager of the same interests at Lima, Ohio.

Mr. Jay E. Burwash, who is recently from the Pacific Coast, has been appointed manager of the Western Union Telegraph Company, at Belvidere, Ill., vice C. F. Prough, resigned.

Mr. Harry Witt has been appointed manager of the Western Union Telegraph office at New Brunswick, N. J., vice William Sullenberger, promoted to the management of the Lancaster, Pa., office.

Mr. J. M. Maddox, of St. Louis, Mo., one of the most enterprising telegraphers of that city, has been appointed manager of the American District Telegraph Company, of San Francisco, Cal., to succeed Edward F. Weihe, resigned, to manage a private enterprise.

Mr. J. W. Weed, manager of the Postal Telegraph-Cable Company, at Jamestown, New York, has been promoted to the managership at Elmira, New York. Mr. G. Victor Wilson, the chief operator of the Jamestown office has been advanced to the managership.

Mr. F. E. Clary, an inspector in the office of the general superintendent of the Eastern and Southern divisions, New York, has been appointed superintendent of the Western Union Telegraph Company, at Richmond, Va., vice J. B. Tree, retired on a pension. A sketch of Mr. Clary appears elsewhere in this issue.

Mr. J. R. Terhune, assistant superintendent of the Western Union Telegraph Company, at Nashville, Tenn., has been promoted to be superintendent of the same interests with headquarters at Nashville, vice J. B. Compton, retired on a pension. A picture and sketch of Mr. Terhune appeared in TELEGRAPH AGE, November 16, 1902.

Mr. Martin D. Wood, for thirty-three years manager of the Western Union Telegraph Company at Kansas City, Mo., has resigned on account of ill health. After taking a long and needed rest, Mr. Wood will re-enter the employ of the company in some other capacity. Mr. George W. Brownson the chief operator of the office has been promoted to succeed to the management, and Mr. S. W. Atkinson, assistant chief operator has been promoted to be chief operator.

The Railroad.

It is reported that Mr. C. F. Annett, who up to a month ago was assistant superintendent of telegraph of the Illinois Central Railroad Company, will embark in the electrical supply business in Chicago.

Mr. O. M. Shepard, an old time and military telegrapher and superintendent of the New York, New Haven and Hartford Railroad Company, at New York, has been promoted to the general superintendency of the system with headquarters at New Haven, Conn.

Emory Parsons, lately appointed acting superintendent of telegraph of the Illinois Central Railroad Company, with headquarters at Chicago, succeeding Mr. C. F. Annett, which has already been noted in this column, is yet a young man, his birth having occurred at Orland, near Chicago, Ill. on February 2, 1870. He first entered the telegraph service at Worth, Ill., on June 6, 1888, in connection with the Wabash Railroad. Following this he held positions with various railroads in the West and Southwest, going with the Illinois Central in July, 1893. Here he has worked his way steadily upward, his position prior to his present office being that of having charge of the road's operating room in Chicago.

Bonzano Weeks, who has become the acting assistant superintendent of telegraph, south of the Ohio River, of the Illinois Central Railroad, with headquarters at Memphis, Tenn., as announced in our issue of June 16, was born at New Orleans, La., on June 30, 1862. He attended the public schools in his native city and afterwards took a commercial college course, later serving an apprenticeship with a machinist. He began his telegraphic career in 1880 as an operator in the

New Orleans police telegraph department. Subsequently he became manager for the Gulf Towing Company's telegraph lines, Port Eads, La., thence becoming chief operator of the L. N. O. and T. Railroad, at New Orleans, until its absorption by the Illinois Central, when he became an operator at the city ticket office of the latter, later being made chief operator and afterwards manager of the telegraph department of the New Orleans Belt and Terminal Company.

Wireless Telegraphy.

The Australian telegraph authorities have pronounced against the adoption of the Marconi wireless system. Mr. Scott, head of the telegraph department, personally experimented with the system and was unfavorably impressed with it for practical use on land, as the currents were uncontrollable and the messages liable to interception.

It is difficult now-a-days to avoid arrest by seeking to escape from the country by steamer across the Atlantic, at least by those vessels equipped with the wireless telegraph system. For on all such it is no longer necessary to await the arrival of the ship in port in order to effect the capture of a person fleeing from justice. A general message is sent to all steamers, describing the individual wanted, and his apprehension is made possible while the boat is still at sea.

The bill to incorporate the Marconi Wireless Telegraph Company of Canada was passed by the Railway and Telegraph Committee of the House of Commons, at Ottawa, Ont., on June 18. The capital stock will be \$5,000,000. Exception was taken to the clauses pertaining to the business of the company and to powers requested. Under these clauses, it was said that it was apt to become the biggest trust in the world, the company getting power to go where it liked and to take over every business of a similar character. The clauses were amended by the addition of the terms "subject to the approval of the Governor in council and of the municipalities interested." The clause relative to charges for messages was amended to read that the company may collect such rates as are fixed from time to time by the Governor in council instead of the directors, as the company desired.

Order of Railroad Telegraphers.

The election of officers of the Order of Railroad Telegraphers, which occurred in St. Louis at the recent convention of the Order, resulted in the re-election of the present incumbents, as follows: H. B. Perham, president; L. W. Quick, grand secretary-treasurer; J. A. Newman, first vice-president; T. M. Pierson, second vice-president, and D. Campbell, third vice-president.

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The Cable.

Cornelius Vanderbilt was elected a director of the Mexican Telegraph Company on June 16 to fill the place made vacant by the death of George G. Williams.

Mr. Frank Wilson, up to two years ago, superintendent of the Commercial Cable Company at Boston, Mass., who was pensioned at that time on account of disability, caused by blindness, and who moved to England, has returned to Boston where he will reside in the future.

The cable ship, *Colonia*, bearing the Pacific Commercial Cable, reached Midway Island on June 19, where the cable was buoyed. The splicing of the Guam-Midway section was made on June 22, and on June 23 the shore end was laid. This completed the work of the *Colonia*. The cable steamer *Anglia*, having on board the Midway-Honolulu section of the cable, and which had preceded the *Colonia* to Midway, then took on the engineering staff of the latter, and on June 26, splicing the last remaining deep-sea section to the shore end of the cable, started, paying out for Honolulu, distant 1,160 miles.

Five hundred and eighty miles of the submarine cable to be laid between Puget Sound and Alaska have been shipped from New York to Seattle, by the Safety Insulated Wire and Cable Company. The remaining 750 miles will be shipped from New York in August. This is the longest submarine cable ever made in the United States. The cable will be laid in Alaskan waters by the United States cable steamer *Burnside*, now on her way from Manila for that purpose. The electrician of the *Burnside*, under whose supervision the cable will be laid, is Mr. David Lynch, who was for many years identified with the Western Union Company's central cable office, New York, York.

PROGRESS IN GERMAN CABLE LAYING.

A new era in German cable construction began with the laying of a cable to Vigo, Spain, a distance of about 1,300 miles.

During the last seven years, Germany has laid 7,375 miles of cable, at a cost of over \$7,000,000. In 1898 a cable, 73 miles in length, was laid between Sassnitz and Trelleborg, and in 1899 German Southwest Africa was connected with the international telegraph system by a cable 154 miles long.

In 1900 the first German-American cable between Emden and New York, via the Azores—a distance of 4,813 miles—was laid. At about the same time Germany put down the first German cables along the Chinese coast, the cable Tsintau-Chefoo being 285 miles and that connecting Tsintau and Shanghai 438 miles long. The year 1901 witnessed the laying of the fifth cable between Germany and England, connecting Borkum and Bacton, a distance of 280 miles. The telephone cable between Fehmarn and Laaland was laid in 1902.

The construction of a second transatlantic cable between Emden and New York, via the

Azores, has been commenced and it will, it is expected, be ready for service before the expiration of the next year. Germany is also contemplating an increase of her cable net in eastern Asia and the South Sea, by constructing cables between Menado and Guam and the Palau Islands and Shanghai.

It is said that the growth of German interests, both military and commercial, will in the future require the building of more cables by Germany, independent of foreign nations. Germany now has cable works and two cable steamers.

The Western Union and Pennsylvania Railroad.

The Pennsylvania Railroad Company is trying to oust the Western Union Telegraph Company by legal action from the Pittsburg, Fort Wayne and Chicago and the Cleveland and Pittsburg railroads. The suits have already been entered and testimony is now being taken in the case.

By an order dated at Altamont, N. Y., Justice Peckham, of the United States Supreme Court, directs that the status quo in the Pennsylvania Railroad-Western Union fight be maintained, and that the Telegraph Company sign a bond of \$100,000 pending a disposition of its appeal. The order from Justice Peckham bears date of June 17.

The Western Union Telegraph Company has filed in the United States Circuit Court a petition for condemnation of a right of way for its poles and wires along the line of the Pennsylvania Railroad between Philadelphia and Washington. The petition claims the right to condemn under the Act of Congress passed July 24, 1866, which provides for the right of telegraph companies to construct their systems along the post roads of the United States, and it is contended that the Pennsylvania is such a road.

The Telegraphic Tournament.

The Executive Committee of the American Telegraphers' Tournament Association held a meeting on Thursday, June 25, at which much routine business was transacted. The question of contests and prizes chiefly occupied attention.

It is probable that every interest will be amply provided for and that the prizes to be awarded will be both liberal and attractive in character, if possible two being offered for each class. It is impossible to say at this early date what their value will be as all depends upon the support accorded to the project. An effort will be made to add to the interest of the contests by the display of a collection of telegraphic equipments and novelties.

The railroad operators are taking an active interest in the affair and a special prize for their class of work will be offered. It is thought likely that the broker operators will also find themselves provided for.

A general meeting will be held at Philadelphia on July 8, when it is expected great progress will be made in further advancing tournament interests.

Life of Storage Batteries.

[From the Question Box of the National Electric Light Association.]

QUESTION.

What is the opinion of the association regarding storage batteries after they have been in operation three or four years, under conditions of moderate use, as compared with the efficiency when first installed?

ANSWERS.

Lamar Lyndon, New York City: Replying to your request to answer this question, I would say that the word "efficiency" is used so often in connection with storage batteries where "capacity" is meant that I feel that what you desire to know is whether or not there is a marked change in capacity after batteries have been in service for some time.

As a matter of fact, there is practically little or no change in efficiency. Possibly a little sulphate may accumulate, raising the internal resistance slightly, but the effect of this on the watt efficiency of a battery is practically negligible. The capacity, however, decreases with the age and number of discharges of any cell. The capacity of the positive plate decreases slightly, due to the gradual accumulation of sulphate clogging the pores, and to loss of active material. This active material lost is in part replaced by the electrochemical action in the battery itself, and the positive plate does not begin to lose capacity until after the fourth or fifth discharge. These remarks refer to pasted plates.

Plated positive plates gradually increase in capacity with use, up to the point where the working away of active material from the ribs and exposed surfaces begins to cause a decrease in the available active surface, after which the capacity will decrease.

Negative plates of either type of battery continue to decrease in capacity from the time they are in service, and no reforming action takes place at this electrode. Consequently the negative plates are always made with an excess of capacity over that of the positives (in practice, from 40 to 60 per cent.), and it is intended that a set of negative electrodes shall not lose enough capacity to bring them down to the capacity of the positives before the two sets of positives are worn out; by this time, the negative plates themselves have to be renewed. In actual practice, we find that as a battery nears the end of its life its capacity decreases from 10 per cent. to 25 per cent. less than the capacity when new. Of course, if the use of a battery be sufficiently prolonged, the electrodes will finally disappear and the capacity be reduced to zero. This has no practical bearing, however, and the figures given represent about the decrease that may be expected up to the point where the battery becomes practically useless, unless the plates be renewed.

No rule can be given, because all the conditions upon which this loss of capacity depends are different in each and every plant, and depend on rates of discharge, number of discharges, whether

overcharged or "boiled" at proper intervals, density of electrolyte, temperature at which operated, the voltage down to which cells are carried on discharge, and other minor factors.

Ernest Lunn, Chicago Edison Company, Chicago: A battery that has been installed for three or four years and operated under conditions of moderate use, having from the beginning had careful attendance, should continue to give good satisfaction and its efficiency should be comparatively near to its efficiency at the time of installation. Emphasis must be placed upon the expressions "moderate use" and "careful attendance," for the length of time a battery will do good work depends entirely upon the conditions of operation and upon the care given it. The life of a battery should not be rated in terms of years, for batteries are seldom operated under the same conditions, and the results obtained from one may not compare at all with those from another. As a rule, the life of a battery is inversely proportional to the total number of ampere-hours discharged, other conditions being favorable.

The most important factors in determining the length of time for which a battery will do good service are: The rates of discharge and charge, the proper amount of charge, the temperature at which the cells are kept, and the care given them, which includes cleaning the cells, watering and protection from impurities in electrolyte. The most important, perhaps, are the amount of charge and the cleaning. As to the charge, it is absolutely necessary that it be brought up to the right point and then stopped, if good capacity and long life are desired. The time to cut off the charge must be determined after the battery has been in operation a sufficient length of time to adapt itself to the work it has to do. One of the surest ways to shorten the life of the battery is to overcharge it continuously. The work of keeping the battery free from the collection of growth on the plates should be carried on systematically and carefully, and an inspection, with the aid of a lamp, of all cells cleaned should be made as soon after cleaning as possible, to make sure that the work was thorough, for many batteries have been ruined because this very important work was neglected. It may be said, in general, that if the same conditions exist at the end of three or four years that made it necessary to install the battery in the first place, and if care has been used in handling it, while there will have been some plate renewals and some loss in ampere-hour capacity, the efficiency of the battery as auxiliary apparatus will be just as high as at the time of installation.

Scientists Give a New Marvel to the World.

Scientists in the principal universities of the country are deeply interested in the cable reports that came first from Berlin and then from London recently to the effect that through the study of the new substance scientifically known as rad-

ium a discovery of transcendental importance had been made regarding the consistency of matter. It is asserted that this discovery utterly destroys the long accepted theory that matter is an amalgamation of indivisible units forming the atoms of the elements.

Professors Crookes, Curie and Lodge, after a study of radium of more than three years' duration, have now absolutely and confidently rendered their decision in favor of the new atomic theory.

The radium theory declares that electricity and matter are one and the same. Units of matter are divisible according to the new theory and in each atom there exists a whole stellar organization of tiny units having the same orbital motion as that of the planets around the sun.

The scientists who have been exploring this fascinating, unknown field have come to definite conclusions regarding the action of the infinitely tiny electrical units or ions, as the scientific men otherwise describe them. For instance, it is known that 700 of these ions will produce oxygen gas and 11,200 ions in each atom make oxygen. A combination of 137,000 of these same ions would produce gold.

The possibility of disintegrating atoms of matter was hinted at by the Roentgen rays. Further study produced the radium and other discoveries, all going to strengthen the new theory which the famous scientists confidently declare is now absolutely proven. Scientists all along were able, for instance, to separate hydrogen and oxygen out of water, but the thought that the atoms that went to form each were themselves separable, occurred to none of the students until there came the suggestion which the X-ray gave.

Under the experiments conducted by the use of the radium, 120,000 ions which constitute an atom of radium flew around so rapidly in their orbit that the result was their complete disintegration into individual ions. But under the ordinary procedure of nature the disintegration is so infinitely slow as to beggar imagination in attempting to think how very slow it is—millions of centuries to effect the disintegration of a single atom's system of ions. Then, too, the separated ions probably come into contact with other ions in the work of regeneration.

Electric Resonance and Wireless Telegraphy.

At the Royal Institution, London, England, recently, Prof. J. A. Fleming, F. R. S., delivered the first of a series of lectures on Electric Resonance and Wireless Telegraphy. The lecture was accompanied by a long series of most interesting and successful experiments. Prof. Fleming explained the fundamental principles which govern electric transmission through space. The laws which govern electric resonance, and the relations which exist between the latter and inductance and capacity, were brought clearly to the understanding by simple mechanical analogies. He showed, for instance, how the oscillations of bodies suspended on springs varied with the

mass of the body and with the extensibility of the spring; how vibrations of air in an organ pipe produce the fundamental tone of a harmonic, according to the value of the vibrations of the sound-producing medium, and so on. The lecturer then proceeded to produce analogous electrical phenomena. He showed how one circuit, acting as receiver, would respond to the electrical impulses sent out by a sender, if only both were in tune; but if out of tune, even only slightly, how impossible it was to make the receiver respond. A most beautiful and convincing demonstration was with what may be termed an "electrical organ pipe." He showed, as he had shown before with the ordinary organ pipe, how it was possible to tune the "electrical organ pipe" by varying the two controlling factors—that is, capacity and inductance—so as to produce the fundamental wave or the higher harmonics. By drawing sparks at various heights of a wire spiral, he proved the existence of the one or the other, at the same time showing the variation in electrical pressure at the different points of the electrical wave.—London Electrician.

Seasoning of Telegraph Poles.

The American Telegraph and Telephone Company is experimenting this summer, through the Bureau of Forestry, with methods of lengthening the lasting powers of cedar and chestnut poles. The Bureau has sent several men to Wilmington, N. C., to study the loss of weight by cedar poles under proper methods of seasoning and the increased length of service of the poles which seasoning and preserving bring about. Similar work is being carried on near Harrisburg, Pa., with chestnut poles.

In Bear Canyon, Gallatin County, Montana, and at Sheridan, Wyoming, the seasoning tests with lodgepole pine, begun last summer in cooperation with the Burlington Railroad, will be continued under the direction of Reynolds Hill. Experiments in seasoning and preserving long-leaf pine ties will be carried on on a large scale at Silsbee, Texas, on the tract of the Kirby Lumber Company.

All this work will be done under the general supervision of Dr. Hermann von Schrenk, an expert on timber treatment and timber diseases.

The American Dispatch Telegraph Company has been incorporated at Raleigh, N. C., with a capital of \$25,000, its purpose being to construct and operate telegraph lines. James A. Edgerton, of Raleigh; Geo. H. Fearons, West End, N. J., and Belvidere Brooks, of New York, are named as the incorporators. The company is said to be an adjunct of the Western Union Telegraph Company.

TELEGRAPHERS' MUTUAL BENEFIT ASSOCIATION.—Assessment No. 409 has been levied by the Telegraphers' Mutual Benefit Association to meet the claims arising from the deaths of John Fitzgerald, at Halifax, N. S.; Wm. G. Jamieson, at Windsor, N. S., and Martin W. Griffin, at Lockport, N. Y.

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CHANGES OF ADDRESS.—The address of a subscriber will be changed as often as desired in ordering a change of address the old as well as the new address must be given.
REMITTANCES to *Telegraph Age* should be made invariably by draft on New York, postal or express order, and never by cash loosely enclosed in an envelope. By the latter method money is liable to be lost, and if so remitted is at the risk of the sender.

NEW YORK, July 1, 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.

Col Clowry and the Western Union Presidency.

We are authoritatively informed that the recent reports published in the newspapers throughout the country to the effect that Col. R. C. Clowry, president of the Western Union Telegraph Company, has resigned, are absolutely untrue and without foundation.

Standardize the Telegraph.

The question of salaries and of their equalization in the telegraph service, is one that is appealing with increasing force to the fraternity at large. An editorial that appeared in these columns on February 1, last, bearing the title adopted herewith, attracted wide attention and has aroused much favorable comment because of its treatment of the subject. It seemed to voice a very general sentiment held among working telegraphers the country over, in regard to the matter.

We revert to the topic at this time because the chief operator in a telegraph office located in a large city, in a letter just at hand, takes the question up and discusses it at some length in an exceptionally intelligent manner and with a pretty clear knowledge of the facts. After commending the editorial utterances of TELEGRAPH AGE in enjoining habits of studiousness upon the fraternity at large in order that operators may get beyond the limit of the dots and dashes, simply, he goes on to ask why it is that such a state of apathy, which he observes on all sides, exists among operators generally concerning the machinery of a telegraph office. He cites many instances of indifference on the part of operators in his own and other offices, as to their connection with the telegraph, and confesses to a feeling of discouragement over the outlook relative to the personnel of the telegraph profession of the future. He says the standard is steadily lowering. He is of opinion that the very small difference in pay between the lower and higher grades of employment, between the amount of compensation received by the man at the key and by the man at the switchboard, is responsible in great measure for the lack of contentment in and enthusiasm for their vocation which so largely prevails at the present time among the men. "For," he goes on to say, "the man at the key has no responsibility beyond the correctness of his immediate work, while the man at the board and repeaters often has the responsibility of the entire office, frequently heavy and of an irritating nature, calling for the exercise of a nice and discriminating judgment, resting upon him, yet the pay in the latter case is at most not more than \$10 or \$15 per month in excess of the former." Again, as he points out, the simple operator is frequently able, as a matter of fact, to earn more money than the chief operator, because he is privileged to work extra, an opportunity denied to the superior officer. These irregularities of compensation, he claims, constitute a source of irritation, degenerating into discontent, that is largely answerable for the lowering of ambition

in the telegraph service and a consequent deterioration of the higher personnel formerly obtaining.

While, as our correspondent points out, the pay of the railroad telegraph operator is considerably in excess of that prevailing in the commercial service, better feeling, he claims, would be promoted, and a new enthusiasm awakened, were the latter relieved of the uncertainties attending promotion and were a fixed or graded scale of wages paid affecting all positions.

Let the Good Work go on.

The publication in our issue of June 16 of a number of letters from subscribers of TELEGRAPH AGE living in different parts of the country, all speaking in an approving tone of the paper, the course it pursues, the information it conveys and the practical aid it is constantly affording to aspiring telegraphers, has not been without interest to a wide circle of readers. At the same time we also took occasion to say that if our readers who have the welfare of TELEGRAPH AGE at heart, would interest themselves to the extent of each securing one or two new subscribers, the subscription list of the paper would be so extended that its conductors would feel warranted in undertaking certain plans of betterment long held in contemplation. The suggestion has met thus far with a gratifying response, and already a number of names have been received. One manager of an important Western office, whose name we withhold by request, and whose kindly and manly letter is peculiarly welcome, writes as follows:

"You are entitled to the words of praise and commendation your correspondents utter. I have been a close student of the excellent technical articles in your paper and an appreciative reader of the strong editorials filled with good advice, and I desire frankly to say that it is largely due to their influence upon me that I have attained to my present position. I am glad to do in return what I can for TELEGRAPH AGE, deeming it both a duty and a pleasure, and I herewith enclose you my check for two new subscriptions. I hope the good work will go on and that you will secure the subscriptions of every intelligent telegrapher in the land who desires to better himself."

Another letter is from Mr. J. M. Stephens, superintendent of the Western Union Telegraph Company at Atlanta, Ga., who, in remitting to cover his subscription, writes: "I have been a subscriber to your paper for many years and I feel as if I could not get along well without the information and interesting reading matter which each issue contains."

Mr. A. C. Terry, a well-known telegrapher, now identified with the telephone interests at Pittsburg, Pa., had this to say in a recent letter: "It must be a matter of gratification to you to have assurances from so many sources that TELEGRAPH AGE is maintaining its reputation as a first class telegraph journal. Although I am not in as close touch with the telegraph fraternity as

I was at one time, I always look forward with pleasure to the receipt of my paper which I know will give me information about those with whom I was at one time more or less intimate."

Dr. L. M. Rheem, a former telegrapher, and now a well-known physician of Minneapolis, Minn., sends this jovial greeting: "This is the season of flowers, consequently a most excellent and appropriate time to throw bouquets. And I notice a bunch for you in your issue of June 16. They are all deserved by you, for your paper is, according to my notion, the ideal journal for the telegrapher or for any one who wishes to keep up with the procession. Jones' points on electricity alone are worth a great deal more than you charge for your paper. That is one for you, and one for Jones. But you need not raise the price, and Jones need not swell up. Just keep on. You will both get your rewards some time in the future when you don't need them."

Mr. H. Van Devender, manager of the Western Union Telegraph Company at Mobile, Ala., in a recent letter, writes: "TELEGRAPH AGE is indispensable. Its receipt is like a letter from home, because it is full of fraternal current topics. Every operator in the United States should take the paper. I recently located an old friend through its columns that I have been looking for for years."

If telegraphers, from the operator at the key, who has resolutely made up his mind for future promotion, and those as well who fill all the upward grades of service clear to the top, will heed our appeal and interest themselves to the extent of securing an additional paid subscription, they in return will derive benefit through the receipt of a paper, enlarged, improved, and with a wider scope of usefulness to its readers.

"Get Out of the Ruts."

The communication from "Constant Reader," Des Moines, Iowa, published in our issue of June 16, in which the writer criticises the careless work of operators, too frequently observed in the average typewritten message forms and furnishing examples of both correct and incorrect methods to be followed, has attracted considerable attention, thus showing that the subject is an interesting one.

Mr. E. Y. Ouderkirk, manager of the Postal office at Johnstown, Pa., who writes "No ruts for me if there is a way out," submits two samples of typewritten message forms, such as have been followed, he says, in that office for at least three years past. Both certainly are in "good form" and they are carefully and intelligently written. In the one the name of the sending office and the date are placed immediately under the line containing the sending operator's office call, "sine," time received, etc., while in the other the name and date of the originating point appear at the upper right hand corner of the message blank, the position always used in letter writing. Otherwise the samples submitted are alike in form and show unmistakably correct business-like teaching in all particulars of

capitalization, punctuation, address and signature lines.

As long ago as May 15, 1895, the Postal Telegraph-Cable Company, recognizing the importance of securing correctness and uniformity in typewritten messages, sent out a special circular enjoining all receiving operators to write out messages as indicated by the following example:

250 Ch Bc Hf 30 Paid. 8:45 A. M. Apr. 15.
San Francisco, Cala., April 14, 1895.
Chas. Shirley, Mgr.,

253 Broadway, New York.

This is the form of a delayed message showing time and date received placed in proper position. The date received, when placed after the original date, is misleading. Sending operators should precede back-date day messages with the words "back-date."

G. A. Staley.

It was urged in the circular that the observance of capitalization and punctuation of date, line of address and signature, should be in conformity with established custom; that no punctuation marks should be inserted unless transmitted, and that sending operators must "follow copy" in every case.

It will be noticed from the preceding example that the Postal company takes issue with the idea of placing the name and date of the sending office at the right hand upper corner as "Constant Reader" urges in his well considered letter.

Western Union Employees Pensioned.

It is said that corporations have no souls. How true this may be in some cases we are not disposed to argue at this time. Of the Western Union Telegraph Company, however, it is pleasant to learn of its benevolent action manifest in pensioning in a quiet way of a number of old and faithful employees who have become incapacitated during the past year for further work. Several such instances have recently come to our knowledge. One is that of W. L. Butman, a veteran telegrapher of Fremont, Ohio, who until recently was the manager of the Western Union office in that city. On resigning he was notified by his company that owing to his long and active service in the company's employ, they deemed it but proper that he should be rewarded, and notified him that he would continue on the company's pay roll as long as he lived and each month would receive a salary check just the same as though he was still in harness.

Other instances of magnanimity exercised by the company are noted in the Eastern and Southern divisions, where General Superintendent Brooks has placed twelve old employees of the company on the pension list with liberal monthly allowance gauged according to rank of positions occupied while in the service and financial condition on retirement. The sum allowed by the company will enable each person to live comfortably for the remainder of his life.

TELEGRAPH AGE will furnish operators with just the kind of practical information they need.

The Postal's New Trademark.

To commemorate an epoch in its history and an event of signal importance to the country—the extension of the cables under the Pacific Ocean from San Francisco to Hawaii, Guam, Manila and China—a new telegram form has been designed and adopted by the Postal Telegraph-Cable Company.



THE POSTAL'S NEW TRADEMARK

The distinctive feature of the form is a unique device, or "trademark," elliptical in shape, to indicate that the company's lines extend more than two-thirds of the distance from East to West around the world, as shown in the illustration. The border of the ellipse is a representation of an armored submarine cable with the words "Postal Telegraph Commercial Cable System" in white on the blue ground of a marginal band, surrounding a reduced map showing in silhouette the Atlantic and Pacific oceans, the shores of Europe and Asia and the Continent of North America, and indicating the routes of ocean cables and the main American land lines of the Commercial Cable and Postal Telegraph companies.

The device is a graphic delineation in a remarkably small space of the comprehensive and far-reaching telegraph system which will endure as a fitting monument to the late John W. Mackay, in whose patriotism and public spirit it was conceived and by whose sagacity, financial ability and indomitable energy it was established and developed, until it gained public recognition as one of the most successful, as well as beneficent, business enterprises of the times.

Telegraph Libraries.

The subject of telegraph libraries interests the telegraphers in the antipodes, as well as in this country, for in "The Advocate," published in New Zealand, in its issue of May 16, we find the following:

"Apropos of the present proposal to establish technical libraries in our service, the following remarks of TELEGRAPH AGE are interesting. We may state that the experiment is being tried in America, where a number of such libraries have been established at various centres. In furthering this experiment, TELEGRAPH AGE says:

"Telegraph libraries wherever located are exercising a potent influence for good, and much valuable educational work is being effected through

their instrumentality. It would serve a most beneficial purpose if every large telegraph office would maintain a library, liberal in its endowments as circumstances will permit, of useful telegraph and electrical books to which operators might have free access. Operators who have had admittance to such reading, have not alone been the gainers through a broader electrical knowledge acquired, frequently laying the foundation for promotion in the service, but the acquisition to the individual has brought correlative gain to the employing company in strengthening the intelligent force at its command."

First Message in Years.

At 4.28 o'clock on the afternoon of June 12 the first dots and dashes of the Morse telegraph alphabet exchanged between the towns of Anderson and Navasota, Texas, were sent over the new International and Great Northern line by Dr. F. B. Johnston and received at the Navasota end by Operator W. E. Farmer. It was a message for J. E. Farquhar, relating to meat for the boarding cars.

This is the first message telegraphed between the towns in about thirty-three years. That was so long ago that many of the younger operators have no knowledge that such a line existed; many of the older ones have forgotten it. Nevertheless there did once exist a telegraph line through the country to the eastward of Navasota, and while it never became a profitable commercial venture, it was of considerable importance to military and civil authorities. This line reached Navasota in the year 1862. It was built for the railway company and the Government by D. P. Shepherd. From Navasota it branched through Anderson, Huntsville, Crockett and on to Shreveport, La.

The last message recollected to have gone over the wire was the story of the capture of Napoleon III. at the battle of Sedan, which event closed the disastrous war of that French emperor against Prussia in 1870. The story was going to the "Item" at Huntsville and was repeated out of Navasota by Operator Joseph Osborne. The Anderson office was in the Story Building, now occupied by J. R. McIntyre. Captain P. G. Hatchett was the operator. In those days the old Morse registers were relied upon for receiving despatches. Captain Hatchett had at that time picked up an amazing familiarity with the sound of the instrument, quickly understood the importance of the despatch; put his register in circuit and caught the story.

If any later business went over the line it was of very minor importance. The line had then fallen into disuse.

"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.

William S. Logue Returns to the East.

Mr. William S. Logue, who for several years past has represented the Edison interests at Chicago, as sales agent, and who now returns East to take charge of the New York office at 83 Chambers street, as general sales agent, is a well known old time telegrapher. He was born at Frederick, Md., on June 26, 1847. At an early age he entered the employ of the Northern Central Railway at Baltimore, Md., where, in 1861, he learned telegraphy. During the next two years he held various positions, both on this railroad and on the Baltimore and Ohio, until 1863, when he entered the Military Telegraph Corps. In this department of army service he remained until the close of the war, being located at Newport News, Jamestown Island and at Deep Bottom, Va., otherwise known as Butler's advance



WILLIAM S. LOGUE.

General Sales Agent, Edison Manufacturing Company, New York.

office. Leaving the army, Mr. Logue entered the Baltimore office of the American Telegraph Company. Subsequently, however, he found employment in turn with nearly all of the various commercial telegraph companies of that period until 1886, when, abandoning telegraphy as an occupation, he entered the employ of Thomas A. Edison, himself a former telegrapher, at Orange, N. J. With these interests he has since been actively identified.

Mr. Logue is a man who has a comprehensive grasp of the subject of his business, is possessed of a genial nature and has the capacity not only of making friends, but of holding them as well. As a sales agent he has achieved a distinct success.

F. E. Clary Goes to Richmond, Va.

Mr. Fred E. Clary, who has been appointed superintendent of the Western Union Telegraph Company, with headquarters at Richmond, Va., where he succeeds Mr. J. B. Tree, retired, has had a long and varied experience as a telegrapher,



FRED E. CLARY.

Western Union Superintendent at Richmond, Va.

mainly in the railroad service. He brings to his new duties a mind well stored with telegraph knowledge and a good record for executive ability. Mr. Clary was born at Maquoketa, Iowa, September 9, 1851. His entry into the telegraph service at Davenport, Iowa, where he learned the art, dates from September, 1872. He subsequently served as an operator with the Davenport and St. Paul Railway Company at Wheatland, Iowa, also with the Chicago, Rock Island and Pacific at Stuart, Iowa, leaving this position August, 1873. Later he was an employe of the Union Pacific Railway Co., being stationed variously at Rawlins, Laramie and Cheyenne, Wyoming; afterwards at Sidney and North Platte, Neb., as operator and train despatcher, from which latter position he was appointed superintendent of telegraph of the Colorado Southern and the Fort Worth and Denver City Railway companies, with headquarters at Denver, Col., a position he held for four years, resigning on March 1, last. He was then appointed inspector of the Eastern Division of the Western Union Telegraph Company, with headquarters at New York, a position he has filled with ability, and from which he has now received promotion as above stated.

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.

Subscribe for TELEGRAPH AGE, \$1.50 per year.

Mr. Chenery Goes to the Missouri Pacific Railway.

Edward A. Chenery, who has lately been appointed superintendent of telegraph of the Missouri Pacific Railway Company, with headquarters at St. Louis, Mo., succeeding C. W. Hammond, was born at sea, on the Atlantic Ocean, October 17, 1859. His entry into the railway service dates from 1872, beginning as a telegraph operator with the Grand Rapids and Indiana Railway, in whose interests he afterwards became yardmaster. From January 9, 1879, to June 15, 1886, he was with the Galveston, Harrisburg and San Antonio Railway filling, respectively, the positions of telegraph operator, train despatcher, car accountant and secretary to the general superintendent. For a period of six months, June 20 to December 15, 1886, he was secretary to the general superintendent of the Union Pacific Railroad. During the month following Mr. Chenery was temporarily out of the railroad service, but on January 13, 1887, he accepted the appointment of superintendent of telegraph of the Terminal Railroad Association of St. Louis, and of the St. Louis Merchants' Bridge Terminal Railway, positions retained by him until he resigned to accept his present place, on May 15 last.

As superintendent of telegraph of the vast Missouri Pacific Railway system, a wider opportunity will be afforded Mr. Chenery for the exercise of his conceded executive abilities, developed in the practical school of railroading with which he has so long been identified.



EDWARD A. CHENERY.

Superintendent of Telegraph, Missouri Pacific Railway, St. Louis, Mo.

Mr. Chenery has been secretary of the St. Louis Railway Club since 1899, and in January, this year, was elected secretary of the St. Louis Division of the Central Association of Railroad Officers.

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.

How the Western Floods Affected Denver.

The Denver, Col., Western Union Telegraph office during the recent midcontinent freshets was a lively place. It was found necessary to largely increase the regular staff of operators in order to handle the great volume of business which centered at this point, until at one period 125 men were employed, nearly double the normal number. While Kansas was the principal centre of disturbance, north and south wires were down in every direction, facts which necessitated the temporary use of many odd and round-about circuits.

After the flood had done its worst at Kansas City it was found that only one wire remained intact between that city and Denver, and that one had lodged upon a fence a goodly portion of the way between Kansas City and Ottawa, Kas. The first message handled over this wire was a message from the Mayor of Kansas City, Mo., to the Mayor of Kansas City, Kas. As everything had been swept out clean over the raging Kaw, the only way this message could reach its destination of less than two miles was to be transmitted 600 miles to Denver, 500 miles back to Omaha, thence 300 miles as the crow flies to Kansas City, Kas., where it was delivered in just seven minutes after being filed at Kansas City, Mo.

Other circuits were made up in all directions from Denver. Two were worked continually via Ogden, Utah; Helena, Mont.; St. Paul, Minn., into Chicago. Another went by way of El Paso and Dallas, Tex., and St. Louis, into Chicago. One of the longest was worked via El Paso, Tex., thence to San Antonio, and on to New York.

During the first few days and until outside help could be secured, Assistant Superintendent A. A. Gargan and his stenographer, Miss Stella Daly, were drafted into service in the operating room, and Chief Operator Jenkins grinned as he placed them down at two of the hottest wires in the office.

As to endurance the women proved themselves equal to the men.

Miss Kitty Welsch handled 648 messages on a Rock Island wire, which brought in all the business west, and including Abilene, Kan., between the hours of 8 a. m. and 12 midnight. Mrs. S. C. Hilker had her private letter on over 500 messages, which she handled in one day on the Missouri Pacific wire, between Denver and Wichita, Kan. Miss Carrie Smith rose smiling after sending fifty-two messages per hour for fourteen consecutive hours. Miss Lula Lentz had nearly 500 messages to her credit at one sitting, never complaining of fatigue, simply remarking that "the messages were awfully long." Miss Alice Frazier, Miss Anna Davies and Miss Nellie McChesney served long and tedious hours on some of the fastest wires in the office, while men working the Chicago or New York end of the same wires complained of weariness.

Several of the men in the Denver office have broken world's records in amount of business handled and hours worked. Old Farmer Lawton says he would not be afraid to wager several acres of his big farm that the present Denver force could step into Chicago or New York and handle the

business of either of these two large offices for one week, if the business of the country depended upon it. They tell a pretty good one on the "old farmer."

After putting in fourteen hours a day for two weeks he started home one morning, but had to wait five minutes for a car. Five minutes is lots of rest for a tired man, and the "old farmer" took advantage of it by taking a nap upon one of the benches on Fifteenth street. Fortunately for him, he was awakened by an old-time policeman who knew the "old farmer" was a "temperance advocator," therefore he missed a ride in the patrol wagon and having to explain to a magistrate how he was caught napping on the street.

Mr. Lawton says that his company has had between two and three hundred line and construction men at work in the neighborhood of Topeka and Kansas City ever since the flood, and while they promptly made temporary repairs on all circuits, yet, like the railroads entering those places, it was a week or more before permanent repairs could be completed.

Life in the Cable Service.

(From "The Empire," London, England.)

There is no more attractive career for a young fellow fond of travel and adventure than that offered by the submarine cable service. Well-treated, not over-worked, he can see the world in first-class style, while constantly improving his position. In certain companies his life is insured, and he benefits by a pension scheme.

Like thousands of cablists, I graduated at the Cornish station of the Eastern Telegraph Company, where I was initiated into the mysteries of the recorder, mirror and Morse, the instruments used on all cables. I also acquired the rudiments of electricity, improved my geographical knowledge, and learned the general cable routine.

After three months' probation I was pronounced "fit," and went to London. There I signed an agreement for Egypt at \$600 a year and quarters, and left for Alexandria. I was now a full-fledged cablist, enjoying gratis all the pleasures of a yachting trip. It was a delightful experience, the first of many similar journeys taken in the service of various companies. For I soon left Egypt, and sought fresh woods and quarters new.

During my ten years' service I traveled about sixty thousand miles on a varying salary, worked an average of six hours a day, and visited the principal Mediterranean cities, France, Italy, Egypt, America, Canada, the West Indies, and other countries. As a working tourist I saw many strange sights, queer places, and had some curious adventures. At every fresh change I found a commodious station, snug quarters, with mess-room, library, and every form of sport and amusement provided by the company, and performed the same routine of work. English colleagues greeted me everywhere, for we have made of ocean telegraphy a complete monopoly. Practically, the cables of the world have been made,

laid, worked and repaired by Britishers. Foreign cablists have been tried, and relegated to subordinate positions. They are too dilatory, and lack the needful power of concentration.

I shall never forget an Italian we had in Egypt. He was a shocking operator, and his knowledge of English was peculiar rather than extensive. His distant colleagues all loathed him—for cablists often detest men they have never seen.

"There's that awful 'Macaroni' was the cry immediately he approached the instrument, betraying his incapacity by his touch.

The number of errors he made was appalling, and he was bombarded with reports, fines, etc. He turned "Singapore" into "Shanghai," "Cadiz" into "Cardiff," and made a terrible hash of important cipher despatches. Indeed, "Macaroni" broke all the company's commandments. He also broke the delicate apparatus, delayed the work, and quarrelled with his correspondents. Finally, he was dismissed. One day he made the following entry in the station diary:

"10 A. M. Aden says I am a fool!"

"11 A. M. Aden says I am a hass!"

"12 noon. Aden says I am a silly idiot!!!"

"I quit the instrument, supremely indignant!!!"

Another day he hastily rushed out of the office, leaving this note:

"Off duty on account of the great hot!"

Some men are marvellously expert. In Brest I had as colleague the champion operator of the world. He could read mirror, recorder, or Morse at lightning speed, almost with his eyes shut. During any breakdown or panic on the Stock Exchange he worked wonders. Fixing his eyes on the mirror, with its dancing spot of light by which cablists decipher the messages, he dictated the despatches to a writer with astonishing rapidity and accuracy, constantly giving "G! G! G!"—a sign to "rush" the work. His power of concentration amounted almost to genius. His fame was universal in cable circles. Poor fellow, he is dead now, but has left no equal!

Cablists are restless fellows. They resign from India, South America, Australasia, or China with reckless unconcern, and come home. One man, stricken with this migratory mania, left our station in Brazil, intending to settle down in England. He stopped a month, and then took a berth at a lonely spot in Chili! Two of my colleagues in Ireland, dissatisfied with their lot, took a holiday, skipped across to New York, walked into an American cable office, and got appointments at higher salaries. A smart, reliable operator can command a position in any quarter of the globe.

Of course, there are stations and stations. Santos is one of the most fatal—people die off there of "yellow jack" with frightful rapidity. Sometimes the harbor is full of ships detained for want of a crew. Death-boats patrol the harbor to collect victims during an epidemic.

I had a friend who served on the West Coast of Africa—the white man's graveyard. He said the mortality was so great at some stations that

black operators had to be employed. Men succumbed by scores to fevers, dysentery, and other deadly diseases. Many took to drink to drown their misery—the surest road to the grave.

I had two friends who left Egypt to go to a barren, torrid spot in the Red Sea—the hottest region on earth. The cable station was the only sign of civilization, the population being composed of savages—dirty, thievish, and treacherous yahoos. Malarial fevers kept one or the other on a sick bed. When one was patient the other acted as nurse. And so they alternated, until sent to a healthier station to recruit. Such pestilential stations are, happily, somewhat rare.

But there are many agreeable stations, like Marseilles, Brest, Lisbon, Havre and Alexandria, where all the gaieties of a Continental city can be enjoyed. But even these have their special dangers, for young fellows often plunge into dissipation and debt. Then they disappear, and finally find themselves stranded in some desolate region, where they sorrowfully meditate on their past follies.

Some fine fellows have "gone under" in this way. One man whom I knew in New York, enjoying \$5,000 a year, was reduced by a series of imprudences to absolute beggary. I afterwards met him in London selling rubber stamps.

Press messages vary in length from 10 to 15,000 words, and are sometimes written in jaw-breaking German. I have handled some of all sorts, including many comical specimens like this, which emanated from a facetious Yankee:

"Victoria left for the Continent to-day. She took with her forty-seven travelling trunks, one bed, two mattresses, one donkey, one Princess, one nigger attendant, one Scotch Highlander, six white servants of divers sexes, one Cabinet Minister, three boxes despatches and books, four dogs, two cats, and one chaplin!"

I have seen the cable used for various curious purposes. English and Canadian astronomers have compared notes across the Atlantic. Chess tournaments are conducted by cable. Messrs. James Gordon Bennett and Joseph Pulitzer edit their newspapers by this medium. Whether in Paris, Monte Carlo, or cruising in the summer seas, the "string" keeps them in constant touch with America. Their cable bills for one year would endow a big hospital. When in Canada, I handled entire leading articles on burning subjects which they considered imperative to treat themselves. Many lovers' quarrels have been conducted through these immense sea-serpents.

Cables are exposed to all sorts of dangers. While I was in Paris with our managing director he received a service message announcing that our two cables had been broken down, simultaneously with two others belonging to another company. This extraordinary accident had been caused by a violent submarine eruption near the great Banks of Newfoundland. Whales get entangled with them. Once a schooner settled down on one and broke it. Fishermen bent on a "catch" will drag for a cable, hook it, and then claim com-

pensation for not having cut it! On one occasion an Atlantic cable was wilfully cut.

Repairing is a very costly business. A special ship costs \$300,000, and often absorbs \$2,500 a month to maintain her ready for sea at a moment's notice. When a cable breaks she makes for the spot indicated by the tests, and picks up the broken ends by raking the bottom of the ocean with an enormous grapnel. These expeditions are not always successful.

I remember one case where the ship dragged for several weeks in stormy, foggy weather, losing thousands of fathoms of ropes, chains, etc. But they did not hook the cable. Having exhausted all gear, and got short of provisions, they were obliged to return to port. A bigger ship effected the repair. That expedition cost the company about \$25,000, and the captain his berth.

Wonderful zeal and energy are displayed in cable operations. Everybody works night and day with cheerful alacrity, braving all dangers and discomforts. During one expedition I was astonished to see the captain in charge, while the shore end was being laid, wading up to his waist in the surf, directing and encouraging his men. We were in the West Indies, where sharks abound. Later on, while the ship was hove to, surrounded by these ugly monsters, the cable fouled the propeller. After warning the engineers below not to start the engines, he took a header into the sea, and, holding on to the blade of the propeller, succeeded in freeing the cable, to the great relief of everybody on the ship, who were watching him with breathless interest. Then he scrambled into a boatswain's chair and was hauled on board. This plucky spirit pervades the entire service, and has enabled cablists to overcome difficulties that would have appeared insurmountable to mere landmen.

Government-owned Telegraph Lines.

It is often urged in support of the Government ownership of the telegraph lines, says the New York Commercial, that the public is more generally and better served under such a system because the question of profits is not such an important factor as it is under private ownership and operation. In England, for instance, where the Government owns and operates the telegraph, the boast is frequently made that the lines go to every town and village, no matter how small and no matter whether the cost of maintenance warrants it or not, the idea of the Government being that the people are everywhere entitled to the service, just as they are to mail facilities, regardless of the cost. In British criticism of the American system, it is often represented that only points that pay profits are served by the telegraph companies here—and that has come to be quite generally regarded as the fact. Both notions are far from the truth.

In one of his official reports on the telegraph service the British Postmaster-General says: "The department has ceased to require the repay-

ment of the capital outlay for telegraph extensions made under guarantee, and the guarantee is now required to cover only the expense of working and maintenance. By act of Parliament the rural sanitary authorities are empowered to undertake guarantees for telegraph offices at places within their districts and to defray the cost out of the rates. As the result of this concession there has been a considerable extension of the telegraph system in the rural districts." It will thus be seen that the British Government requires a guarantee of the cost of working and maintenance before it extends the telegraph lines to any point where the prospective revenues are a matter of doubt. In this country the telegraph lines of necessity reach every railroad point and are there maintained by the companies regardless of the revenue; and they will be extended to any point remote from the railroads where a guarantee of the expense of operation is given. The two systems appear, in this particular, to be operated under practically the same policies.

A marked disadvantage in Government ownership is found in the matter of responsibility to the patrons of the telegraph lines. The Government having a monopoly of the business, there is no competition, and no redress whatever for delays in transmission or for errors; the actual tolls paid by the senders will be returned in such cases—but that is all. Here in the United States the courts are always open for redress to any patron who suffers by the acts or the negligence of a telegraph company.

As once pointed out by a telegraph official, the Governments in Europe, having direct control of the telegraphs, exercise over the contents of all messages transmitted an espionage which would not be tolerated by the people of the United States.

Here, the employes of the competing telegraph companies are, in the main, persons who have been in the business all their lives, the tenure of their positions depending upon their efficiency. But, if the telegraph business were controlled by the Government, political loyalty to the party in power would be more apt to be regarded as the gauge of qualification than ability to perform the duties of the position. And in the United States it is a crime under the law for employes of telegraph companies to divulge or make any improper use of the contents of telegraph messages.

Still, we hear stump orators and newspapers proclaiming that the Government should conduct all such utilities "in the interest of the whole people." Let the experiment once be made, and the "whole people" would be up in arms against the system within a twelve-month.

Everybody in the telegraph service is reading "Pocket Edition of Diagrams," etc. It is endorsed by experts, and no telegrapher who would gain a thorough knowledge of his business, told and illustrated in a manner clear to every reader, should fail to procure a copy. See advertisement.

E. C. Sweeney Superintendent of the French Cable Company at New York.

Edward Charles Sweeney, whose appointment as superintendent of the New York office of the French Telegraphic Cable Company was announced in the



EDWARD C. SWEENEY.

Superintendent of the French Cable Company, New York.

last issue of TELEGRAPH AGE, is an accomplished cable operator. Mr. Sweeney was born in Liverpool, England, on April 13, 1857, and began his telegraphic career in 1889 in that country in the service of the Electric and International Telegraph Company. Afterwards he served in the London and North Western Railway Company, the British Post Office and the Direct United States Cable Company, being with the latter both in England and at Torbay, Nova Scotia. When the French Cable Company commenced business in 1879, Mr. Sweeney was the first cable operator engaged and he has since continuously remained in that employ. For twenty years of this period he was stationed at St. Pierre, Miquelon, as clerk-in-charge, and has filled a similar position in New York during the past three years from which he lately passed to his present post. Mr. Sweeney is well known in telegraph circles, is a fine scholar, speaks French fluently, and is one of the few remaining experts in the Lord Kelvin mirror system of working ocean cables.

Government Pay for Stenographers and Telegraphers.

The United States Civil Service Commission will hold an examination on July 29 for the position of stenographer, typewriter and telegrapher, the position being open to men only. Applicants must be twenty years old or over and must state fully what experience they have had as telegraph operators. They will also be examined in stenography, arithmetic, penmanship, tabulating, copying and spacing and in dictation. From the list of eligibles certification will be made to a position in the navy yard at Pensacola, Fla.

The Western Union Manager at Saginaw, Mich.

Frank P. Duckett, who has lately become manager of the Western Union Telegraph Company at Saginaw, Mich., although still a young man, having been born on August 22, 1875, at Indianapolis, Ind., has had, nevertheless, considerable experience in his profession. His telegraphic career as an operator began with the Pennsylvania Railroad Company at Cincinnati, O., in August, 1893. In September, 1897, he went with the Northern Pacific Railway Company in North Dakota, returning, however, in the following spring to his former employment. Here he remained until February, 1899, when abandoning the railroad for the commercial service, he accepted the appointment of manager of the Postal Telegraph-Cable Company at Coshocton, O., afterwards becoming manager of a Postal branch office on Fourth street, Cincinnati. This position he retained for two years, until August, 1902, when he resigned to take the managership of the Western Union office at Cambridge, Mass. From this point he was transferred on September 19, 1902, to Fall River, Mass., from which, in February, 1903, he felt obliged to resign to return to the West on account of sickness in his fam-



FRANK P. DUCKETT.

Lately Appointed Manager of the Western Union Telegraph Company, Saginaw, Mich.

ily. On April 1, however, he was offered the management of the Western Union office at Mansfield, O., only to remain there a few weeks, when he was transferred to Saginaw, Mich., a post he took charge of on May 16, last.

Those who contemplate subscribing for TELEGRAPH AGE, and who would first like to inspect a sample copy, should not fail to write for the next issue.

The Tale of a Sounder.

"No greater grief than to remember days
"Of joy, when misery is at hand."

While all the rest of the inhabitants of Salem, Va., were rejoicing, a few days since, and trying to make everybody else happy during the semi-centennial celebration and annual commencement exercises of that historic seat of learning, Roanoke College, says the Roanoke, Va., Times, Mr. William Smeed Oakey, the veteran manager of the Western Union Telegraph Company's office in the City of Peace, was sad. Mr. Oakey was lamenting the loss of a friend. He was grieving because that which had been his daily companion for two score years had been stricken down in the twinkling of an eye. That little friend which ever since 1863 had never failed to respond to the touch of Mr. Oakey's hand was nothing more than a telegraph sounder, such as is used in every telegraph office throughout the land. The little sounder had done service on many a battlefield, being, like its master, a veteran of the Civil War. The gloom which had settled over the little telegraph office at Salem was all brought about by a rude stroke of lightning which found its way into the very bowels of the little sounder on Sunday afternoon and destroyed the coils which had weathered so many storms before.

All the afternoon, and late into the evening, Mr. Oakey worked with his faithful old sounder, now laid low by a flash from no one knows where, trying every conceivable way to induct it to answer the Morse characters made on the key, but its mechanism was wrecked. The bolt had done its work quickly and effectively. In desperation the grizzled telegrapher was compelled to ask the officials to send him a new sounder to take the place of the silent little machine which must now be sent to the factory and have new coils wound upon its base. Even this will be consented to by Mr. Oakey with great reluctance, for while he wishes the little thing to have attention in the hospital, he hates to part with it even for a brief period.

Mr. Oakey was a telegrapher operator during the war between the States, and it was over this sounder that he received many secret messages telling of the movements of armies. He grew fond of the sounder during those days, and when Lee surrendered at Appomattox stored it away in his knapsack and carried it back to Salem, where it was installed in service on the main wire working through that town, and there it has been in constant use ever since until Sunday.

The little instrument stood the shot and shell of Grant's army, but when the fatal ball of fire thundered down from the Commander-in-Chief of all the armies and rolled into the confines of the little office the ink-stained and tarnished messenger was paralyzed. The old sounder has brought messages of gladness into many homes, and tidings of sadness into others. It has told of marriages, deaths, births, sickness, fortunes and misfortunes—always doing its master's bidding

without a murmur, save that caused by the grindings of the electric current. Few people are there in the little town of Salem who have not, at some time or other, received some message or caused to be transmitted some word through this little pile of brass, copper and wood.

The following figures, based upon averages not considered excessive, will show what duty this part of the Salem telegraph office has performed during the past four decades. The ordinary speed of Morse telegraphing is thirty words per minute, or 1,800 words per hour. It is estimated this sounder has been "cut in"—that is, connected with the main line—twelve hours each day. This would mean 21,600 words per day. During a year the total number of words clicked off would be 7,884,000, and in the forty years' service the little sounder has rung off 315,360,000 words. Counting five letters to the word, the total number of letters made since 1863 would reach 1,576,800,000. The sounder had to click an average of five times for each letter, or during the forty years the ticks emanating from Mr. Oakey's little friend have reached a total of 7,884,000,000. To feed this sounder, or to keep it in working order, has required 800 pounds of blue-stone, 500 pounds of zinc, 200 pounds of copper and 800 gallons of water. Allowing Mr. Oakey twenty messages a day—sending ten and receiving a like number, a small average, to be sure—he has handled 292,000 telegrams through the aid of the little sounder. These telegrams have perhaps netted the telegraph company 40 cents each, or a total of \$116,800—quite a snug little fortune.

Politeness.

Far too many fail to realize the immense importance of politeness as a business asset, says the Express Gazette. A man may be incorruptibly just, thoroughly honest, self-sacrificing, and public-spirited, and render these sterling qualities worth nothing in the eyes of others if he is rude or brusque in his intercourse with his fellows. Politeness is a concrete quality which addresses itself to a man's reason through his feelings, and it does not require an extensive study of human nature to learn that feeling leads reason nine times out of ten.

Organization.

A convention of the Order of the Commercial Telegraphers' Union of America will take place in New York City on July 19, when it is expected that some sixty local divisions covering as many sections of the country will be represented. The Executive Council of the Order is made up as follows: I. J. McDonald, Chicago; Percy Thomas, New York; M. J. Reidy, Boston; Wilbur Eastlake, New York; A. G. Douglas, Milwaukee; W. F. Craig, Jr., Pittsburg. Mr. Eastlake, of New York, is the grand secretary-treasurer.

TELEGRAPH AGE should go regularly to every one interested in the telegraph. Write for a sample copy.

Charles Miller Sheaffer, Superintendent of Telegraph, Promoted.

Charles Miller Sheaffer, who was superintendent of telegraph of the Pennsylvania Railroad Company up to June 1, last, was on that date promoted to be superintendent of passenger transportation. It may truthfully be said that Mr. Sheaffer is a product of the Pennsylvania road, the only concern he has ever served, and in whose employ he entered as a messenger in the telegraph department in his native city, on April 1, 1877. He was born on March 4, 1858, and is consequently now in his forty-sixth year. Learning telegraphy, he became an operator, and by natural sequence passed on to the respective positions of yard master, train despatcher, division operator, superintendent of telegraph and to the post he



CHARLES M. SHEAFFER.

Superintendent of Passenger Transportation, Pennsylvania Railroad Company.

now occupies. His upward rise has been steady and is due to the sterling qualities of the man, who proved his worth at each stage by becoming not only familiar with, but a master of, its duties. His record for ability and willingness to perform hard work and to accept responsibility has not been lost upon his official superiors, in a system where merit is always recognized and given promotion, even though it be necessary to transfer services from one to another department where a further advancement may follow. The high esteem in which he is generally held is a pleasant reflex of personal characteristics.

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

Andrew Keiser, Superintendent of Telegraph of the Pennsylvania Railroad Company.

Andrew Keiser, who has been made superintendent of telegraph of the Pennsylvania Railroad Company, Philadelphia, succeeding to that office Charles M. Sheaffer, promoted, is a native of Pennsylvania, having been born at Mount Joy, that State, on August 24, 1861. His entire business career has been passed in the service of the Pennsylvania Railroad, in whose employ he entered as a messenger in the telegraph department at Pittsburg on October 1, 1878, and at which point he has since been almost continuously located. On June 9, 1879, he became an operator on the Pittsburg division of the road, remaining as such until June 1, 1884, when he was promoted to be yard master and train despatcher of the Southwest Pennsylvania Railroad, Pittsburg division. His next position was that of train des-



ANDREW KEISER.

Superintendent of Telegraph, Pennsylvania Railroad Company.

patcher on the Pittsburg and Altoona divisions, at Altoona, held until May 20, 1888, when he was made train despatcher of the Pittsburg division, going back to Pittsburg. Promotion advanced him to the post of chief train despatcher of the same division. On January 1, 1900, he became assistant freight train master; on July 1, 1901, division operator; on July 10, 1902, passenger train master, and on June 1, 1903, receiving his appointment as superintendent of telegraph.

The copper wire which has been cut down along the Pennsylvania Railroad lines and belonging to the Western Union Telegraph Company will not be used. It will be sold and made into new wire, but none will be used which has been on the poles. The reason is that the wire, when it is gathered up, is full of "kinks."

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.]

MEMPHIS, TENN., WESTERN UNION.

Edward E. Cord, chief operator, and Miss Estelle V. Tefft, of Nortonville, Ky., were married here May 17.

Mrs. Cord is a charming and accomplished member of a prominent old Kentucky family and only recently came here to visit relatives. The wedding was a very quiet affair and came as quite a surprise to the many friends of the contracting parties, a host of whom did not learn of the nuptials until the return of Mr. and Mrs. Cord, two weeks later, from their wedding trip. The couple were presented with a handsome silver service by the members of the operating and clerical force.

Traffic Chief Victor Crooker, who was ill for a week has wholly recovered and resumed his duties.

Philip Byrnes, assistant night chief operator, who recently recovered from a severe illness, covering a period of two months, has gone to French Lick, Ind., to recuperate his health. His duties are being looked after by George Bishoff, who is relieved as repeater "rider" by R. E. Lee Griffey.

Miss Daisy Russell has returned from a trip to Oxford, Miss.

Samuel E. Sheets, T. J. Richmond and Wire Chief Vestal are being congratulated upon recent additions to their families.

Mr. J. B. Stevens has been assigned as way-room chief.

Recent additions to the operating force are as follows: G. N. Arnold, Charles C. Cord and C. M. Laurendine, from New Orleans; J. Harvey Carson and W. C. Lee, from Chattanooga, Tenn.; R. V. Harris, Huntsville, Ala.; L. J. Herr, Nashville, Tenn.; G. L. Jarnagan and W. H. Bearden, from Illinois Central Railroad, Memphis, Tenn.; T. C. Lemmond, South Carolina; R. A. Scott, Little Rock, Ark.; W. B. Scott, Corinth, Miss.; E. E.

Wayman, Shreveport, La., and B. B. Westcott, Birmingham, Ala. Misses Annie and Nettie Hester have been added to the check force.

Miss Cora Lecoq, our popular service clerk, has returned from an outing at Raleigh Springs, Tenn.

CHICAGO, ILL., WESTERN UNION.

Division Chief A. J. McGrath is at present assisting Loop Chief Gosling on the St. Louis and Kansas City leases during the rush of business occasioned by floods at Kansas City and Topeka. He is relieved in the race department by E. Wells, and in the southern division by Thomas Quinlan.

Messrs. McCrudden, Lee, Jason, Stocks, Schwinger and Kramer were detailed to St. Joseph, Mo., to help out the rush of business incident to the floods at Kansas City and Topeka.

Messrs. Dorr and Norville were detailed to Cairo, Ill., during the flood, where much extra business awaited them.

J. F. Brown, formerly a train despatcher for the Rock Island road at Rock Island, Ill., is with us to try his hand at commercial telegraphing. Mr. Brown is working part trick in the race department and seems to be adapted to any branch.

A few days ago the members of the Signal Corps of this office went to Aurora, Ill., for the purpose of electing a new lieutenant. A. H. McNeal was chosen. The selection was a wise one as Mr. McNeal is a quiet, orderly and military-like gentleman, well adapted to the position.

Sunday, June 24, the Signal Corps went to Knox, Ind., to play a game of baseball with the Knox team. It was a hotly contested game, but the odds were slightly against the Signal boys, and the Knox men were victorious. Considering the fact that the Knox team is a professional one and is playing continually, much credit attaches to our boys, and they hope to try conclusions with the Knox team again.

A daughter has been born to E. F. Cranley, assistant loop chief.

W. J. Kniffin leaves shortly to become Western Union manager at Escanaba, Mich. Mr. Kniffin is thoroughly conversant with this line of work and has done some soliciting for the Chicago office; no doubt the receipts will increase at Escanaba under his management.

W. J. Miller, who has been very sick for some weeks, is still in a precarious condition.

Miss Clara Kernan, of this office, has resigned to go to Buffalo, N. Y.

W. H. Horrell, of the city lines, died on June 10. He had been ailing for some months and last year took a trip to Denver, Col., where he improved, but on returning to Chicago his health gradually declined. Mr. Horrell had been employed for a number of years by this company, and had served in the capacity of branch office manager previous to coming to Chicago. He will be greatly missed by his many friends and warm sympathy is extended to his widow.

Charles Willoughby has returned to Chicago from Des Moines, Ia., where he has been acting as chief operator and wire chief. He has been as-

signed to the position of wire chief, at West board

L. E. Baxter has again returned to us after a few months' absence, and his stately form of six feet and four inches are noticeable. In fact, he is distinguished for his manly bearing and genial manner. Mr. Baxter is an ardent and faithful believer in TELEGRAPH AGE and with marked punctuality sends in his subscription.

HAVANA, CUBA, NOTES.

Recent changes in the staff of the International Ocean Telegraph Company are as follows: Arrivals: C. H. Owen, of the Western Union, Augusta, Ga., and C. H. Birkner, of the same interests, at Miami, Fla. Departures: E. Frazer and J. J. Dugan for New York.

SHREVEPORT, LA., WESTERN UNION.

Just before Theodore P. Cook was appointed general superintendent he did us the great favor of moving us from a little cramped up, dark and musty office to large, well ventilated quarters just a block lower down the street, where both winter and summer we are comfortably located. We shall ever remember him for his thoughtful action. When Mr. Cook was promoted Shreveport rejoiced for it was a just recognition of the faithful service of a good man. We love him and miss his visits.

In our office we have twenty-four single circuits, three quadded circuits with three sets of repeaters, two half sets and two thousand cells of battery. J. T. Patton is manager and has been here for the past eighteen years. He is ably assisted days by J. C. Berry as chief operator, E. G. Theus and C. W. Allison on New Orleans local, and J. A. McCoy, Dallas and ways. C. S. Woods is in charge at night. Mrs. J. H. Hutchinson looks after the delivery with eight messenger boys, who are mounted on bicycles and broncos, and who give very good service. Miss Carrie Patton is in charge of the two counters—public and Board of Trade. C. E. Parker is the line man and Dennis Gladney looks after the batteries. Miss Bessie Patton is manager at the Phoenix Hotel branch office and gets the business in her neighborhood. A. B. Avery is in charge of the Union depot branch office.

We have two turf exchanges and this, coupled with our baseball business, keeps our receipts well up. John Harwell and E. Stannard are operators for the brokers; Hugo M. Asher and Mr. Gibson for the turf exchanges.

We receive detail scores and send same of all games played by the home team. R. W. Macdonald is the faithful servant of The Associated Press.

SHREVEPORT, LA., POSTAL.

W. J. Johnston is the manager of this office and is assisted days by Mr. Wilkinson, Mrs. Johnston and Miss Gertie Dillenberger. Simeon Bodenheim has charge nights. Mr. Johnston has a nice office. The boys of this and of the Western Union offices are in the regulation uniform, "the blue and the gray," and like the old "Feds." and "Confeds." sometimes "mix up." but the heads of the

departments keep cool and work in harmony. The offices are right together and people take their choice; if they don't get suited at the one they try the other. Both offices long since discarded the pen, and the typewriter has full sway. All the operators own their machines and we are keeping up with the procession.

MONTREAL, QUE., GREAT NORTHWEST-ERN.

Resigned.—George Falle, L. E. Sellen, T. M. Wilson, Mr. Bordua, Mr. Lachevrotiere and Master Bogue.

Arrivals.—Miss Berthelot, Mr. McCormack, Misses M. D. Peeples and K. M. Peebles, F. Cochran and C. Byrd.

Extra.—Albert Ross and Oliver Young.

Business is very heavy this season and the men are making all the extra they want.

CINCINNATI, O., POSTAL.

General Superintendent E. J. Nally, of Chicago; Superintendent E. W. Collins, of Cleveland, and Superintendent W. J. Slater, of Louisville, were recent visitors.

Fred Gruelich, of this office, was sent to Columbus to help out during the recent Republican convention.

S. C. Sprong, ex-night chief, has charge of a branch office, vice J. S. Roberts, who has left for Chicago to accept a position there with a broker.

Carlyle Emerson Cox, formerly of Big Bone Springs, Ky., and Frank G. Diehly, formerly manager of the Western Union at Fairmount, W. Va., are the latest additions to the main office force.

Charles Shank, who worked our Chicago wire, left lately to accept a night position with this company at Dayton.

PHILADELPHIA, PA.

Boys, if you want to own the "smoothest mill" for message, newspaper or railroad work, communicate with me regarding the Number Six Fay-Sholes typewriter. Write or wire for booklet and easy monthly payment plan. PLEASE REMEMBER it does not cost \$105.00. Remington's and Smith's fitted with reversible rolls forty and forty-five dollars, easy monthly plan. All makes rented three dollars monthly. D. A. Mahoney, Western Union Telegraph Company, Philadelphia.

POSTAL.

The early morning rush still continues and more additions to the force have been necessary. The latest acquisitions are Mr. H. Woerner, assigned to the 6 A. M. trick, and P. J. Nihen to the 6.30 trick. With the wane of the berry season the potatoes are becoming an important factor, and together with the peach crop, will continue to hold sway until the sweet potato crop winds up the season.

At his own request Mr. Geo. F. McIntyre was recently relieved at the 3rd and Chestnut streets branch office and transferred to the main office. Mr. O. C. Balmer, formerly with the Western Union at Lancaster, Pa., succeeds Mr. McIntyre.

Early Traffic Chief Jay A. Thomas, with his

wife and child, spent a few days visiting the home of his parents at Pittston, Pa.

After an absence of over nine months Mr. Joseph Hockery returns from an extended trip through the South and West and resumes work in our midst.

Taking advantage of the short, dull season between the Easter and summer rush, Mr. Geo. W. Phillips, manager at Atlantic City, N. J., embraced the opportunity to pay a visit to relatives at Laurel, Del., stopping to see us while en route.

INDIANAPOLIS, IND., WESTERN UNION.

D. R. Davies, superintendent of construction; L. H. McKissick, general electrician, and V. T. Kissinger, assistant, were among recent visitors.

Henry Katzenberger, chief check boy, has been promoted to be an operator, and he has every promise of making a good one. John Mullen succeeds him as chief check.

W. C. Rogge was married recently.

Resignations: Fred Kurz, assistant traffic chief, to accept a position with Thompson and Company, brokers; David Connors, to accept a position with the Scripps-McRae Press Association, on the Indianapolis "Sentinel"; Jeremiah Hogan, to accept a position with the "Morning Star," a new morning paper for Indianapolis.

William Fogarty, an operator on the Indianapolis "Sun," has announced his candidacy for the nomination of city clerk. Mr. Fogarty was a candidate for representative of Marion County at the last State election. His popularity was then shown when he headed the ticket.

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.

Typewriter's for rent, and sold on easy terms. Out of town operator's are requested to write for my new illustrated circular and "Cut prices."

Amos L. Bougher,

Western Union Telegraph Company,
195 Broadway, New York.

WESTERN UNION.

The removal of the supply department from the fourth floor of this building to the commodious quarters at 152-154 Franklin street, transposes an important division which has for a long time been urgently in need of more storage room, and increased office space in which to transact its large business. The transfer was effected during the absence, due to illness, of Mr. Edward C. Cockey, the superintendent of supplies, and was accomplished under the direction of Mr. Horace E. Roberts, the assistant superintendent, who aided also in the planning and arranging of the present offices. The new building which is seven stories in height with a brick and iron front, is 50x80 feet in size. On the street floor of No. 152 there is a branch telegraph office, from which an

elevator and staircase lead to the floors above. In the second story Mr. Cockey's private room, a large, airy, well-lighted apartment, is located at the front, while the clerical office occupies the remainder of the entire floor, and is a model of convenient arrangement for the despatch of business. The third and a portion of the fourth lofts are devoted to the storage of supplies, a part of the space of the latter being given over to the Gold and Stock Telegraph Company as a machine repair shop. The fifth floor is used as the supply department for the American District Telegraph Company. The two top stories will also be used in conjunction with the other supply rooms.

To enter Mr. Cockey's office leaves no doubt on the mind of the visitor, even though its genial chief be absent, as to who the rightful occupant of the room may be. Aside from the comfortable furnishings, including a handsome new carpet, which Mr. Cockey appears to regard with a feeling of pride, akin almost to reverence, all of which mark a well appointed room, the characteristics which distinguished the superintendent's former quarters at "195," are also strikingly apparent in the new. The same mottoes hanging on the walls, including some Bible quotations, pat in their adaptation to the brusque ideas of modern business methods, meet the view as in the old office, and they lend a familiar look and impart an accustomed atmosphere to the room. Yet it is not difficult to surmise that they might cause the timid visitor to pause in some trepidation as he crossed the threshold and first caught sight of their rather startling and ominous inscriptions. Mr. Cockey derives a quiet enjoyment from the perplexed look of enquiry that sometimes crosses the face of a caller when he first reads, for instance, the framed legend: "This is Room 73"; and, "Always glad to see you, but be brief": "Be not rash with thy mouth"; "Things come to those who hustle while they wait"; "Shut your mouth and save your life"; "It is better not so much to know, than to know so much that isn't so"; "Wisdom is the principal thing, therefore get wisdom, and with all thy getting, get understanding."

Near to Mr. Cockey's desk hangs the photograph of a young Catholic priest, now established over a struggling mission church in Texas. It is the picture of Rev. Francis J. Tobin who for seven years was a clerk in Mr. Cockey's office, and who declares that the training he received there fitted him in great measure for the sacred office he now fills. It is needless to say that Mr. Cockey regards the young man with affection. On the wall at the far end of the room there is a picture done in crayon of Prof. Morse, one of the best likenesses of the great inventor ever produced. It was executed by an artist now unknown, and was a gift to Mr. Cockey from the Telegraphers' Club. Immediately under this picture is another showing in a group the manager and wire chiefs of the New York office in 1889. Another feature of the room is a hod such as laborers carry mortar in. It is cherished as a memento of an Irish dinner given by Knight Templars which Mr. Cockey

attended years ago. The waiters marched into the dining hall each with a hod filled with potatoes, with their jackets on, which were dumped unceremoniously in piles in the centre of each table, so that the diners might help themselves.

Mr. Cockey and his office are well worth a visit, yet don't forget ye unwary one, that the veteran head of the supply department of the Western Union Telegraph Company, is strictly a man of business.

T. C. Dempsey, for several years an operator with the Great North Western Telegraph Company, is now agent of the Wells Fargo Express Company, at No. 1383 Broadway.

Senator William L. Ives went to Troy, N. Y., on June 18 to attend the funeral of his aunt, and paid a visit to the Western Union offices at Troy and Albany.

Charles J. Kilfoyle has been selected to act as emergency traffic chief on the Eastern division.

Abraham Levisohn was married to Miss Anna, the daughter of S. Sklar at Majestic Hall, Harlem, on June 21. Mr. Levinsohn works the Providence wire in this office and is one of the most skilful operators. Hearty congratulations are extended to the happy couple.

George Roehm gave a tin wedding dinner to his many friends at the "Arena," 31st street and Broadway, on the evening of June 20. The gifts were unique as well as eminently useful. The guests numbered about twenty.

Matthew Redmond, a Stock Exchange quotation operator, has, on account of illness, been forced to take a rest at his home in Pennsylvania, and will be absent three weeks.

Mr. William J. Finn, from Ogden, Utah, is a late acquisition to the Central Cable office force. Mr. Finn is the son of William Finn, the well known electrical and cable expert.

Mr. George Erbeling, secretary to Mr. Edwin Gould and also secretary of the St. Louis and Southwestern Railway Co., is receiving the hearty congratulations of his many friends on the birth of a daughter, which occurred June 15.

Mr. W. A. Schudt, a bright young operator at the Produce Exchange branch, was married on June 24 to Miss Mamie Curry, of Brooklyn. Their wedding trip is taking them to Buffalo, Niagara Falls and Montreal.

Mr. W. H. Jackson, southern wire chief, has been promoted to be assistant chief operator, and will have charge of clerk's department, the automatic systems, city lines, the Long Island circuits and a portion of the lines in New Jersey. All these departments are located on the 7th floor.

"A carpenter is known by his chips," and a wire runner by his ends. Among the Western contingent that arrived five months ago was C. F. Mauntler. He has proved himself to be a jack of all trades and a master wire runner. Under his guidance the intricate work of moving the quadruplex department and the repeaters, single, double-loop and half Milliken, from the 7th to the 8th floors was accomplished in a highly creditable manner. To those who are familiar with the

wiring of a quadruplex set, the amount of skill and energy requisite to the transfer of fifty sets and as many repeaters will be apparent. Mr. Mauntler is now engaged in renovating the old city line switchboard preparatory to running the Western way wires thereto, and will re-wire all the desks in the department lately occupied by the city department for the Western way circuits. He is ably assisted by George Worzel, Jr., who probably inherits his adaptability to the work from his father.

Mr. Joseph O. Hunter, formerly of Raleigh, N. C., is now employed in this office.

Mr. Frank Kitton, assistant electrical engineer of the company, now occupies a desk in the office of the assistant general manager on the sixth floor.

Mr. M. J. Kenna who represents the company at the various race tracks throughout the country, was in the city a few days since en route to his home in New Hampshire, where he will spend his vacation.

Joseph W. Porter, son of J. W. Porter, manager at Owensboro, Ky., is working for the company in New York. Young Porter was an operator in Cuba during the war, and has worked in Chicago and New Orleans since.

Mr. William Harrison Barse, the assistant manager of the Hotel Waldorf-Astoria, New York, is an ex-telegrapher. He was formerly employed by the Canadian Pacific Telegraph Company, at Richford, Vt.

Amos L. Bougher, of the night force, has been appointed special deputy for the order of the "Woodmen of the World" and will solicit members and organize and instruct camps.

Mr. P. J. Casey, manager of the Twenty-third street and Fifth avenue office has assumed the management of the West End, Long Branch, N. J., office for the Summer. This is Mr. Casey's twenty-first year as manager at this famous resort, but his connection with the office, first as an operator, dates back thirty-four years.

Mr. Martin Durivan, a traffic chief in this office, will act as chief operator in the Long Branch office during the season, as has been his custom for many years past.

NEW YORK, POSTAL.

Mr. J. T. Ewing has been appointed assistant city chief, days.

The following transfers have been made: W. C. Morris, from the leased wire board to be Southern traffic chief; J. B. Rex, from the Western traffic to be Eastern wire chief, nights; O. J. Nourse, from assistant city chief to be Western traffic chief. Mr. J. B. Rolson has been assigned to the leased wire board.

Mr. H. C. Bunting has resigned as Eastern night chief to accept the position of manager of the Ashfort, Arizona, Postal repeating station. He started for his new post on June 26.

J. H. Twyford, for a long time Southern traffic chief, resigned to accept the position of chief operator for the Postal at Atlanta, Ga. His many

friends wish him success in his new place. He left for Atlanta June 25.

Mr. J. G. Pierce has resigned to take a position in another line of business.

Mr. R. E. Fagan, for many years identified with the Western Union lunch room at No. 195 Broadway, has for some months past been connected with the messenger department of this company, assisting Mr. A. E. Chandler.

THE ASSOCIATED PRESS.

Mr. G. R. Allen, night chief operator, has been promoted to the day managership, vice Mr. H. R. Clark, who has accepted a position with the Yetman Transmitter.

Mr. G. W. C. Spaid, formerly of the Washington, D. C., bureau, but for some months past of the Chicago, Ill., office, has been appointed night chief operator of the New York bureau, vice G. R. Allen promoted to day service.

The Magnetic Club Outing.

The summer meeting of the Magnetic Club, of New York, occurred on the afternoon and evening of June 23, at Cove Hotel, Livingston, Staten Island. Despite the weather, which was a continuation of that of the previous three weeks of rain, with an especial emphasis of wet for the occasion, thus necessitating the omission of that part of the program covering outdoor sports, yet fully seventy-five members and their friends who were present had a most enjoyable time indulging in indoor games and other forms of amusement.

The Western Union Telegraph Company's cable steamer, which was placed at the disposal of the club, made three trips to the Island to convey those who desired to attend the outing.

The storm which raged without could not mar the enjoyment of the dinner within doors, to which the company were summoned at half-past six o'clock. An excellent menu was gone through with, and after coffee had been served a very interesting program of entertainment was carried out. Those who furnished the song and story and other forms of amusement for the assembled company, some of whom were members, met with generous applause, for their efforts, which were of a high order, were fully appreciated, and contributed largely to the success of the meeting. The engagement of the professional talent present was creditably due to Mr. T. A. Brooks, chairman of the Entertainment Committee.

President F. W. Jones extended a hearty welcome to all members and friends, and stated that, notwithstanding the unusually inclement weather, the attendance was far beyond his expectations. He also added that the prizes intended for the winners of the outdoor sporting contests, necessarily abandoned on account of the storm, would be distributed by being drawn for among those at the banquet tables.

Letters of regret were read from many absent members of the club, including Mr. Edward C. Cockey, a former president of the club, and from Mr. F. M. Ferrin, of Boston, and Thos. F. Clark,

vice-president of the Western Union Telegraph Company.

Former president, W. H. Baker, who had assumed the chair temporarily, announced the numbers on the program of entertainment, Mr. Charles Jacobson, the head of the circular department of the American District Telegraph Company, starting the same with a few well-told funny stories.

President Jones, again presiding, called for remarks from Messrs. Belvidere Brooks, J. C. Barclay, Wm. H. Baker, C. H. Darlton and W. S. Logue. At this point of the proceedings, Mr. James A. Dunn, a young man but twenty-one years of age, a telegrapher who was brought up in the New York Western Union main office, where his father, Mr. H. J. Dunn is a traffic chief, rendered a number of selections upon the banjo, completely captivating his audience by the versatility and beauty of his playing. His skill undoubtedly entitles him to rank among the most expert banjo players in the world. Mr. Dunn left the telegraph service three years ago to enter his present profession, and he has just returned from Europe after a highly successful tour extended through many countries. He will return to Europe after filling a few engagements in America.

At the conclusion of Mr. Dunn's playing, Mr. J. B. Taltavall was selected to conduct the drawing of prizes for distribution among those present, and Mr. R. J. Murphy was delegated to call the numbers as they were taken from the hat and award the prizes. Before any distribution was made, however, President Jones was presented with a beautiful gold scarf pin of horseshoe design set with pearls, donated by a Magnetic Club member whose identity was not disclosed.

Cash for the purchase of prizes was donated by members as follows: Col. Robert C. Clowry, twenty-five dollars; Clarence H. Mackay, twenty-five dollars; Thomas F. Clark, ten dollars; Edward C. Cockey, five dollars; F. M. Ferrin, ten dollars; James Kempster, five dollars; Wm. J. Dealy, two dollars; Belvidere Brooks, eight dollars.

Articles for prizes were contributed as follows: Foote, Pierson and Co., a silk umbrella; Wm. H. Baker, a silk umbrella; National Cable and Conduit Company, a silk umbrella; J. C. Barclay, a silk umbrella; Fred. Pearce, medical battery; J. J. Ghegan, pocket flash light; George Clapperton, shaving mirror; M. H. Kerner, stylographic pen; William Maver, Jr., two gold scarf pins; H. L. Shippy, box of cigars; J. B. Taltavall, book—Pocket Edition of Diagrams; A. Schulte, briar root pipe and tobacco; A. F. Kennedy, outing cap; Surbrug Tobacco Company, box of tobacco.

In addition to these articles there were thirteen valuable prizes furnished by the Entertainment Committee and paid for with the cash donated for the purpose, and were distributed by lot to members present.

The winners of the prizes were: G. Roehm,

W. B. McCurdy, R. E. Bristol, Marston R. Cockey, W. S. Logue, B. Brooks, T. A. Brooks, F. J. Scherrer, R. J. Murphy, T. E. Fleming, R. E. Fagan, J. W. Connelly, F. Kitton, T. L. Cuyler, Jr., C. C. Duvall, J. J. Ghegan, J. F. Ahearn, W. H. Baker, S. F. Jones, W. S. Eckert, G. W. Hickey, W. Marshall, F. E. Maize, C. A. Darlton, M. J. O'Leary, E. B. Bruch, J. Brant and G. W. Fleming.

Among those present were: M. H. Kerner, Wm. Finn, B. Brooks, E. B. Bruch, M. J. O'Leary, W. H. Reagan of Fall River, Mass.; G. W. Fleming, M. R. Cockey, J. F. McGuire, A. E. Price, Geo. Roehm, T. L. Cuyler, Jr., T. E. Fleming, J. J. Ghegan, S. J. McIntyre, W. B. McCurdy, A. I. Miles, W. C. Wering, J. F. Ahearn, J. C. Barclay, F. N. Roberts of Chicago, Ill.; John Brant, S. F. Jones, Frank C. Colyer, H. H. Sherman, T. J. Smith, F. W. Jones, E. E. Gilmore and F. E. Maize of Philadelphia, Pa.; J. Leahy, J. B. Taltavall, G. W. Hickey, R. J. Murphy, T. A. Brooks, R. E. Fagan, C. C. Duvall, J. W. Connelly, F. J. Schum, J. Tully, W. S. Eckert, W. Marshall, W. S. Logue, C. A. Darlton of Washington, D. C.; A. H. Kennealy, W. F. Williams of Portsmouth, Va.; F. Pearce, H. J. Dunn, J. Earls, A. Duffy, C. Jacobson, G. Morris, G. Brooks, R. E. Bristol, F. Kitton, D. Skelton, G. F. Fagan, F. E. McKiernan, J. Leon, Capt. Olmstead, Alex. Kline, C. Brooks, T. Downs, H. Gross, W. H. Baker, G. E. Harding and F. J. Scherrer.

President Jones announced that the officials of the Western Union Telegraph Company had indicated to him that the cable steamer Western Union would be placed at the disposal of the club whenever it saw fit to ask for it.

The beautiful flowers which decorated the tables were presented to the club by Mr. D. Skelton, the superintendent of the American District Telegraph Company.

The Old Time Telegraphers' Association.

Mr. John Brant, of New York, secretary of the Old Time Telegraphers' and Historical Association, has received a message from Mr. U. J. Fry of Milwaukee, president of the association, announcing that the Executive Committee had settled upon September 15, 16 and 17 as the dates of the meeting of the Milwaukee reunion. President Fry, who is the superintendent of telegraph of the Chicago, Milwaukee and St. Paul Railroad Company, is desirous that there should be a large attendance.

The Executive Committee comprises the following: George H. Corse, of Ogden, Utah; L. B. McFarlane, of Montreal, Que.; H. C. Hope, of St. Paul, Minn.; H. J. Pettengill, of Boston, Mass.; W. J. Lloyd and Joseph Uhrig, of Chicago, and C. J. Machette, P. W. Drew, F. V. Moffitt and H. G. McGill of Milwaukee, Wis.

Operators will find a fund of practical information in every issue of TELEGRAPH AGE.

George W. Brownson, Western Union Manager at Kansas City, Mo.

Mr. George W. Brownson who has become the manager of the Western Union Telegraph Company, at Kansas City, Mo., where he succeeds Mr. M. D. Wood, resigned, was born at Southfield, N. Y., on October 31, 1858. The first position held by him as a telegraph operator was on the old Cleveland and Pittsburg Railroad, at Industry, Pa., in 1870. In 1875 he entered the Western Union service at the old office No. 145 Broadway, New York, when A. S. Brown was manager. Trans-



GEO. W. BROWNSON,

New Western Union Manager at Kansas City, Mo.

ferred to St. Louis in 1877, he worked there as an operator, later being appointed as assistant night chief under Night Chief Theodore P. Cook, now general superintendent, at Chicago. When Mr. Cook was promoted it was natural that Mr. Brownson should succeed to the position vacated by his chief. This place he continued to hold until 1886, when he was transferred from St. Louis to Kansas City as chief operator. His succession now to the head of the office advances an accomplished telegrapher who has passed through an excellent school of training under and with associates of exceptional ability.

For the peace of mind of press telegraph operators and all who are obliged to carefully read reports of the doings in Servia, it is hoped that the skuptschina will decide to leave the man selected for the throne in peaceful possession and that there may be no internecine warfare. After a course of South African Dutch it is too early to expect the telegraph profession to become fluent in names redundant with "Samoyedic savagery," as the late Mr. Carlyle would say.

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

Wire Thieves Still at Work.

Vandals on June 23 destroyed and carried away part of the line recently built by the Western Union Telegraph Company, from Philadelphia to New York. The wire cutters attacked the line at Trevoze, Bucks County, near Neshaminy Falls. They cut the thirty-two new copper wires for a distance of eight poles. About fifteen miles of wire was taken, and the line was virtually destroyed. Only the poles were left standing.

The thieves got about 2,000 pounds of wire, worth about \$500. The telegraph company has offered a reward of \$1,000 for information which will lead to their arrest and conviction.

It was 2 o'clock in the morning when the operators in Philadelphia found that the wires on the new line to New York were not working. A corps of linemen was sent out to locate the trouble, and before daylight they reported: "There's no trouble, except that we can't find any wires. The poles are all that's left of the line."

Western Union men think that the wires were stolen by the same gang that has been cutting telephone and trolley wires around Philadelphia for a year.

When Cyrus W. Field was in England, just fifty years ago, attempting to interest capitalists in his proposed scheme to lay a submarine cable under the Atlantic, he was asked by Lord Clarendon: "But, suppose you don't succeed? Suppose you make the effort and fail—your cable is lost in the sea—then what will you do?" There was no hesitation in Field's answer: "Charge

it to profit and loss, and go to work to lay another." His courage inspired such confidence that a company was formed.

One of the telegraphers of the South African service writes in a letter to us that there is no inducement offered to good men to remain in the telegraph service in South Africa where the Government owns and controls the wires. However ambitious the individual may be, he says, he is not permitted to push himself ahead, or improve the service in the slightest degree. This same condition of things is true in all countries where the telegraph lines are in the hands of the Government.

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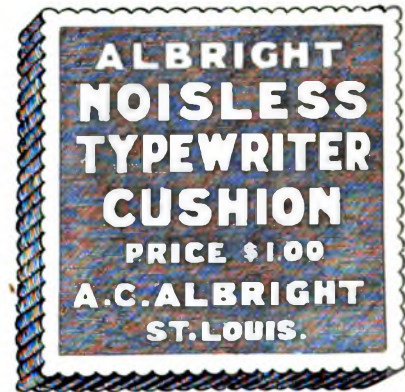
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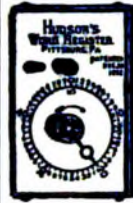
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Facts Concerning This Journal.

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.

THE PROGRESSIVE CHARACTER of the paper itself is generally recognized, and its influence and high standing in all telegraphic and allied electrical circles is freely acknowledged.

CONDUCTED BY EXPERT TELEGRAPHERS, graduates themselves from the key, their training and sympathies put them in close touch with the conditions and needs of the craft still engaged in receiving and sending dots and dashes.

THE SUBSTANTIAL ENCOURAGEMENT received in the past has already given *Telegraph Age* a wide circulation. And this has steadily grown. Yet the field is constantly expanding. Considering the variety, extent and character of the important matter the paper is now offering in all of its departments, so thoroughly meeting the requirements of up-to-date telegraphic information, technical and general, this journal should be an indispensable factor, not only in every telegraph office in the United States, Canada and Mexico, including those of the railroad, the police-telegraph and fire-alarm systems, but to every individual telegrapher as well. To the upbuilding of this large circulation, the accomplishment of which means as much to the subscribers as to the publisher, because affording the guarantee of a still further improved paper, we ask the active co-operation of our friends everywhere.

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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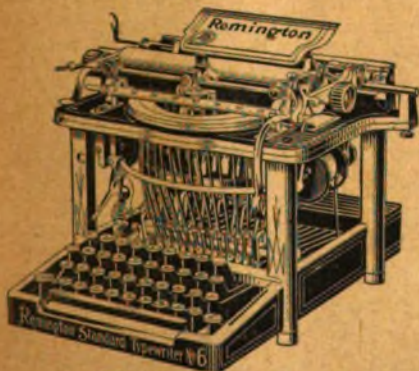
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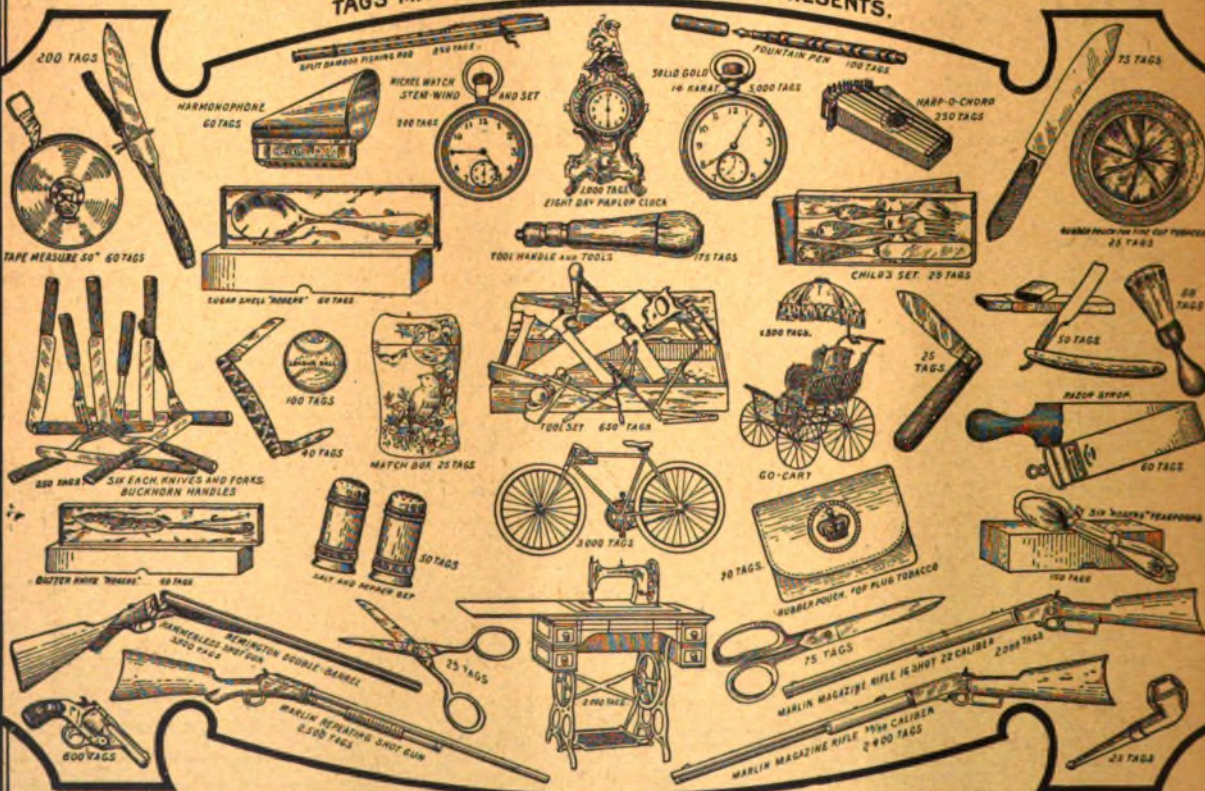
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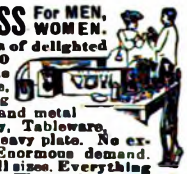
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THE TELEGRAPH AGE.

No. 14.

NEW YORK, JULY 16, 1903.

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Among some of the questions asked by an old-timer recently returned to the telegraph service after an absence of many years, was one which may possibly require official investigation in the near future. The question was: "Why is it that so few long circuits are now worked 'four-cornered?'"

In view of the fact that large copper wires now replace the old iron conductors, and telegraph apparatus generally is constructed for better results, the question is certainly worthy of due consideration. We need not go back more than ten or twelve years to arrive at the period when nearly every quadruplex circuit of 400 miles in length was worked "four-cornered," as our friend puts it, and exchanged as many as 1,200 or more messages daily, and over a 4 or a 6 gauge wire at that. Where can we find a long quadruplex circuit today that will carry so great a volume of business?

It is not because we do not have operators proficient enough to handle it, for with our code words and the typewriter old timer's records should be beaten easily. Neither is it true that operators of today are less ambitious than their earlier brothers. Nevertheless, the fact stares telegraph companies in the face that long circuits do not give the satisfaction that they did years ago, and the passing of the present standard quadruplex, as a "four-cornered" device on long circuits, while not officially admitted, is certainly pretty well recognized by all who have the handling of them, as only a matter of time.

Many factors have contributed to bring this about which cannot be eliminated in the general estimate, for they have come to stay, and apparently there is no relief except to devise some other method which will employ apparatus less susceptible to existing influences than the neutral relay now in use.

The writer of this article has been investigating the subject recently in order to ascertain, if possible, just what is causing so much trouble. The results obtained prove almost conclusively that the electrical conditions of the atmosphere in the immediate environments of our great trunk line poles of many parallel wires and cable, both underground and aerial, are to-day such that each separate conductor and relay coils therein is very much in the position of the armature of a dynamo rotating in a magnetic field. The only difference is that in the case of the pole wires the conductors are stationary, while the density of the field fluctuates, and the electromotive force generated is comparatively feeble.

Years ago the number of parallel circuits and cables extending along one route was comparatively small, while trolley line disturbances and the churning of the electrical conditions by the rapid breaking of currents in rapid automatic circuits was a minimum quantity, hence the aerial "field" was then too weak to generate a formidable foe within the wires. Today, however, the immediate surroundings of a pole of wires is a dense, seething magnetic field capable of causing so great a counter electromotive force in each separate conductor, as the currents, therein together act and react upon each other, that the working margin of a neutral relay is reduced to a point below that required for its proper operation. This fact was demonstrated to the satisfaction of the writer by noting the different results obtained in several quadruplex circuits when balanced at certain stated periods.

On a certain trunk line particularly affected by inductance it was found that each circuit selected

for the experiment would "quad" in a first class manner at eight o'clock in the morning, or earlier, and all day on Sundays, but gradually grew less efficient on week days as the morning advanced, until by ten or eleven o'clock the B side was either useless or required so much attention that it would be impracticable to attempt to work it. This could mean but one thing, and that was, that when all circuits, including the automatic, began their electrical bombardment, the quadruplex circuits under observation were unable to cope with their antagonists, and at the same time supply the neutral relay with its full quota of current. This is no doubt the true explanation of the difficulty experienced in quadruplexing long circuits.

Short circuits are not disturbed to any great extent for the reason that, although the strength of the current required to operate them is the same as on long circuits, there is not so great a length of wire in the pole line "field" to be acted upon, hence, like a short coil armature in a dynamo, there is less counter electromotive force generated to disturb normal conditions.

Another point noted was that wires running east and west seem to be affected to a much greater extent than circuits of similar length and apparently like conditions extending north and south. In fact the long southern quadruplex wires are still giving satisfaction as "four-cornered" circuits in spite of a noticeable increment of the electrical disturbances mentioned.

This brings up another question: Does the magnetic belt of the earth play any part in the phenomenon? Theoretically it does. The magnetic lines of force in this belt run north and south, hence they are in parallel with those surrounding the wires running east and west, because such lines of force in the latter arrange themselves at right angles to the direction of the current flowing in the conductors. The magnetic field surrounding such conductors, therefore, is obviously strengthened to the extent of the value of the earth's like forces. On the other hand the lines of force surrounding conductors running north and south clash with the belt line, with the result that the total field is weakened.

Can any of our readers offer a more plausible explanation of the phenomenon? If so it might be worth publishing for the benefit of others who may have become interested in the subject.

In describing the Barclay combination quadruplex rheostat in this column in the issue of July 1, the valuable feature appertaining to the method of winding the resistant coils should properly have been included. It appears that each individual coil consists of one layer of bare German silver wire wound on a porcelain spool, each convolution of which is thoroughly insulated from its side companion by a coating of varnish. By this method there can be no overlapping or crossing out of any convolution of wire in a spool. There being no silk covering on the wire there can be no burning out, while on the other hand the one

row of winding offers an ideal method of dissipating the heat due to the current traversing the coils.

Recent Telegraph Patents.

A patent, No. 732,012, for a switchboard, has been taken out by John F. Skirrow, of East Orange, N. J. This switchboard is intended for use at intermediate offices. It is built in sections, each section accommodating one wire. It is possible, therefore, to add to the switchboard at will, instead of replacing it by a larger board when additional wires are strung.

A patent, number 732,648, for a telegraphic transmitter, has been taken out by Horace G. Martin, of Brooklyn, N. Y. The transmitter is constructed to make all dots automatically, leaving it in the power of the operator to adjust the length of the dot, the idea being to relieve the operator of some of the nervous strain involved in the operation of an ordinary Morse key.

Business Notice.

The Canadian General Electric Company, Ltd., Toronto, Ontario, is now representing The Electric Storage Battery Company, of Philadelphia, in the sale of the Chloride Accumulator and the Exide Accumulator, throughout Canada, and all inquiries from Canada in regard to the same should be addressed to the Canadian General Electric Company, Ltd.

Annual Election.

At the annual meeting of the American Union Telegraph Company of New Jersey in Jersey City, N. J., July 8, the following directors were elected: A. R. Brewer, J. B. Bertholf, B. Brooks, R. C. Clowry and T. F. Clark. The directors subsequently elected these officers: R. C. Clowry, president; Thomas F. Clark, vice-president, and A. R. Brewer, secretary and treasurer.

General Mention.

Mr. Frank W. Cameron, a popular member of the Western Union Telegraph force, at Houston, Tex., became the father of a daughter on June 28.

Mr. H. W. Gardner, chief lineman of the Northern Pacific Railway Company, St. Paul, Minn., has resigned to accept a similar position with the Atchison, Topeka and Santa Fe Railroad Company. He has been succeeded by William O'Connell, construction foreman.

The Western Union Telegraph Company will soon have a new office at Macon, Ga., located at No. 455 Cherry street, that city, which will be thoroughly modern in respect to all of its equipment. The call messenger system will be greatly extended and improved, and in addition, it is said, a burglar and fire alarm system will also be installed.

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

Wireless Telegraphy.

Sir William H. Preece remarked during a public discussion of wireless telegraphy in London last month that the world had learned almost nothing about the theory of this art in the last seven years, but that there was a growing belief that the earth acted as a conductor. The former chief of the British telegraph service also asserted that very little had yet been done. Equally pessimistic views were expressed by others. Sir William's utterances, though, derive significance from the fact that he did more than any one else to befriend Marconi when the latter first came to England, in 1896. If he is now lacking in enthusiasm his attitude will certainly not inspire it in others.

The necessary plant is now being erected for communication by wireless telegraphy between Miesaki, in Nagasaki prefecture, and Hassekimon, on Sharyo Island, off Kelung, Formosa, a distance of about 850 miles. The installation was commenced in January last, and the expenditure on the enterprise is estimated at about \$10,000. Mr. Saiki, an engineer in the Department of Communications, is in charge of the work at Miesaki. The station at Hassekimon was commenced in March last, and is in charge of Mr. Ichimura, an engineer in the same department. It is expected that everything will be completed by the end of July, and that communication will be established immediately. Experiments in wireless telegraphy, it seems, have been continually made by the Japanese Navy since 1896. The experiments were first made, with satisfactory results, between Yawata, Kazusa and Funabashi, Shimosa, a distance of 11 miles, and afterwards between the shore and ships in Tokyo Bay, a distance of over 20 miles. Wireless telegraphy in Japan, it is asserted, materially differs from Marconi's system. An application of Signor Marconi to patent his invention in Japan was refused, and the system now being established between Formosa and Kyushu has been developed by a Japanese inventor.

The Governments of Europe are preparing to protect themselves against the advance of wireless telegraphy as a harmful element in war, and an international conference has been called to consider this subject. The conference is to be held in Berlin, August 4, and the United States Government has been invited to send representatives.

The men who will represent the United States are General A. W. Greely, chief signal officer of the Army; Commander F. M. Barber of the Navy, and Mr. Waterbury of the Department of Commerce and Labor. The conference is to be almost strictly military in character, and will be confined absolutely to Government officials. The European Governments are sending chiefly army and navy officers, but Secretary Cortelyou of the Department of Commerce thought that the business interests are largely concerned in wireless telegraphy development, and decided to send a representative to Berlin. The officers of the Marconi company asked permission to be represented in the conference by an agent, but this was refused on the ground that the conference was to be strictly a Government affair. No objection was

made, however, to sending agents to Berlin, who will be heard before anything definite is done by the delegates.

No instructions have yet been issued to the three American delegates by this Government, but it is known pretty well what policy they will advocate. General Greely believes that it is a matter of much importance that steps be taken to prevent the various wireless telegraph companies from monopolizing the desirable coast sites with commercial stations. He thinks that the needs of the Government should be first satisfied, and that the private interests should come second.

This question came up a few months ago when the Marconi people established a station on Cape Cod. An enormous plant was put up, which, as General Greely says, pre-empts all the air for a great radius, so far as the receiving and sending of wireless telegraphy goes. If this thing goes ahead the entire coast line would sooner or later be in the possession of private companies, leaving the Government no place for the location of a military station. It is said that private companies are following the same course in Germany, England and France, and that the Governments there are as much concerned as are our military authorities. It is proposed to impose certain restrictions on the operations of wireless companies and to regulate the use of receiving and sending stations in time of war.

The Railroad.

Mr. H. L. Bennett has been appointed superintendent of telegraph of the Houston and Texas Central Railroad, with headquarters at Houston, Tex.

Mr. Nathaniel E. Smith, chief train dispatcher of the New York, New Haven and Hartford Railroad Company, has been appointed superintendent of telegraph of the entire system, with headquarters at New Haven, Conn.

The Lackawanna Railroad Company recently equipped their quadruplex circuit between New York City and Scranton, Pa., with the Yetman transmitting typewriter. Mr. G. W. Conkling, of the Yetman Company, installed the system at Scranton in the presence of a number of railroad officials, many of them telegraphers, who pronounced the system a great success. It is the intention of the Lackawanna road to equip its principal offices with the Yetman machine.

Mr. A. S. Foote, of the telegraph department of the Southern Pacific Railroad, has contracted with the Stromberg-Carlson Telephone Manufacturing Company, of Chicago, for equipment to be used on the division from El Paso to New Orleans. Mr. Foote is stringing copper circuits between cities, and from stations to sections he uses grounded circuits. This places section, engine and work crews at the disposal of the dispatcher. It is also proposed to place at every blind siding some kind of a telephone apparatus that will enable wrecking crews to communicate with the dispatcher.

Efforts are being made in many directions by

railroads to reduce cost of operation, and in this the Baltimore and Ohio is achieving a degree of success. A recent innovation is a cipher code for the use of the transportation department, which will reduce the number of words per message very materially. It has been carefully prepared and single words supplant entire sentences. Some idea of the requirements of a system like the Baltimore and Ohio may be gained from the statement that 5,000,000 telegraph blanks are used each month for the company's business over its own wires, exclusive of train orders.

Personal Mention.

Mr. J. P. Altberger, superintendent of the Western Union Telegraph Company, Philadelphia, Pa., is in Europe whither he went recently for a brief rest of about a month.

Colonel Charles S. Diehl, of Chicago, assistant general manager of The Associated Press, accompanied by his wife, son and daughter, has gone to Europe, and will be absent several weeks.

Mr. H. M. Davis, advertising manager of the Sprague Electric Company, New York, was married in June to Miss Grace Inez Barrett, of Saratoga, N. Y. Mr. and Mrs. Davis have taken up their residence on the upper West Side in New York City.

Mr. Charles J. Glidden, the old time telegrapher and former telephone president, and a member of the Massachusetts Automobile Club, sailed recently from Boston, for Europe, with the reported intention of taking an automobile trip in Norway, penetrating the region within the Arctic circle. Later he will make a tour of a portion of Europe. After first visiting England and Ireland, Mr. Glidden will go thence to Christiania, Norway. Northward from this point the roads, it is said, will permit the driving of the automobile for about six hundred miles.

Mr. Glidden will carry with him the flag of the Massachusetts Automobile Club, which will be deposited with a responsible party at the most northern point reached, a receipt will be taken with the understanding that the flag is to be surrendered to the member of the Massachusetts Automobile Club who will, with an automobile, carry it to a point further north or return it to the club after completing the Norwegian trip. Mr. Glidden will be accompanied on the entire trip by Mrs. Glidden, and a representative of one of the London illustrated publications.

The Municipal Electricians.

Several interesting features are promised for the forthcoming convention of the International Association of Municipal Electricians, at Atlantic City on September 2, 3, and 4. Among them will be an exhibit of the Cooper-Hewitt mercury vapor lamp and converter, which have lately been perfected, and a demonstration of the DeForest system of wireless telegraphy.

The Western Union and Pennsylvania Railroad.

In the United States District Court at Baltimore, Md., on July 13, Judge Morris signed an order restraining the Philadelphia, Baltimore and Washington Railroad Company from interfering with the poles and wires of the Western Union Telegraph Company on the property of the railroad company. This prevents the railroad company, unless it acts in defiance of the courts, from duplicating in Maryland its action in Pennsylvania, where it removed the poles and wires belonging to the Western Union Telegraph Company.

Obituary.

Mrs. P. H. Hughes, the wife of the manager of the Postal Telegraph-Cable Company, at Savannah, Ga., died in that city on June 26.

Gustavus Swan, a pioneer telegrapher, known widely as a philanthropist and humanitarian, died July 1, aged 74 years, at his home in Westernville, N. Y. He had been in declining health for two years. Mr. Swan was born in Westernville, September 1, 1828. He learned telegraphy of Prof. Morse and of O. S. Wood in the Utica office of the old New York, Albany and Buffalo Telegraph Company. In 1851 he had charge of a branch telegraph office of the old Morse line in the Astor House, New York. He founded the Gustavus Swan Society for the Prevention of Cruelty to Children, and was the author of the statute passed by the Legislature in 1856 exempting telegraph operators from military and jury duty.

New Line to Dawson.

The Great North Western Telegraph Company, it is reported, is to build from Dawson to the international boundary, connect with the projected Northern American lines and put the Dominion Yukon Telegraph line out of business.

Cedar and pine trees are rapidly being consumed for the purpose of supplying telegraph and trolley poles, and at the present rate of consumption, it will not be a great while before the visible supply will be exhausted. The foresters look to catalpa to fill the place of pine and cedar in this particular. The catalpa flourishes in a great many places in this country, and has the advantage of growing very straight, and attains the needed size in from sixteen to eighteen years. The time required for cedar and pine is more than double this.

"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.

Resignations and Appointments.

Mr. L. S. Humes, Western Union manager at Duluth, Minn., has been transferred to St. Paul, succeeding W. A. Rudd, resigned.

Mr. Elmer J. Huber, an operator of the Postal Telegraph-Cable Company, at Green Bay, Wis., has been appointed manager of the same interests at Ishpeming, Mich.

Mr. P. A. Henegan has been appointed manager of the Postal Telegraph-Cable Company at Ottawa, Ill., vice W. K. Sanderson, resigned to enter the employ of a brokerage firm.

Mr. Charles R. Fisher, night wire chief of the Western Union Telegraph Company, at Kansas City, Mo., has been advanced to be assistant chief operator, vice S. W. Atkinson, promoted.

Mr. William A. Rudd, manager of the Western Union Telegraph Company at St. Paul, Minn., has resigned to accept the managership of the Postal Telegraph-Cable Company at Memphis, Tenn., vice W. H. Laske, resigned.

Mr. Charles A. Crane, manager of the Western Union Telegraph Company at Sioux Falls, S. D., has been appointed manager of the same interests at Duluth, Minn. He is succeeded at the former office by J. M. O'Neill, promoted.

Miss Olive Hastings, manager of the Western Union Telegraph Company at Torrington, Conn., has been promoted to the managership of the Princeton, N. J., office of the same company. Miss Blanche Auld, of Derby, Conn., succeeds Miss Hastings at Torrington.

Mr. A. C. Hanson, manager of the Western Union Telegraph Company at Crookstown, Minn., has been transferred to the charge of the office at Grand Forks, N. D., vice W. R. Powell, resigned. Mr. R. T. Gorman, manager at Austin, Minn., succeeds Mr. Hanson at Crookstown, while Mrs. M. Heath, manager at Superior, Wis., takes Mr. Gorman's place at Austin, Mr. John Frederickson being appointed to the vacancy at Superior.

The telegraph messenger boys of Boston, Mass., have organized, and nearly all the lads at the "Hub" who carry messages for the telegraph companies are in the union.

A despatch from Dawson says that the last link of the United States Government telegraph system connecting St. Michael with Seattle has been connected, but vast forest fires have interrupted communication. Miles of telegraph poles have been burned in the wilderness through which the line runs.

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 Reminiscence of the Days of the Old Pacific Telegraph Lines.

C. W. MC REYNOLDS.

I presume there are none of the operators which comprised the force on the old Pacific line, but what could relate some laughable incidents connected with their initiations into the service and the life on the plains of the "Wild and Wooley West." With no direct connection with the outside world, (excepting the telegraph) but by the Pony Express, and letters at one dollar apiece, it was but natural for the telegraphers to find some means of expending their exuberance of feeling and overflow of animal spirits. An exhibition of this abounding condition we termed the "Initiatory Ceremonies," and I believe all were compelled to pass through this experience to a greater or lesser extent.

It was the misfortune of the writer to have been assigned to an office on the division controlled by "Jack" Slade, one of the greatest desperadoes the West ever produced, and who was surrounded by a most disorderly band of drivers and riders. His chief of staff was one named Smith, generally known as "Old Man Smith," with whom I became personally deeply interested on account of his being the master of ceremonies in my initiation. "Johnny" Clow, who was the operator at the front up to my advent, was located at Horse Shoe Station, Slade's headquarters, and through him the gang worked up the scheme to test the tenderfoot. Upon my arrival Clow took me in hand to ascertain what, if any, deadly weapons (for all carried revolvers) I had, and finding me unarmed the schemers started in. The plan was for Smith to take me in hand and on the road he was to fill my mind full of stories of the ferocity of the Sioux, the number of victims regularly sacrificed by their cruelty and of their depredations committed on this particular route. Haunted Canon (Three Crossings) was to be the point from which active operations were to be commenced.

Smith certainly performed his part with zeal and fidelity, for by the time the coach on which we were travelling, reached Three Crossings, the tenderfoot was possessed of dismal forebodings and his mind was filled with a longing for home and friends, in fact he was home-sick to the extreme.

The programme as carried out by Smith was for me to jump from the coach at the first commencement of possible hostilities and to follow his lead. He informed me that our only safety lay in giving up the coach and the valuables it contained to the Indians, and seek safety in flight, that the savages were not likely to leave the coach and its contents to follow us. My position as pre-arranged was to watch out at the rear end of the coach, and Smith at the side. Soon after leaving the station and while intently watching for the dreaded Indians, I perceived some one drop behind the coach. It was a beautiful moonlight night, but I could not distinguish the face well enough to recognize the individual, and as Smith had particularly told me that the dress of the Indians was the same as that of the white men, I took it for granted that I had seen my first Indian, and accordingly called out: "Who is that?" The

only reply received was that made by a shot. This was the signal for Smith to get in his work, and the game was on. Smith yelled at me to jump and run, an invitation I did not need a second time to obey. Smith followed, but I being young, and fear lending me wings, I soon left him out of sight. Unfortunately I travelled, as an inexperienced woodsman is apt to do, in a circle through the sage brush, which was from four to five feet high, a fact which gave Smith plenty of time to rest and enjoy the scene, as well as to consult with Slade and Charley Carter, the driver, as to the next step in the programme. A second shot caused me to stop. Looking back I discerned Smith running and just in time to see him fall. I thought he was killed, and started to run towards him in order to get possession of his revolver, which I supposed he carried. I had proceeded but a few steps when I was confronted by another Indian who immediately commenced shooting at me, and I again turned and ran. This running in a circle was my undoing, for I only returned to be met by still another Indian, and by another shot. But I was determined to find Smith, for I believed that in so doing was my only salvation. At length when I came upon him and found him alive, I was overjoyed, but my joy turned to disheartenment, for he appeared suddenly to have gone insane, and made a great uproar in shouting and halloaing for Carter. I urged that as Smith knew every foot of the surrounding country that we start across it afoot, and thus endeavor to effect our escape from the Indians. Smith, however, was obdurate, and insisted that we find our way back to the coach. This we cautiously did. Carter always claimed there was something ghostly in the manner of my approach, for he said I alternately rose in the air and disappeared. Perhaps this was due to the uncertainty of my nerves, a condition of being which doubtless caused an undulatory motion of body, for I must confess that I was thoroughly scared.

Be that as it may, I was rejoiced to reach the stage alive and to rejoin my companions, regarding whom all sorts of horrible suspicions as to their fate had filled my mind during the few moments of the "attack." Somehow, in the meantime the Indians (?) had disappeared from the scene, and all trace of bloodthirsty border warfare, about which my mind had been filled, and of which I believed I had experienced a realizing sense, had vanished.

Smith and Slade both left the coach at Strawberry, and I never saw either of them again. Carter continued the journey with me in the coach. Slade was a half brother of "Jack" Slade. Smith was killed in reality by the Sioux' at Willow Springs soon after, and while I was stationed at Pacific Springs. The superstitious claimed his death to be in retribution for the part he took in showing me just what Indian warfare was.

This episode, Mr. Editor, caused the writer to be known as "Big Injun," an appellation which clung to him for some years, and I presume there are a few still living who will doubtless remember this "nom de guerre."

I think it very probable that many of the boys on the line west of old Fort Laramie had some experience of a nature similar to mine, varied maybe according to the surroundings. I often look back on the rough events of those times, and not without pleasant memory, for they constitute a part, even if peculiar, of my early education and had their influence in determining me to make my home permanently in the West. Operators of the present time cannot realize, however, the many discomforts and privations the pioneer operators of the West were subjected to. But few, if any, of the old force are now alive, yet if any should perchance read this reminiscence, I doubt not they will recall the many "jolts" I received over my initiation.

Eight Hams!

A bevy of fair women operators were going out to a baseball game the other day in a certain smoky city in Pennsylvania, when, in order to fortify themselves for the arduous work in prospect, they stopped at a restaurant and one of the party gaily ordered eight ham sandwiches. According to the custom of the place the waiter immediately shouted out: "Eight hams!" Imagine the consternation that was instantly depicted on eight expectant faces when these ominous words echoed through the hall! The first impulse was to flee away from a place where such atrocious libels might be uttered with impunity on innocent customers, but more conservative councils prevailing, the girls wondered whether, after all, any sarcasm was really intended.

Directory of Annual Meetings.

Association of Railway Telegraph Superintendents meets 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. on September 2, 3 and 4.

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

Old Time Telegraphers and Historical Association meets at Milwaukee, Wis., September 23, 24 and 25.

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.

Telegraphic Bookkeeping.

Ninth Article.

BY W. H. DOHERTY.

An important work that usually falls to the manager is to make up the monthly report. This may appear to some as a small matter, that can be put together most any way, but the fact is this is one of the most difficult tasks in telegraphic bookkeeping. To make neat, concise, up-to-date monthly reports is indeed an accomplishment.

It has been my fortune to call frequently at the office of a superintendent of telegraph of one of the largest railroads in the country, and to know the office force well. In that way I was afforded the opportunity to notice the many and varied monthly reports handled there, but I often wondered where some of the operators turning in these reports learned the business, it certainly was not in a telegraph office. This thought was followed by another, and that was, whether if the superintendent asked the clerk in charge of these reports what kind of an agent a certain operator would make, the clerk, gauging his judgement from the report he had been receiving from the operator, would probably say either good or bad, as the case might be. A good comprehensive, intelligent monthly report on the part of a manager acts, it might be said, as a recommendation for his future advancement.

The largest part of the work connected with a monthly report, is what is known as the "check report." This is drawn from the check ledger, and shows first the business done with local State points. Then follows the rest of the States arranged in alphabetical order, together with the different cities therein with which business has been transacted.

If the manager has more than three or four sheets of "check reports" he will find it a good plan to add or total each sheet separately, and carry these separate totals to another sheet, whereon should be recorded the full number of sheets. A check report blank should be used for this purpose, numbered in the space provided for the names of places, the total of each sheet entered according to its number, the totals appearing under their respective headings. By doing this the necessity is avoided of erasing and correcting, when found necessary, if the totals are carried forward from page to page. The sum total of the "check report" must agree with the total of the figures, set opposite the dates of the month, as on form 4.

These figures show the regular receipts of the office, and should be entered on the inside of the report—the debit side near the top. To ascertain which is the inside of the report, fold it, and the correct place will be apparent. Just below this is the heading, "sundry receipts." At this point should be entered "guaranteed messages," "cable receipts," "transfers," "clock rentals," "wire rentals," and in fact anything in the shape of receipts

outside of the regular receipts. Then add them up and place the total amount in the column to the right that is provided for that purpose.

Before entering the credit side it is necessary that all vouchers should be arranged according to classifications on the back of the report; namely, "schedule of ordinary disbursements." This schedule calls for the totals of each classification, and all vouchers should be listed and numbered, so that they can be readily checked off by the auditor. It might be well to consider these different credits.

The first, "Paid Other Lines," represent credits on which payments have been made for deliveries to some nearby suburb, etc.; also messages which were received collect and were forwarded to another point, with all charges following; as well as messages transferred from other telegraph or telephone companies, on which collections for tolls are necessary.

The second, "Refunded and Uncollectable," includes all refunds made of tolls on complaint cases, also any credit authorized by the superintendent's office. These should be listed on a bill head, which is about as good a form as any for this purpose. After all the refunds and authorized credits have been listed enter on the same list the total of all uncollectable messages and that part of the half rate refund messages that you take credit for. Occasionally there will be a message received collect, for some employe, which is usually taken credit with, as D. H. employe; also messages received collect for some railroad official, which should be D. H. answer to D. H., and for which he refuses to pay. All these can be included in this list, and the total of them all should agree with the figures in the totals; that is, they are divided into regular and Uncollectable."

Next come the salaries, which are required to be divided in several parts, but when it is known who are "regular employes" and "extra employes" it is an easy matter. The clerks and office boys are regarded the same as the operators, that is, they are divided into regular and extra. The total of each class is set into the short column, and the grand totals carried out into the space provided, the dotted lines indicating where the totals should be placed.

The other items as they appear on this page are made up much in the same manner, and if this form be carefully followed there is but little chance of the manager going very far astray on this part of the report. It will be noticed in the "black book," under the heading of "Ordinary Disbursements," that the different classes or divisions of disbursements, are the same as on the monthly report, so that it is an easy matter to balance a report with the black book.

When the entries on this side of the report are completed the "Total Ordinary Disbursements" are carried forward to the inside of the monthly report blank and entered in the space provided. Then can be entered below on the dotted lines any special kind of credit desired and

which is not shown elsewhere on the blank form.

Among the special credits, for which no place is designated on the report blank, are transfer payments and Government messages. I often wonder why this omission was made. Below the entry for special credits follows the list of remittances made for the month current, while below this and at the bottom is the "balance due from office," an amount representing the total of the outstanding charged accounts, a list of which should accompany the monthly report.

The above gives the reader a rather short outline of a monthly report, but on the whole the subject is not a difficult one, particularly if it be studied out in detail. If not, the telegraph bookkeeper is likely to get into trouble.

An Important Decision Respecting Undelivered Telegrams.

A decision by the New York Supreme Court, in an opinion rendered by Justice Davy, defines the limitation relative to the responsibility of a telegraph company in the matter of undelivered telegrams. It says:

"The statute in question prescribes in plain and unambiguous language that only the person or persons sending or desiring to send the dispatch can recover the penalty. If it had been the intention of the lawmakers to authorize the party to whom the dispatch was sent to bring action to recover penalty, it is to be supposed that such intention would have been embodied in the act. In Indiana, where there is a similar statute, it is held that the sender of the dispatch, and not the party to whom it is sent, can recover the penalty for a violation of its provisions."

Long Wire Spans.

Telephone wires have been strung across the Columbia River, between Pasco and Kennewick, Wash. The distance from pole to pole is 2,800 feet. Another long span is that of 3,200 feet across the Susquehanna River, connecting the telephone systems of Lancaster and York Counties, Pa. In the Pennsylvania instance the wires dip a distance of 122 feet below a straight line between the poles. Still another long span, although not so great as the one in Washington, is that across the Connecticut River near Middletown, Conn., it being 1,300 feet. At Muscoda, Wis., there is an 1,100-foot span of electric light wires across the Wisconsin River.

A New Use for Telegraph Wires.

A new use has been found for telegraph wires. Dr. Laska, a Polish meteorologist, has studied the humming sound they emit occasionally, and has found that it is not caused by the wind, as commonly supposed. Eydam's observations, extending over several years, show that these sounds always indicate the approach of rain, snow or a storm, and Laska inclines to the belief that they are in some way caused by terrestrial vibrations induced by meteorological changes.

Samuel W. Atkinson, Chief Operator of the Western Union at Kansas City, Mo.

Mr. Samuel W. Atkinson, whose promotion from the position of assistant chief operator to that of chief operator, of the Western Union Telegraph Company, at Kansas City, Mo., succeeding George W. Brownson, who has been advanced to the management of the office, was born at Earlville, Ill., in 1864. He began his telegraphic career in his native place at the age of fifteen years, becoming a night operator on the Chicago, Burlington and Quincy Railroad. Later, he held positions at different points on the same road, both as agent and as operator. In 1881 he accepted employment with the Western Union Telegraph Company, at Chicago, and two years thereafter, in June, 1883, he went to Kansas City in the same interests. His promotion to the post of



SAMUEL W. ATKINSON.

Chief Operator of the Western Union Telegraph Company, Kansas City, Mo.

division chief occurred in 1888, and succeeding which he was made wire chief. In 1896 he became assistant chief operator, and on June 1, last, was appointed to the place he now holds. Mr. Atkinson has been active in telegraph circles and has gained an enviable reputation as an operator in the city in which he has lived for so many years. Two years ago he organized the Telegraphers' Aid Society of Kansas City, and became its first president, an office he still retains.

A Telegraph That Will Set Type.

M. d'Arsonville a few days ago submitted to the Academy of Science, Paris, an invention for typesetting by telegraph, the electric current being made to perforate characters on a moving band connected with a typesetting machine. It is claimed that the contrivance, which is the work of M. Rodmal, will dispense with transcription altogether for press purposes.

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NEW YORK, July 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.

The Commercial Pacific Cable.

The completion of the Commercial Pacific Cable, finally connecting the United States with the Philippine Islands, and thus at last bringing all of our Pacific insular possessions into close domestic relationship with the home country, is an achievement, the importance of which will become more and more apparent as time passes. It means much in advancing the commanding position of the United States as a commercial and naval power; in the new cable the people and the Government of the United States have rare privileges. It also means much to the company whose splendid enterprise and undaunted courage have successfully created another long arm to its already extended and growing allied systems over land and under sea. And it was a fitting time to transmit the first message across the broad Pacific by an American owned cable on the significant date of the Fourth of July.

Elsewhere in this issue a full account of the cable will be found.

The Conservation of Thrift.

There is nothing that tends to make telegraphers conservative so much as the exercise of a wise frugality. When an operator begins to save his money and is enabled to open a bank account; or, from his earnings, let us say, he is paying for a home, somehow his disposition begins to undergo a gradual and marked change for the better. From a possible happy-go-lucky frame of mind and its frequently accompanying eccentricity of conduct, the voluntary assumption of financial responsibility, the tendency of which is to invest the individual with a higher sense of manhood dignity, character broadens and moral worth becomes self-assertive. Under such changed circumstances the man who, once with shallow thought, and cynic and pessimistic reasoning, was wont to regard life at best as hardly worth the living, begins to look out upon existence after all with a clear conception of its usefulness, of its duties and possibilities of happiness, because inspired with a clearer vision gained from a loftier viewpoint. Living within one's means, then; to cultivate habits of economy and thrift, not niggardliness, all contribute in large measure to elevate the tone of the individual, to make him more independent, and, as the saying is, "to make a man of him."

The man who deliberately mortgages his salary, under whatever form it may be done, and which can only be accomplished at heavy and ruinous rates, it needs hardly to be said is engaged in a practice debasing to his manhood, certainly to his pocketbook. To follow such methods he is left with no working margin of cash, his recuperative power becomes impaired and he is in a pitiful condition.

The loan associations, managed by telegraphers in various parts of the country, are excellent institutions, and are among the best aids that ever held out a friendly, helping and directing hand to operators who would be thrifty and careful of

their savings. That financial experience and education may be gained through the instrumentality of these fraternity organizations goes without saying. Frugality, economy, saving, are the three terms that should appeal with force and stern meaning to the man who would get ahead. As a rule the best and most trustworthy men in the profession today are those who are able to maintain bank accounts or who have acquired and own property. They are the men, no matter how busy they may be, who still have the time to think and meditate and plan out ideas that confer benefits in the future.

On Telegraphic Bookkeeping.

Mr. Doherty's articles on telegraphic bookkeeping, clear, concise and cogent in their expression, have proved a boon to many inexperienced telegraphers struggling with an important subject, with which they were unfamiliar, or at best had but a vague acquaintance, when sometimes by reason of promotion, or otherwise, the unexpected had been thrust upon them. Others, who themselves have mastered the bookkeeping problem and fully recognizing its importance, heartily commend the judgment of TELEGRAPH AGE for publishing such a series of practical articles as have emanated from the Albany manager's pen. For they are declared to be opportune and highly necessary for the educational guidance of all telegraphers whether called upon at the moment to exercise the duties of a bookkeeper or not. In this connection the manager of a well known office writes:

"The articles recently appearing in TELEGRAPH AGE in regard to telegraph bookkeeping and accounts generally, will be of value to all the younger element of the fraternity who may be interested in any way; even the older members can gather many useful notions from them. They have made me think of some short cuts in that direction, but I am almost afraid to exploit them lest 'Bill' Smith notices them and calls attention to the fact that John Jones, assistant auditor of the old Mutual Atlantic and Western used and, for the benefit of employes, published the formulas in 1826! Not long ago I asked a bookkeeper how he was coming on with his check report. 'All right,' he replied, 'but I can't get this column twice alike; guess it's because I have got a headache.' It was not headache that troubled him; the fault lay rather in the lack of a comprehensive grasp of his subject. After I had shown him an easy and sure method of proving he was so pleased with the idea, new to him, that he made good time with the remainder of his work. A short cut system of proving in use by many is that observed in posting, say, several messages to the same office of a different number of words, and, of course, different amounts. Instead of putting down the tolls on each message—25, 27, 31, 27, 37 and so on—multiply the number of messages by the rate, then run over the extra words and multiply by the additional word rate.

This makes but two groups of figures even if it becomes necessary to put the figures down at all."

We shall be pleased to hear further on the subject from other correspondents.

Postal Construction in the West.

The Postal Telegraph-Cable Company is about to begin the building of a projected line which will eventually extend from Omaha to Portland, Oregon. The line will follow the route of the Union Pacific Railroad between Omaha and Ogden, thence the route of the Oregon Short Line. The work will be done under the direction of Mr. W. I. Capen, of Chicago, who is the superintendent of construction of the western division of the Postal Company.

It is said that when the actual work begins it will require about six months to complete the line to Cheyenne, and that the construction of the line west of Cheyenne will probably not be begun until the first portion of the line is completed. From Cheyenne a line will run to Denver, while from Ogden lines will be run south to Salt Lake City.

The Old Time Telegraphers' Association.

It was officially announced in the July 1 issue of TELEGRAPH AGE that the date of the forthcoming reunion of the Old Time Telegraphers' and Historical Association, which is to meet at Milwaukee, Wis., would be held on September 15, 16 and 17. It has since been determined by the committee that these dates will be inexpedient, and accordingly the 23, 24 and 25 of September, Wednesday, Thursday and Friday of the week following, have been named instead.

The executive committee, is made up as follows: George H. Corse, of Ogden, Utah; L. B. McFarlane, of Montreal, Que.; H. C. Hope, of St. Paul, Minn.; H. J. Pettengill, of Boston, Mass.; W. J. Lloyd and Joseph Uhrig, of Chicago, and C. J. Machette, P. W. Drew, F. V. Moffitt and H. G. McGill, of Milwaukee, Wis.

John Brant, Western Union Telegraph Company, No. 195 Broadway, New York, is the secretary.

Portable Telegraph Offices.

The Louisville and Nashville Railroad Company is building in its shops at New Decatur, Ala., two portable telegraph offices to be used at the scene of wrecks, washouts, etc. One of them will be kept at the shop and the other will be sent to Birmingham, Ala. They are constructed of canvas and are made to fold up so that they can be transported on hand cars to the places where they may be needed.

The Colorado Fuel and Iron Company, whose head offices are located at Denver, Col., has quite an extensive private telegraph system extending over Colorado, New Mexico and Wyoming, covering some 3,000 miles. The title of this system is the Mountain Telegraph Company.

The Debate on the English Post Office Telegraph Vote.

(From the Electrician, London, England).

The Postmaster-General of England was obliged to make a statement in the House of Commons on June 8 with regard to such diverse matters as the conveyance of mails across the seas, the telephone service, submarine cables and wireless telegraphy. His speech demonstrated that, on the whole, he had a good grasp of the difficult problems which these services involve; and even if in one respect, at any rate, his ideas on engineering questions were somewhat crude, this will doubtless be corrected with little difficulty by his technical advisers.

Dealing first with the telegraph deficit, Mr. Austen Chamberlain attributed it to three causes: The increasing number of concessions made to the public, the increase in pay to the Post Office employes, and the large sum originally paid when the telegraph system was transferred from the companies to the State. He might have added a fourth reason, namely, the system in which joint expenditure is allocated between the postal and telegraph departments. It is not too much to hope, however, that the actual loss on the telegraph system itself will soon be wiped out by the increasing profits that should arise from an efficient working of the telephone system. Mr. Chamberlain pointed out the inherent absurdity of competition in telephony, and indicated clearly his view that the greater part of the British telephone system should be worked by the Government in 1911—at which date the licenses of the National Telephone Company expire, with the exception of those which were prolonged under the unsatisfactory Act of 1899, authorizing the erection by local authorities of telephone exchanges in competition with those already existing. We would point out, as we have done on previous occasions, that an opportunity for realizing Mr. Chamberlain's ideal of a telephone system worked entirely by the State itself, occurs sooner than 1911, for, under the National Telephone Company's general license, the Government may purchase the undertaking compulsorily at the end of 1904. It will be a matter for regret if the Government, by not making use of this opportunity, condemns the country to a telephone service of makeshift and multiple control for another eight years. It appears also from Mr. Chamberlain's speech that there has been friction between the Post Office and the local authorities over telephone matters, as well as between the Post Office and the National Telephone Company.

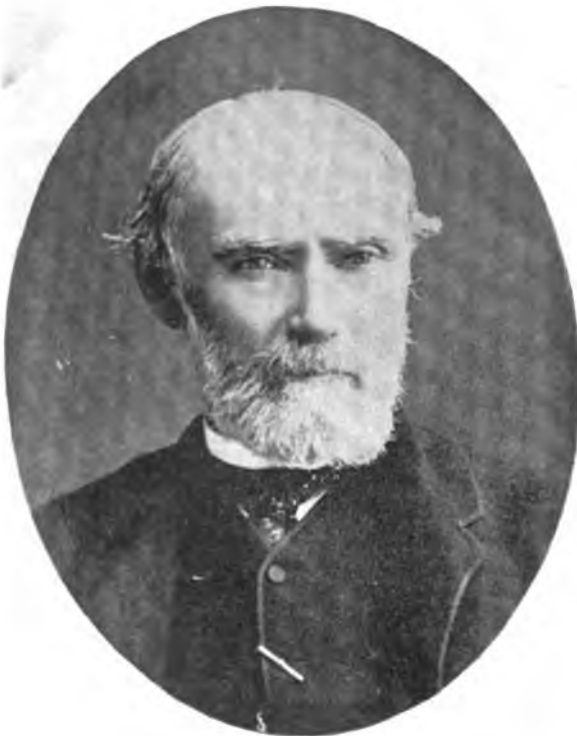
The telephone situation, however, is largely a matter of history; it has changed little, if at all, during the past year. Mr. Chamberlain's statement as to wireless telegraph matters, on the other hand, throws much light on recent controversies, and enables the public to form a clear judgment as to the questions at issue. It is not merely a question of giving Mr. Marconi or his company facilities for wireless telegraphy, the

company ask for an exclusive right to work wireless telegraphy in this country; they ask for permanence; and they also ask that the Post Office should act as receiving and forwarding agents for their transatlantic service, just as that department does for the cable companies. The first two demands, the Postmaster-General has naturally flatly refused. The request that the Post Office should act as agents, however, he has treated in all seriousness and with patience, pointing out that the company must first satisfy him that they are in a position to carry on a business of transmitting telegrams from one side of the Atlantic to the other. They were asked, he said, to do this in a letter dated March 31, but had not yet replied. The company was also asked to undertake that their long-distance system should not interfere with the Admiralty's wireless telegraph arrangements, which is also a most rational condition, and one with which, if we are to believe Mr. Marconi and Prof. Fleming, the company should have no difficulty in complying. An opportunity has already been afforded them by "The Times" for transmitting daily messages on a commercial basis, and the Post Office has erected for the company a private wire to Poldhu; yet this daily transmission of messages—although it merely represents the simpler task of transmission in one direction only—has not yet been realized. In view of these facts, Mr. Chamberlain's policy of awaiting events before pressing forward with the establishment of new cable routes is somewhat inconsistent—if indeed these new routes are seriously needed. The expressions which the Postmaster-General adopted to explain this attitude were, moreover, not very happily chosen, for they might, if taken too literally, be construed as a warning to the public not to invest more money in cable enterprise. This cannot surely be Mr. Austen Chamberlain's meaning, and in fairness to him, one must assume his reference to cable shares and cable shareholders to be nothing more than a skillful manoeuvre in debate, to save the necessity of discussing seriously Mr. Heaton's proposal that the Government should purchase the cables connected with this country. This suggestion of Mr. Heaton's, with his avowed friendship for Mr. Marconi and all his works, could in the same way be understood as a confession of weakness on the part of the long-distance wireless telegraph enthusiasts; for if Mr. Heaton really believes in successful commercial long-distance wireless telegraphy and supports the Marconi Company in its endeavors to obtain a monopoly, surely he would not advocate that the vested interests with which Mr. Marconi proposes to compete should be transferred to the Government.

"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.

The Great North Western Telegraph Company.

The general offices of the Great North Western Telegraph Company, says the Canadian Electrical News, in a recent article, are located at Toronto, Ontario. The building which the company occupies on the corner of Wellington and Scott streets, was built by the Montreal Telegraph Company, for its own use, under the supervision of President and General Manager H. P. Dwight, about thirty years ago, and was taken over by the Great North Western Telegraph Company at the time the Montreal and Dominion Telegraph companies were merged in the Great North Western in 1881. When the building was first erected it was justly considered a very handsome edifice, and it certainly was one of the most commodious and best-planned telegraphic offices of its day. The whirligig of time



H. P. DWIGHT, OF TORONTO, ONT.

President and General Manager of the Great North Western Telegraph Company.

works wondrous changes, however, and where, under the old order of things, there was plenty of room and to spare, the company now finds itself, with its largely increased business, somewhat cramped for space, and several rooms in the adjoining building have been secured to accommodate a portion of the staff.

The telegraph business, in keeping with the general business of the country, has increased by leaps and bounds during the past few years, and the Great North Western, besides strengthening and improving its plant in all directions, has from time to time, to meet the increased traffic, added a number of new wires to the most important routes. This work, of course, has been in charge of the enterprising and able superintendent of

construction, Mr. A. B. Smith, who, always a busy man, is in his element when immersed in work in which a bold push is required to complete a certain job in a specified time. Quite recently a copper wire of the most approved gauge was erected between Buffalo and Montreal. This wire is worked quadruplex. Six quadruplexes are in constant use in the Toronto office of the Great North Western.

The Great North Western has an exclusive connection with the Western Union Telegraph Company, and President Dwight returned only the other day from New York, where he had been in consultation with Col. Clowry, president and general manager of the Western Union in regard to matters of interest to their respective companies. While Mr. Dwight was in New York arrangements were made for the erection of additional wires during the coming season to meet the increased demands of international business.

The Great North Western has just finished re-wiring its Toronto operating room—putting in a new Bunnell switch, capable of accommodating 100 lines, and introducing other new telegraphic apparatus. The latest pattern of loop switch has also been added to the office equipment. All the old wiring under the operating room floor has been removed, and cables have been laid in metallic troughs carrying a new set of wires, with carefully soldered joints, to every instrument in the office. The operating tables, which are also new, are what is known as the sextette pattern. The work of making these changes has been in progress, by easy stages, for the past six months, the change, which was under the immediate direction of Inspector W. J. Duckworth, having been effected without causing a moment's interruption to any of the wires in the building. It may be confidently asserted that the operating room of the Great North Western at Toronto is now in every respect one of the best organized and equipped, and as thoroughly modern in all its appointments, as any similar room on this continent. All the lines in the office are worked from dynamotors, the power for running these machines being supplied by the Toronto Electric Light Company.

As Toronto is the headquarters of the company, and the audit department, treasury department, stores department, construction and maintenance department, and press department are all stationed there, the entire force, including the operating staff, employed in that city by the Great North Western is necessarily a very large one.

The Great North Western Telegraph system now embraces 18,000 miles of poles and 42,000 miles of wire, with some 1,800 offices distributed throughout Ontario, Quebec, New Brunswick, Manitoba and a section of British Columbia.

The history of every great undertaking is the history of patient effort by energetic and far seeing men faithfully fighting the obstacles of dulness, apathy and vested interests.

Canadian Pacific Railroad Telegraphs.

The Canadian Pacific Railroad Telegraphs is, as is generally known, a department of the Canadian Pacific Railway, remarks The Canadian Electrical News. The head office is in Montreal, Mr. James Kent being the general manager. The telegraphic business of the railway was established in 1886, since which time its growth has been very rapid. The Toronto office, naturally one of the most important, is situated in the Board of Trade building at the corner of Front and Yonge streets. Mr. A. W. Barber is superintendent of the Ontario division, and Mr. D. G. Sturrock local manager at Toronto. When the business was established seventeen years ago, it was handled by twelve wires and a staff of six operators, twelve messengers and four clerks. To-day thirty-six wires



JAMES KENT, OF MONTREAL, QUE.

General Manager Canadian Pacific Railroad Telegraphs.

are required to handle the business, while the number of operators has been increased to thirty-five, the messengers to fifty, and the clerks to fourteen. As an indication of more recent development in the company's business, it may be stated that within ten years the traffic of the Toronto office has fully doubled.

The general offices and receiving room are located on the first floor of the Board of Trade building, and the operating department on the seventh floor. Messages are conveyed from the receiving offices to the operating room and vice versa by a pneumatic tube system operated by a "Roots" blower driven during the day by an engine in the building and when required at night by an electric motor. The operating

room contains switchboard capacity for seventy wires and accommodation for seventy sets of instruments—eight quadruplex instruments being in use. Current for the wires and instruments is furnished by motor generators situated in a separate room. They are twelve in number, of the Lundell type, and were manufactured by the Sprague Electric Company, of New York. Connection is made by means of twelve 5-conductor cables (one cable to each machine) with the switchboard, which is bolted to a framework of angle iron secured to the floor and ceiling. On each side of the switchboard are the rheostats, one for each machine, while above are the ammeter and voltmeter, of Weston make. The current is obtained from the Toronto Electric Light Company, but there is also an emergency switch for connection with the electric plant at the Union Station in case the current from the Toronto Electric Light Company should fail. The generators are wound for 225 volts, the secondary rating being as follows: One of 110 volts, two of 30 volts, three of 130 volts, three of 225 volts, and three of 400 volts.

The operating room now handles an average of 4,500 messages per day, in addition to from 60,000 to 70,000 words of press matter. This department is in charge of Mr. F. C. Robertson, circuit manager for the Ontario division. Mr. Robertson has acted in this capacity since the inception of the Canadian Pacific Railroad Telegraphs, previous to which time he was associated with the Dominion Telegraph Company, and later with the Mutual Union Telegraph Company and Postal Telegraph-Cable Company.

The city branch offices are forty in number, located in all sections of the city. A staff of linemen is kept constantly on duty for repair work, under the direction of Mr. E. A. Speer, foreman.

A Long-Distance Submarine Telephone Cable.

The Anglo-Belgian telephone cable was opened for service on June 8. This cable forms the submarine portion of the London-Brussels telephone line, the entire length of which is 24½ miles. The cable forms 54.2 miles of this, and is the longest submarine telephone cable which has yet been laid. The cable consists of four stranded conductors, each insulated with gutta-percha armored with brass sheathing and steel wire.

"Air Wave" Typewriter the Latest.

An interesting sequel to the discovery of wireless telegraphy is said to be found in the invention by Prof. A. Kamm of an "Air Wave" typewriter, whereby, it is claimed, messages written on one machine are transmitted by wireless telegraphy to another machine and are then printed directly on a tape. The machines are said to be so delicately adjusted that "interference" is impossible. Prof. Kamm is an English engineer and member of the Royal Institution.

There are no fragments so precious as those of time, and none so heedlessly lost by people who can not make a moment and yet can waste years.

The International Telegraph Conference.

THE DINNER.

In connection with the International Telegraph Conference in London, a dinner was given on the evening of May 28 by the submarine telegraph companies at the Hotel Cecil. Sir John Wolfe Barry presided, and the company, numbering nearly 500, included Lady Wolfe-Barry, Lord and Lady Tweeddale, Lord and Lady Strathcona, Lord Allerton, Lord and Lady Kelvin, Mr. J. C. Lamb, C. B., and Miss Lamb; Mr. Brodrick, M. P., Sir John and Lady Denison-Pender, Rear-Admiral Sir J. L. Wharton, F. R. S., and Lady Wharton; Lady Caledon, the Baroness D'Indham, Sir Robert and Lady Hunter, Sir Horace and Lady Tozer, Sir W. R. Brooke, Sir Albert and Lady Cappel, the Hon. Henry Copeland and Miss Copeland; Sir Henry and Lady Fischer, Baron Alfred Fries, Sir John and Lady Glover, Mr. H. Allerdale Grainger, Sir Henry and Lady Mance, the Hon. Henry Marsham, M. L. G. Metaxas and Mlle. Marie Metaxas; Sir Walter Peace, the Hon. George Peel, Sir William and Miss Preece; the Hon. W. P. Reeves, Mr. Alexander Siemens and Mrs. Siemens; Sir Spencer Walpole, Major-General and Mrs. Webber, Mr. Underdown, K. C., Professor Silvanus Thompson, F. R. S., and Mrs. Thompson; Professor John Perry, F. R. S., Major O'Meara, Colonel Hozier, the Prime Warden of the Goldsmiths' Company; M. F. H. Delarge, Professor Grylls Adams, F. R. S., Mr. and Mrs. Webb, Professor Ayrton, F. R. S., Mr. A. B. Walkley, Mrs. Walkley, Dr. G. Hennyey de Henne, Mr. J. Ardron and Mr. T. W. Stratford-Andrews.

After the toasts of "The King" and "The Queen," the chairman proposed that of "The rulers of all other countries." He said he felt certain that the sentiments which actuated Britons towards their beloved Sovereign were felt also by all the delegates present to the rulers of their respective countries. He therefore gave them the toast with every sentiment of respect and veneration.

The chairman next proposed "Success to the International Telegraph Conference and welcome to the representatives of foreign administrations." He said he felt highly honored at being allowed to occupy the chair, and to be the mouth-piece of the companies whom he happened to represent in wishing them all a hearty welcome to London. From very small beginnings in 1851 and 1858 that great conference had assumed a world-wide importance. It was not until 1871 that the cable companies were admitted to the conference. He hoped the delegates of all nations would allow that that was a salutary departure and had added greatly to the utility of the conference. The companies represented that evening had a mileage of 100,000 miles of cable, from which figure it would be seen that their interests were of no light importance in matters which were dealt with at the conference. The meetings which had taken place since the com-

panies were admitted were held at St. Petersburg in 1875, in London in 1879, in Berlin in 1885, in Paris in 1890, and at Budapest in 1896. Now they were proud to welcome the delegates once more in the old City of London. The cable companies wished the delegates a most hearty welcome. They recognized in them friends and comrades in a great enterprise. They knew that many of them were friends of long standing and valued for their varied attainments. There were many subjects in telegraphy which required mutual consideration of possibly conflicting views. Friendly conference insured the exchange of ideas on those subjects, and enabled a broad view of the whole matter to be taken. The experience of mankind was that there was no such solvent of difficulties as a dinner. Dr. Johnson said that the dinner was the greatest event of the day, and another philosopher said that the way to the heart was best found down the throat. They thus hoped that a dinner of that kind would not only be agreeable to their guests, but useful in furthering the objects with which they were met. He trusted that, if any comparison was made between the conference of 1903 and the other delightful conferences at which so many of them had assisted, the comparison would not be unduly unfavorable to that of the present year.

Mr. J. C. Lamb, the president of the conference, responding in French, said that the delegates were very much touched by the kind words with which Sir John Wolfe-Barry had proposed the toast, and at the cordial manner with which it had been received. For himself he knew perfectly well that he did not owe to his own merits the honor of presiding over that conference, but that it was due to the kindness of others. His object would be to make harmony reign, and he felt that his task would be easy, because he had the good fortune to be intimately associated with telegraphs, and he knew that, whether they belonged to the State or to the great cable companies, those who were associated with telegraphs were united by the bonds of sympathy and friendship. There were many influences at work which tended to arouse difficulties and jealousies among nations, but they could all congratulate themselves that the tendencies of the work in which they were engaged were in a quite opposite direction. The co-operation of the entire world in matters relating to telegraphy must have a preponderating influence in favor of peace. In the name of the delegates he thanked them with all his heart for that magnificent entertainment, and for the cordial welcome which had been offered to them.

Mocs. Delarge (Belgium), the doyen of the conference, also responded. He said that two days previously he had demonstrated the fact that submarine cables had contributed enormously to the progress of civilization by uniting the sympathy of the world. That evening they could point with admiration to the fact that they had accomplished another prodigy in assembling in that hall so very numerous and so very distinguished a company.

This concluded the speeches and the guests

then adjourned to the Victoria Hall, where a concert took place.

The American cable companies were represented by George Gray Ward, of the Commercial Cable Company, and by D. Le Rougetel, of the Western Union Cable Company.

The King, shortly after his arrival at Windsor, on June 15, received Mr. Austen Chamberlain, M. P. (Postmaster-General); Sir George Murray (Secretary to the Post Office); Mr. J. C. Lamb, C. B., C. M. G. (Second Secretary); Mr. G. W. Smyth, C. B. (Assistant Secretary); Sir H. C. Fischer (formerly Controller of the Central Telegraph Office); and other officials and many members of the International Telegraph Conference, including the representatives of the American cable companies. The delegates, about 300 in number, travelled to Windsor by special London and South-Western train, arriving shortly after 3 o'clock. Lord Esher, Lieutenant-Governor of the Castle, met the party on behalf of the King at the station, and the guests, among whom were several ladies, drove to the Castle and inspected St. George's Chapel and the State apartments. Soon after 4 o'clock the King received the delegates in St. George's Hall, the Queen, Princess Victoria, the Prince and Princess of Wales, and the Royal children being also present. The principal delegates were presented to the King, who, it is said, recognized the Portuguese representative, whom his Majesty remembered seeing when in Portugal. Refreshments were served to his Majesty's guests.

The delegates, who were highly delighted at the gracious welcome accorded them by the King, left Windsor shortly after 5 o'clock on their return to London. Mr. Shipley, the Mayor of Windsor, was present during their departure.

The Lord Mayor and the Lady Mayoress gave a State reception and conversation at the Mansion House, on the evening of June 15, to Mr. A. Chamberlain, M. P., and the members of the International Telegraph Conference now meeting in London.

Commended for its Truthfulness.

The Boston Commercial publishes the following "true story," contributed by a correspondent respecting "a young actor who is rapidly working his way to the topmost rung in America's firmament of histrionic fame":

"Few of the many devoted admirers of Theophilus Golightly, who is so brilliantly supporting Mrs. Starrow by his vivid, yet simple, impersonation of Gustave, in 'Camille,' even suspect that he is an accomplished telegraph operator. In fact, few of his intimates are aware of the fact, yet such is the case, he having learned the business at odd moments while at Harvard College. One day Theophilus was strolling along the ocean beach when he noticed a strange appearing object in the water. Upon examination he discovered that it was the end of a broken telegraph cable

and his practised eye informed him that a message was being sent over it—the passage of the electric current causing a discoloration of the copper readily distinguishable to the experienced. Theophilus fortunately happened to have a telegraph instrument in his vest pocket. Hastily affixing it to the cable, he was able to rescue an important cablegram to one of the leading financiers in New York city, which would have been entirely lost had not Mr. Golightly happened along just as he did. After receiving the message he succeeded in attracting the attention of the London operator and informed him of the break in the cable so that he refrained from sending any more despatches until repairs had been made. It is needless to say that if Theophilus Golightly ever desires to become a dramatic star there is a certain New York financier who willingly will become his backer."

You should have been a press agent, Mr. Correspondent, remarks the Commercial. You have marvellous capabilities along that line—capabilities that should carry you into the front rank of that guild with great celerity. And the greatest of these is truthfulness—the one thing upon which newspaper editors insist when considering contributions, particularly if they relate to the stage or stage folk.

Not By a Long Shot!

Go to the top of Pike's Peak; take a great big rifled cannon and a great big projectile and about thirty miles of copper wire. Fasten the wire to the projectile, load the cannon with the latter, point straight upwards and fire. Then what?

According to a Chicago man's theory, the big projectile, with the wire attached, will go on and on and on until it plunges into the "electric sea," which he believes envelops this globe; and there, being beyond the action of gravitation, it will remain. Then the electricity will flow down the copper wire in such quantities that it will supply all the telegraph instruments, all the trolley engines, all the door bells and all the electric machinery in the world.

Just think of it! But should it flow down too fast what could be done with it? That's a question of vital importance. Meanwhile do not worry. The big gun hasn't yet been fired and the order has not yet been given for the copper wire. There is as yet no assurance that an "electric sea" envelops the earth thirty miles up, nor any conclusive proof that the laws of gravitation are inoperative in any part of the known universe.—Newark Advertiser.

W. T. Henley's Telegraph Works Company, Limited, which concern now operates a large plant at Woolwich, England, has decided to erect another extensive plant on American lines. The new factory will be devoted to the manufacture of underground cables. The company has recently secured some important British contracts, in competition with American firms.

The American Cable Across the Pacific.

The laying of the Commercial Pacific cable is one of the most notable events occurring in the commercial and industrial history of the country. Its completion so that messages were transmitted over its entire length from San Francisco to Manila, in the Philippines, on the Fourth of July,



CLARENCE W. MACKAY.

President of the Commercial Pacific Cable Company, Commercial Cable Company and the Postal Telegraph-Cable Company.

while fulfilling the promises of a date long previously appointed, yet showed a progress and activity in cable laying that speaks volumes for the energy and resources of the Commercial Pacific Cable Company. And it is particularly gratifying that this great enterprise has been achieved by private capital and without aid from the Government.

It was expected that the final splice would be made so that messages might be transmitted early in the day, but difficulties and delay due to high winds and a strong tide off the Hawaiian shore, retarded operations so that it was 10.15 in the evening before the announcement that communication was established was received. At 10.50 o'clock President Roosevelt sent the first message which was to Governor Taft, at Manila, Mr. George H. Usher, superintendent at New York, of the Postal Telegraph-Cable Company, acting as operator. It was as follows:

"July 4, 1903.

"Sagamore Hill, Oyster Bay, Long Island, N. Y.

"Governor Taft, Manila:—I open the American Pacific cable with greetings to you and the people of the Philippines.

"THEODORE ROOSEVELT."

This is Governor Taft's message in reply to the President:

"Manila, July 4.—To President, Washington: The Filipino people and the Americans resi-

dent in these islands are glad to present their respectful greetings and congratulations to the President of the United States conveyed over the cable with which American enterprise has girded the Pacific, thereby rendering greatly easier and more frequent communication between the two countries.

"It will certainly lead to closer union and a better mutual understanding of each other's aim and sympathies and of their common interest in the prosperity of the Philippines and the education and development of the Filipinos. It is not inappropriate to incorporate in this, the first message across the Pacific from the Philippines to America, an earnest plea for the reduction of the tariff on Filipino products, in accordance with the broad and liberal spirit which the American people desire to manifest toward the Philippines, and of which you have been an earnest exponent."

These messages, sent around the world, immediately followed:

"To Mr. Clarence H. Mackay, President Commercial Pacific Cable Company:—

"Congratulations and success to the Pacific cable, which the genius of your lamented father and your own enterprise made possible.

"THEODORE ROOSEVELT."

Mr. Mackay received the message of the President and sent an answer from west to east at 11.53.45. It returned at 12.02.45. It read:

"Oyster Bay, L. I., July 4, 1903.

"To the President, Oyster Bay:—

"I thank you deeply for your message and I earnestly hope that the Pacific cable, by opening wide horizon of great East, may prove a useful factor to the commerce of United States.

"CLARENCE H. MACKAY."

The new cable also carried many other messages to Governor Taft from distinguished personages, including Gen. A. W. Greely, Chief of the Signal Corps; former President, Grover Cleveland; Seth Low, Mayor of New York, and Governors of different States. Mr. Mackay himself was the recipient also of numerous congratulatory telegrams and notes, coming from Governors of many States, from P. C. Knox, the Attorney-General; Gen. A. W. Greely, Morris K. Jesup, president of the New York Chamber of Commerce, and others.

The publisher of TELEGRAPH AGE sent the following:

"I desire to extend to you the hearty and sincere congratulations of TELEGRAPH AGE at the auspicious finish of the laying of the Pacific cable. It is an event deserving of the acclaim it is receiving around the world, in which your family name, represented in father and son, is most honorably and indissolubly connected, standing forth at once a magnificent monument to American enterprise and to the great systems of which you are the head."

It is a curious result of the unequal race between electricity and the course of sun-light around the earth that according to the almanac a

message starting from New York around the world at 5 A. M. today would arrive at Midway at 10 P. M. yesterday, at Guam at 7 P. M. today and at Manila at 6 P. M. today. It would pass through India at 3 P. M. today and after having made an excursion from today into yesterday it would return to New York again today shortly after it started.

Another message leaving New York at 5 P. M. today would arrive at Guam at 7 A. M. tomorrow. Continuing its journey around the world it would arrive at Suez at midnight tonight and return to New York today, a few minutes after it started.

In their courses they would pass through historic cables and waters. The cable which would carry them from Manila to Hong Kong is the one which was lifted and cut by Admiral Dewey on April 25, 1898, to cut off the Spaniard's means of communication with Spain. The cables which would carry them from Aden to Suez rest with Pharaoh's army in the waters of the Red Sea.

To compare previous feats in cable transmission over long distances by that just accomplished, we recall the fact that on May 16, 1896, at the National Electrical Exposition, held in the Grand Central Palace, New York, to demonstrate the promptness of modern telegraphic service, a message written by the Hon. Chauncy M. Depew, was sent from New York to Chicago, Los Angeles, San Francisco, Vancouver, Winnipeg and Canso, to London; thence via Lisbon to Gibraltar, Malta, Alexandria, Suez, Aden, Bombay, Madras,

the British Pacific Cable from Vancouver to Australia. A message was started from Ottawa, Canada, by way of Canso, N. S., to London, thence to Cape Verde Islands, Ascension Island, Cape Town, Durban, the Mauritius, Cocos Island in the Indian Ocean, thence to Perth and to Adelaide in Australia. It left Australia at Brisbane and passed on to Norfolk, Fiji and Fanning Islands, thence to Vancouver and back to Ottawa. The time of transmission was 6 hours and 3 minutes.

By the Commercial Cable system and its close connections the course of President Roosevelt's message around the world was by the Postal Telegraph Company's land lines from Oyster Bay to San Francisco, thence by the Commercial Pacific Cables to Honolulu, to Midway, to Guam and to Manila. From Manila to Hong Kong the message passed by the cable which was lifted and cut by Admiral Dewey in 1898. From Hong Kong it went to Saigon, to Singapore, to Penang, to Madras, to Bombay, to Aden, to Suez, to Alexandria, to Malta, to Gibraltar, to Lisbon and to the Azores. Between Hong Kong and the Azores it had passed by foreign cables. At the Azores it was taken up again by the Commercial Cables and sent to Canso, to New York and to Oyster Bay. The time of transmission was 12 minutes.

The following table shows the time of transmission for around the world messages, from New York and various points, and the distances:

						Total Lengths	
New York,	5	A. M.	July 4th.	5	P. M.	July 4th.	
Chicago,	4	"	"	4	"	"	
San Francisco,	2	"	"	2	"	"	
Honolulu,	11	P. M.	" 3rd.	11	A. M.	" "	5,526
Midway,	10	"	"	10	"	"	6,911
Guam,	7	"	" 4th.	7	"	" 5th.	9,604
Manila,	6	"	"	6	"	"	11,313
Hong Kong,	5	"	"	5	"	"	12,049
Singapore,							
(via Saigon)	5	"	"	5	"	"	13,626
Penang,	5	"	"	5	"	"	14,025
Madras,	3-30	"	"	3-30	"	"	15,523
Bombay,	3	"	"	3	"	"	16,221
Aden,	1	"	"	1	"	"	18,110
Suez,	12 noon	"	"	12	Midn't	" 4th.	19,519
Alexandria,	12	"	"	12	"	"	19,758
Malta,	11	A. M.	"	11	P. M.	"	20,671
Gibraltar,	10	"	"	10	"	"	21,797
Lisbon,	9-30	"	"	9-30	"	"	22,189
Azores,	8	"	"	8	"	"	23,242
Canso,	6	"	"	6	"	"	24,940
New York,	5	"	"	5	"	"	25,835



GEORGE G. WARD.

Vice-President and General Manager of the Commercial Cable Company and of the Commercial Pacific Cable Company.

Singapore, Hong Kong, Shanghai, Nagasaki and Tokio and back again to New York, where it was received by Mr. Thomas A. Edison. The time of transmission was fifty minutes.

Another and later instance occurred on December 5, 1902, to commemorate the laying of

The total length of the Commercial Pacific Cable being 8,300 nautical miles, it is interesting to note the weight of the different materials used in its construction:

Iron and steel wires 19,000,000 pounds; jute yarn 2,010,000 pounds; preservative tapes 5,090,000 pounds; brass sheathing 52,000 pounds; copper 3,600,000 pounds; gutta percha 2,310,000 pounds; preservative compounds 4,220,000 pounds. Of preservative tapes 306,000,000 yards were employed. The whole work was completed in eighteen months after the signing of the contract.

The personnel of several of the staffs of the Commercial Pacific Cable Company are as follows:

Manila—C. Cuttriss, superintendent. (tempo-

rary); E. Desaonee, assistant superintendent; W. S. Parkes, W. H. Grant, Chas. J. O'Connor and Wm. J. Kealey.

Guam—D. Coath, superintendent; W. Pimley, C. Mills, H. Taylor, J. J. Haynes, Jas. Broomfield and three Chinese servants.

Midway—B. W. Colley, D. Morrison, O. C. Read, H. P. Butler, A. Moore, Dr. Martin Crook, O. J. Floren and three Chinese servants.

The last section of the Commercial Pacific Company's cable has been laid, thereby completing the entire line of telegraph from San Francisco to the Philippine Islands, a distance of over 8,000 miles, and bringing to a successful conclusion the greatest and most difficult of submarine cable enterprises undertaken in the history of ocean telegraphy. The route followed is unique for its lack of natural stations, traversing as it does the greatest uninhabited waste of water on the globe. Up to the time when this enterprise was undertaken the Government of the United States had been able to connect by telegraph with Manila only by a route containing fifteen or sixteen separate stations. That supplied by the Commercial Cable Company, which did not differ essentially from the other cable routes, required that a cablegram from Washington to Manila should take the following course: To New York by land; to Canso by cable; to Fayal in the Azores, by cable; to Lisbon by cable; to Gibraltar by cable; to Malta by cable; to Alexandria by cable; to Suez by land; to Auen by cable; to Bombay by cable; to Madras by land; to Singapore by cable; to Saigon, Cochin China, by cable; to Hong Kong by cable; to Manila by cable—the distance being 14,000 miles and the number of transmissions fifteen. For this service our Government was paying up to the end of the Philippine insurrection at the rate of about \$400,000 a year for its own messages.

The permanent and vital union which had been established between this country and the Far East made it in the last degree inadvisable that our Government should rest satisfied with the means of communication with that part of the world which it was compelled to employ. It was universally recognized that an all American cable had become an absolute necessity. On February 10, 1899, President McKinley addressed a message to Congress directing attention to the necessity of establishing telegraphic communication with the Philippines via Hawaii and Guam. "The present conditions," he said, "should not be allowed to continue a moment longer than is absolutely necessary." Congress resumed consideration of the subject, and a series of hearings were had by committees of the Senate and the House. Expert opinion on every phase of the subject was elicited, and many different plans for bringing about the laying of cable were submitted, discussed and passed upon. As indicating the fertility of cable propositions, it may be stated that several years before President McKinley addressed himself to the subject, between September 20, 1895, and December 14, 1896, twelve bills had been introduced

to the Senate and the House, all relating to the construction of a cable across the Pacific. Some bills were in favor of one promoting company and some in favor of another, and still others in favor of the construction of the cable by the Government. Bills were reported and passed in one House, only to fail in the other. The project received the strongest support in the Senate, which successively passed bills both to subsidize private companies and for the construction of the cable by the Government, the main object being to secure action which would be ratified by the House. But when the Senate passed a bill favoring private construction, the House wanted Government ownership, and when the Senate passed a bill for Government construction, the House wanted a private company to build it.

This kind of experience continued until the winter of 1901, and would probably not yet have been exhausted but for the timely intervention of the late John W. Mackay, who offered to lay the cable without subsidy or guarantee of any kind, and solely as a private business enterprise. This offer lifted the whole subject out of the maze of discussion of pros and cons of Government ownership, and might be supposed to have promptly ended the conflict of Congressional doubts and deliberations. But, notwithstanding Mr. Mackay's liberal offer, which involved the expenditure of millions of dollars without risk to the Government, several bills were introduced in the next session of Congress in favor of Government construction, and apparently endless obstacles were thrown in the way of the new enterprise. The sentiment of the country, however, as evidenced by the many commendatory resolutions of chambers of commerce and other commercial bodies, was most emphatically in favor of a private cable. Congress was at length brought to recognize this fact, and even in the House, where the obstructionists were most numerous, when the bill favoring Government ownership came to a vote it was rejected by 116 to 77.

Meanwhile the Commercial Pacific Cable Company was incorporated under the laws of the State of New York on September 23, 1901, with a charter authorizing it to lay and operate a submarine cable from California to the Philippine Islands, by way of the Hawaiian Islands. Some years previous the Navy Department had taken soundings across the Pacific Ocean for the purpose of determining a suitable route for a submarine cable, and after a careful survey that Department had recommended the route from San Francisco to the Hawaiian Islands, thence to the Midway Island, Island of Guam, and the Philippines. After Congress had decided against a Government cable, and an amicable understanding had been arrived at between the cable company and the Government, these soundings were turned over to the company for their information. When it is remembered that the greater the depth the greater the pressure and strain upon the cable, and that the average depth by the route selected was about three miles, the magnitude of the task marked

out by these soundings becomes sufficiently impressive. The route had four great ocean stretches of 2,276, 1,254, 2,593 and 1,490 miles. On the first, between San Francisco and Hawaii, the mean depth is 2,500 fathoms, with a maximum of 3,073; on the second, between Hawaii and Midway Island, the mean depth is 2,000, the maximum 3,026; on the third, from Midway Island to Guam, the mean depth is 2,600, with a maximum of 4,900, and with sudden and great fluctuations; on the fourth, from Guam to Luzon, the average depth is 2,200, the maximum 3,400 fathoms. To bring home the significance of these immense depths in cable laying, it may be explained that the amount of cable in suspension necessarily varies according to the depth and rate of paying out. In 2,900 fathoms, with the ship steaming at 8 knots per hour, no less than 25 miles of cable are in suspension in the water. Two and a half hours are occupied in such case by any particular point in the cable from the time of leaving the ship to touching the bottom. Then, at any time during the paying out, which may last, with a long section, some ten or fourteen days, a storm may arise or some mishap may occur on board, resulting in the loss of the cable in a depth of three miles below the surface. In such a case the date of its recovery cannot possibly be predicted; the interruption may last for three or four days, or it may be for as many weeks or months.

The contract for the first section of the cable from San Francisco to Honolulu was awarded to the India Rubber Gutta Percha Telegraph Works Company, of London, England. The reason for placing the order with an English firm was the lack of sufficiently high development in the methods of manufacture of submarine cables in this country. In an enterprise where the penalty for failure would have been so serious and where the risks were unusually numerous, it was necessary to take advantage of all the skill and experience which English manufacturers had gained during years of practice in this business. The cable steamer *Silvertown* with the first section of the Pacific cable on board, consisting of 2,413 nautical miles and weighing 4,807 tons, left the English coast on September 23, 1902, arriving at San Francisco on December 4. The short end of the cable having been laid with appropriate ceremonies, the *Silvertown* left for Honolulu on December 15, arriving off the island on Christmas Day, and on the morning of December 26 the cable was buoyed during a heavy gale at a point about 35 miles from Honolulu. During the trip from San Francisco to Honolulu 200 miles of cable were laid per day.

The cable company had undertaken to complete the line to Manila by 1904, but the work of manufacture had been so diligently pushed and the business of laying the cable was so thoroughly systematized that the representative of the company was able to announce at the time the shore end was laid in San Francisco that completed communication would be established with the Philippines by the Fourth of July, 1903. A separate

contract had been awarded to the Telegraph Construction and Maintenance Company for the remaining sections of the cable from Honolulu to Midway-Guam and the Philippines. On the 9th and 10th of April last the steamships *Colonia* and *Anglia*, belonging to the manufacturers, left London with over 6,000 miles of cable in their tanks. The *Colonia*, which laid the longest section of the cable, that between Guam and Midway, 2,606 nautical miles, is the largest cable ship afloat. She has a dead weight capacity of nearly 11,000 tons, and is capable of carrying close upon 4,000 nautical miles of cable in the four large tanks built up in her holds. Not even the *Great Eastern*, whose displacement was much larger, could find room for half the mileage of cable which the *Colonia* can comfortably carry. The dimensions of the steamship *Anglia* are somewhat smaller than those of her sister ship, the *Colonia*. She can carry 8,620 tons dead weight, and during her recent operations in the Pacific did carry some 3,300 miles of cable.

The *Anglia* arrived at Manila on May 22, and having landed the shore end on May 24 she paid out the cable through St. Bernardino Strait and on toward the Guam. She arrived at Guam on June 2 and established cable communication between Manila and Guam, on June 4. The *Colonia* has proceeded direct to Guam where she arrived on May 27. At that point the engineering and electrical staffs were transferred from the *Anglia* to the *Colonia*, and the latter vessel began to perform her share of the work by laying the cable from Guam to Midway. The work was performed with marvelous precision and success, and with but a single interruption, at the rate of 200 miles a day and an average speed of 9 knots an hour. The *Colonia* arrived at Midway on June 19, and communication between Midway and Guam was thus established, connecting Midway with the telegraphic systems of the world, and leaving only the small section between Midway and Honolulu to be laid to complete the encircling of the globe. The *Anglia* had proceeded from Guam to Midway, and on the arrival of the *Colonia* at that point her engineering and electrical staffs were transferred back to the *Anglia*, and the latter began to pay out the Midway and Hawaii section of the cable. Waikiki, near Honolulu, is the landing place of the San Francisco-Honolulu and the Honolulu-Midway sections of the cable, and with the news of the arrival of the *Anglia* at this point the announcement went out to the world that the great enterprise of bridging the Pacific with a submarine cable had passed into history, and that an American Pacific cable was at last a reality.

The Commercial Pacific Cable is a work which cannot fail to be of great benefit to the country commercially, politically and strategically. True to its traditions, the Commercial Cable Company has made its advent on the Pacific the signal for the reduction of cable tolls. Prior to the incorporation of the Commercial Pacific Cable Company, in September, 1901, the rate for messages from New York to the Philippine Islands was

\$2.35 per word; in November, 1901, this rate was reduced by the European cable companies to \$1.66 per word. The simple announcement of the intention of the Commercial Company to lay a Pacific cable thus effected a saving of 69 cents per word. Before entering on the execution of its contract the Commercial Pacific Cable Company bound itself to charge but \$1 per word from San Francisco to China; \$1 a word from San Francisco to Manila, and 50 cents from San Francisco to Honolulu, the last named rate to be reduced within two years to 35 cents a word. This Pacific cable will greatly increase the value and efficiency of the United States navy. It will keep the Government in close touch with the military and civil authorities in the Philippine Islands, and will in many other respects greatly strengthen the bond between the United States and its possessions in the Pacific. The extension of the cable to China will be the next step in its development, and by no means the least important one, since the advancement of American commercial interests in the Chinese Empire imperatively demands the provision of an all American line of ocean telegraphy.

For all the beneficent results which are likely to attend the completion of this great enterprise the country has to thank the late John W. Mackay, whose energy and perseverance had done so much for commerce by the introduction of new enterprise into the business of Atlantic telegraphy, and without whom it is safe to say that there would have been no American Pacific cable for years to come. Mr. Mackay's history is too well known to require recapitulation, but that simple business-like letter of his to the Hon. John Hay, Secretary of State, may be cited as a historic document of exceptional value and significance. It was on August 22, 1901, that Mr. Mackay wrote: "I beg leave to state I wish to lay and operate a submarine cable, or cables, from California to the Philippine Islands by way of the Hawaiian Islands, by means of an American corporation to be organized hereafter. I ask no subsidy or guarantee in connection with the same. Before proceeding, however, I respectfully write to ascertain the conditions upon which such cable may be landed at the various points under the jurisdiction and control of the United States. The same conditions that have been prescribed by the United States in connection with the landing of Atlantic cables owned by domestic corporations will be satisfactory to me in connection with this proposed enterprise. I do not ask and shall not expect the United States Government to insure or indemnify me against any existing landing rights of any company or companies, in respect to the Philippine Islands or any other islands in the Pacific. If the conditions should be substantially the same as those upon which the Atlantic cables were landed, and if the same should be indicated to me without delay, I would arrange immediately for the manufacture and undertake to have the first section between California and the Hawaiian Islands completed by September, 1902, unless pre-

vented by *force majeure*." It took a long time to arrange the conditions, and to overcome the factious opposition of members of Congress who were bent on defeating the enterprise in the interest of other companies. But undismayed by the tardiness with which his offer was accepted, Mr. Mackay went on with the manufacture of the cable, and completed the connection within a few months of the date which would have been kept but for the obstacles which were interposed, and the enterprise which he will have the enduring fame of having founded has been carried to a triumphant issue a year earlier than its most sanguine promoters anticipated.

As cable stations the Midway Islands and Guam have a unique interest for the people of the United States. Midway Islands are two small islands situated about half way between the California and China coasts. They are surrounded by a coral reef of about 18 miles in circumference. The reef protects the islands from the high seas. A rift in the reef admits vessels of 18 feet draught into a deep and safe harbor. The Wandering Minstrel was wrecked here in 1887. Captain Walker, his wife and crew, lived for fourteen months on the islands, subsisting on fish and the eggs of sea birds until they were rescued. The islands have been placed under the jurisdiction of the Navy Department. Lieut. Commander Hugh Rodman, U. S. N., has been appointed Governor. Temporary buildings have been erected for the accommodation of the little cable colony. Permanent buildings will be erected before the end of the year. For the present food will be supplied by special steamer, but there is good reason to believe that vegetables can be made to grow with proper cultivation. Fresh water is obtained easily. The Pacific Mail Steamship Company at one time maintained a coaling station and a staff of men on the islands. The coaling station did not prove satisfactory, and was therefore abandoned. With this exception the establishment of the cable station is the first attempt to inhabit the islands permanently. The Japanese have been going there to kill sea birds for the sake of their feathers, but this traffic will now be stopped.

The persons who make up the cable colony sailed from Honolulu on April 23 on the steamship Hanalei. They reached Midway on the 29th, and sent the following account of their landing:

"Wednesday, April 29, at 5:15 A. M., the joyful news of land on our starboard bow quickly spread through the ship, and all the passengers soon appeared on deck to obtain the first look at lonely Midway. At this early hour very little could be seen, only a few breakers; at 6 A. M. we could make things more distinctly, and we could see that Midway Islands were simply a few miles of sand, with a few small bushes and a reef of coral rocks around it, with the exception of an entrance at the northwest part. Much excitement was caused by the discovery of a two masted vessel at the northwest part of the island, which we at first thought was a wreck, but as we

approached nearer we found that the schooner was at anchor in the harbor and proved to be the Japanese schooner *Yeijumaru*. From what we can learn she has been here some time. The vessel carries a crew of thirty-eight men, who have been killing birds, etc. At 8 A. M. we anchored in Seaward Roads, about 2 miles from Sand Island, and at 8:34 A. M. our superintendent, Mr. Colley, accompanied by Captain Piltz, of Hanalei, and Mr. Coath, the Guam superintendent, landed in a small boat to decide upon the best place for the landing of our supplies, etc., after which they returned on board Hanalei, and we commenced landing our lumber and supplies. The Midway Islands were discovered by Captain Brooks, of the *Gambia*, in the year 1859, who took possession of them for the United States, and they have since been used by the Pacific Mail Company, who intended to form a depot here for trans-Pacific steamers instead of Honolulu. The reef encircling Midway Islands is 18 miles in circumference, and without an opening except on the western side; at the northwest point is a small patch of breakers, a few detached rocks, and then commences a compact coral wall about 5 feet high and from 6 to 20 feet wide, which continues for 6½ miles to southward and eastward, when it loses its uniformity of surface and presents a line of detached rocks very little more than awash for 2½ miles to the southward there. Off the centre of Eastern Island the rocks dip under water, but reappear 2 miles to the westward, whence they again show a continuous wall about 4½ miles to the westward and northward, ending there and forming the south side of the entrance to Welles Harbor. This entrance is about three-quarters of a mile broad, and from its northern side to the northwest rocks there is a bed of coral with from 1 to 16 fathoms, showing above water in one place, with occasional breakers in the northern, eastern and southern portions of the reef, which are steep to the rocks. The bottom is visible in two places only, near the northeast and southeast points, where the soundings are shown on the chart. There is very little vegetation on the island, and the glare from the sand is very trying to the eyes. The observation spot near the southwest end of the island is in latitude 28° 12' 22" north, longitude 177° 22' 23" west. Welles Harbor is formed by a gap in the coral reef, and is roomy and safe, with the entrance open to the westward and 250 yards wide where most contracted. The bar, which is well within the entrance and on which there is no swell during the trade winds, is narrow, and has an uneven bottom of coral rock and small sand holes; its depth varies from 16 to 21 feet, but changes so often and suddenly as to make unsafe to count on crossing without getting a cast of 18 feet. Inside the bar the depth for anchoring is from 5 to 7 fathoms, white sand; the harbor is therefore only fit for vessels drawing less than 18 feet; vessels of deeper draught must lie in Seward Roads, picking out a sandy bottom to anchor on.

"Fish of many varieties are plentiful. Millions of birds are on the island, including curlew and plover. Water may be procured by digging from 4 to 7 feet, and by filtration becomes drinkable. At present we are sleeping in tents, but in a few days expect to have our sleeping quarters finished. Five buildings are being erected as temporary quarters, which consist of an office, storeroom, dining room and kitchen, sleeping quarters for staff and Chinese quarters; from April 29 to May 29 we experienced only one stormy night, which was on May 13, and during that night the outer covering of our tent blew away and we had to shift our sleeping quarters for that night to the storeroom."

The latest news from the expedition to Guam is as follows:

"On arrival at Guam the Hanalei was boarded by Health Officer Dr. Lees, of the U. S. M. C., who, after careful examination, found ship and company in satisfactory condition. The superintendent accompanied the doctor ashore, drove to Agana, a distance of 5 miles, over a perfect road, and immediately called on Governor Sewell, who gave him a most cordial reception. At the Governor's invitation the night was spent with him at the palace. The company's plans for the establishment of the cable station were fully explained on Monday morning, May 18. The Governor accompanied the superintendent, and several hours were spent in examining the proposed site for station, it being necessary to hew a pathway through the dense jungle which covers the peninsula. After thorough investigation a lot was chosen on the plateau, 65 feet above the water, the land then sloping gently to the north and northwest to higher levels. Two large lighters belonging to the Western Commercial Company, of Agana, partially manned by natives, were engaged to assist in landing cargo. A gang of natives were set to work to dig a trench for the cable and a large number of bullock teams were hired to convey material from the beach to the station site. Several men were also engaged to clear the jungle and prepare land for building. Mr. Wood, C. E., and assistants proceeded to lay out company's property. Two responsible men were selected by the Governor's aide to guard material at landing place day and night. The work of landing freight from ship was necessarily slow on account of the shallowness of water on the reef, which extends outward from shore a distance of about one-quarter mile, even the flat bottom sampans or lighters being frequently held up for an hour or more, and the ship's boats being unable at low water to make the trip. The work of removing goods from beach to site was also slow, on account of steep grade of trail and the primitive method of conveyance, the cattle employed being undersized and the two wheel carts only carrying a small load. All this, combined with the distaste of the native employes for work, prevented us from making that rapid progress which we desired. There being only eight days from our

arrival until the time the cable ship was due, our own men, without exception, turned to with a will, using their utmost exertions to push matters along, so that by Sunday evening, May 24, the office was practically completed, or sufficiently so to enable the building to be used. The trench, which had to be hewn through coral rock, some of which was exceedingly hard, was in a fair state of completion. No drills or blasting material were obtainable till the last boatload of freight left the Hanalei at 10 A. M., Tuesday, May 24, and orders were immediately given Captain Piltz to sail for Honolulu via Midway."

The Telegraphic Tournament.

A general meeting of all interested in the American Telegraphers' Tournament Association met in Philadelphia, on the evening of July 8, with Mr. John Wintrup in the chair. There was a large gathering and much interest and enthusiasm was shown by all present in the progress already made, and much work for the future was mapped out. It was decided that the first prize should be for all-around work, including sending and receiving in the three classes—commercial, code and press.

The committee appointments were as follows, to which, however, additions will be made:—

Finance: D. A. Mahoney, chairman; James H. Wilson, H. J. Cosgrove, J. L. Osmond, F. E. Maize, W. Rigby, C. Dannenhower, V. G. Hudgins and J. Hennessey. Reception: W. S. Sullivan, chairman; J. S. Greene, C. E. Stump, J. W. Dyer, R. C. McCreedy, W. N. Tuttle, R. C. Kirkpatrick, G. W. Wood, I. D. Maize and W. Koons. Program: F. E. Maize, chairman; W. Fitzgerald, Cyrus Moffett, R. C. Murray, Jr., and J. W. Reed. Printing: E. L. Irving, chairman; S. W. Graham, A. W. Baldwin and T. P. Murphy. Contest Rules: R. C. Murray, Jr., chairman; D. J. Burns, Minor M. Davis, C. E. Bagley, Fred Catlin and Miles Dunn. Press: E. C. Abrams, chairman; Roby McCarthy, J. A. Moran and A. P. Sell. Prizes: A. S. Weir, chairman; J. A. Sisk, D. Good, J. V. Berger, Leo Miller, Joseph Dolphin and W. S. Burleigh. Hall: G. W. Dunn, chairman.

It is thought that the exposition will take place in the commodious Exposition Hall, Philadelphia, and that the contests will be held on Friday and Saturday, October 30 and 31. It is proposed that manufacturers and others be invited to make a display of telegraphic and other allied apparatus during the term of the tournament.

Mr. Thomas A. Edison having consented to act as a member of the New York committee, that body is now fully constituted as follows: J. B. Taltavall, chairman; Thomas A. Edison, J. C. Barclay, M. M. Davis, Fred Catlin, Morgan Jones, G. W. Conkling, H. R. Clark and A. E. Marr.

The angels may have wider sphere of action, may have nobler forms of duty; but right with them and with us is one and the same thing.

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.]

DENVER, COL., WESTERN UNION.

After our heavy business on account of floods in different parts of the country, things are becoming normal again at this point, although there are still quite a number of new men on the list.

Mr. A. C. Parsons, our assistant wire chief, left for San Francisco, July 1, to accept service with this company at that point.

Mr. Parsons is a protege of Old Farmer Lawton, starting under him as a check boy a number of years ago, and has steadily worked himself up to be assistant wire chief. The force remembered him with a fine traveling case just before his departure. Mr. Parsons having been identified with the Denver force so long, was very much beloved by all. He makes the change on account of his wife's health.

Mr. F. M. Hutchins, formerly our overland chief, has been appointed to succeed Mr. Parsons. Mr. Hutchins has been with us a number of years and is a fine gentleman, well liked by everyone, and no doubt will make a success in his new duties.

Mr. Wm. C. Lampe has been appointed as a regular carrier by the Government.

Mr. Harry Thomas left July 1 for a visit to Indianapolis, his old home.

Captain McConaha has resigned and left for Kansas City. The Captain having invented a new balloon, expects to devote his entire time in giving exhibitions at the summer resorts of that place. The Captain made quite a hit in Denver with his invention.

New arrivals:—Mr. E. E. Carnes, formerly of Reno, Nev.; W. H. Skidmore, recently night chief, El Paso, Tex.; O. L. Michaels, Fort Scott, Kans.; Mr. Shannon and C. L. Gatch.

C. E. Smith, who for the past two years had charge of the Morgan Brokerage Co. at Colorado Springs, has accepted a position with Otis and Hough, brokers, of Denver, and is also enabled

to put in a few hours at this office in the afternoon.

H. C. Briggs, recently manager of Cripple Creek, Colo., office, has been placed on the regular night force.

Chas. H. Bronson, of Kansas City, is working our Kansas City local out of Denver.

H. E. Madison, who has been stationed at Trinidad, Colo., for the past year, is back with us again.

Miss Carita Rogers, from a branch office, has accepted a place in the main office.

L. R. Mowray, of Portland, Ore., has been assigned to the first Chicago line, nights, together with Mr. Cooper, of Butte.

Miss C. M. Tyler, formerly of Omaha, Neb., alternates with Mr. Joe. White on our Omaha-Denver local.

Mr. P. J. Foley has been transferred from a pool-room to the night force.

Mr. A. E. Littler, formerly of Lincoln, Neb., has been appointed manager of the Equitable Building office, this city. Mr. Littler comes to Denver very highly recommended.

Mr. E. E. Lash, our assistant night manager, spent his Fourth in Colorado Springs.

B. F. Bush is spending his vacation in the mountains.

Miss C. E. Smith, having passed the winter in Florida and Cuba, has returned and reports feeling greatly improved because of her trip.

Mr. Joe. Gargan, who is considered quite an authority on all ball matters, has been assigned the ball park this year.

PHILADELPHIA, PA.

My motto—honorable dealing. THERE MUST BE MERIT, and lots of it, too, in the Fay-Sholes machines when the acknowledged greatest merchant of the United States places in his Philadelphia store at one time 49 Fay-Sholes, removing a like number of other typewriters, many of the latter comparatively new. Booklet and easy monthly payment plan upon application to me. All makes typewriters rented \$3.00 per month. D. A. Mahoney, Western Union Telegraph Company, Philadelphia.

POSTAL.

Hot days! Hot business! Hot offices! Everybody desirous to get away on vacation! Under these circumstances Chief Operator C. A. Stimpson is entitled to much sympathy, considering the trying ordeal he is under while endeavoring to arrange matters satisfactory for a host of vacation applicants.

Doctor Moran was assigned the care of the excess of special matter filed at the Wilmington, Del., office consequent to the incineration of a negro by an enraged populace.

While en-route to New York city, Mr. Walter Houghtaling did not forget to make us a friendly call.

Mr. G. H. Yetman, of the Boston, Mass., District Messenger Company, was a recent visitor to this

City of Brotherly Love and was well taken care of by Manager C. E. Bagley.

The excessive strain of constant bonus work on the first New York local has made it necessary for Mr. Frank Holloway to enter upon an extended rest.

The receiving clerks at the front counter have had a compact telephone switchboard installed in their department. All the various 'phones heretofore connected direct by the telephone exchanges will now make their final connections through this switch.

ST. PAUL, MINN., WESTERN UNION.

Mr. Harry Ward, for a number of years quadruple chief, has resigned, and is now with the brokerage firm of Edwards, Wood & Co., this city. Mr. N. Lee has been appointed to the vacant position.

Mrs. Scanlon, of this office, is in the hospital recovering from a dangerous operation for cancer, which she recently underwent.

Mr. A. B. Oviatt, of the Long Distance Telephone Company, of Chicago, was a recent caller.

Traffic Chief W. Strang is on the sick list and during his absence Mr. J. S. McConnell is filling his place most acceptably.

The business quarters of the company have been enlarged, another room being added to the present office and the working force in the manager's department are to be congratulated on their increased facilities.

Electric lights have been installed and the night force is more than pleased with the change, for during this hot weather there is some comfort working, the 13 arc lights having replaced some 52 gas jets which, when all going, made the heat of the room something unbearable during the heated term.

The Morse Social Club members keep up an interest in their club during the summer months by giving monthly trolley parties to some of the many pleasure resorts around the Twin Cities. The next will be on the twenty-third instant when the objective point will be Wildwood.

Harry Chappel has resigned the position of all-night clerk and has been succeeded by Mr. Smith, of the manager's department.

Mr. and Mrs. Barry have returned to duty after a month's pleasant outing in the woods of northern Wisconsin.

NASHVILLE, TENN., WESTERN UNION.

Although you do not hear from our office very often, neither it nor we are dead by any means, if judgment may be based on the amount of business we are handling. Business is extremely heavy for this time of the year, and prospects are very flattering for its continuance the remainder of the summer.

William Knoch, chief of the way department, was recently promoted to be assistant wire chief, and is succeeded by R. L. Redford, of the New Orleans circuit, T. B. Adams being assigned to the place made vacant by the latter.

W. L. Mounce has just returned from a vacation of a month passed with his brother in Augusta, Ga.

Recent arrivals: J. A. Hibbs, C. W. Beasley, G. W. Silvertooth, C. A. Grier, R. E. McQueen,

R. L. Turpin, L. A. Tatum, C. E. Young, J. S. Moffatt.

J. O. Newman has gone to New York to try his hand in the main office there.

J. Harry Lewis, of the St. Louis office, was a recent visitor.

CHICAGO, ILL., WESTERN UNION.

Miss Dot McCracken has returned from St. Paul, where she has been in attendance upon her sick father for several weeks.

Harry Church, formerly wire expert here, has been a recent visitor, and was greeted by many friends.

Evidently traveling agrees with Brother Frank Likes, who recently took a position with Chicago, Burlington and Quincy Railroad Co. as assistant traveling electrician. His visit here of a few days showed that he has grown quite fleshy and rosy.

William Atherton has gone to his home in New York State for a few weeks.

Conrad Fray has arrived from Buffalo, where he has been for the past year. He generally spends the summer with us, then goes back to his home in Buffalo for the remainder of the year.

E. G. Herman recently returned from Armour and Co., where he has been for a couple of months. G. W. Lark has also returned.

When Miss Thompson reached her place at the desk on June 27, she found awaiting her a handsome album resting on a brass stand. It was a gift and a card attached bore the following: "Miss Thompson, compliments of 'Bogy.'"

Gilbert B. Guthrie and J. J. Tourney were sent to Quincy, Ill., to help out at that point during the rush of business, incident to the floods along the Mississippi River.

Mr. Robert Watkins and family have gone on a trip to Michigan, at a point where the fishing is said to be excellent.

Joseph Cummins was a recent visitor here.

The "Clarmont" and "Lone Star" baseball teams, previously noticed in this column, are devoting much time to practice.

Business is good and everyone that chooses is making extra, an opportunity much appreciated by the boys.

CHICAGO, ILL., POSTAL.

Mr. George W. Sheldon, of this office, has resigned and opened the Postal office at Burlington, Iowa. This is a good telegraph point and the Postal should get considerable business right at the start.

Mr. George Burmeister, lately with a broker, has returned to the main office.

Mr. J. J. Ahern has resigned and accepted the Postal report job at Rockford, Ill.

Mr. Thomas Walsh is now a first class bonus man. Messrs. Dick Raabe, Richard Ahlers and John Harrington are the latest benedicts of this office. We offer our congratulations and best wishes.

John Brosnan and Rex Coombs have resigned and accepted service with the Western Union.

Mr. Adkins, who was set upon recently and severely beaten, is recovering at the Mercy Hospital. He will probably lose the sight of one eye.

Mr. A. C. Anderson, formerly manager of the Postal at Sioux City, Iowa, is now chief of the delivery department.

MONTREAL, QUE., CANADIAN PACIFIC.

Although it was rumored some time ago that a general shuffle would soon take place in regard to promotions and other changes, nothing has yet been done in that direction up to the present writing. The only changes, however, which have occurred since my last writing was the resignation of one of our brilliant lady operators, Miss M. Duncan, who has since been married. Before her departure she was presented with a handsome souvenir. Mr. Fred Allan, who promises to be one of the finest telegraphers of the day, also resigned and has gone to Chicago. Another resignation is that of C. E. McWha. It is understood that he will be transferred to Bamfield, B. C. He has in the meantime left for Nova Scotia, where he will spend a short period before his departure for the Pacific Coast. Mr. F. Burns has been transferred to Ottawa and Messrs. C. H. Labonte and A. L. Decourcey have been transferred to Vancouver, B. C.

Arrivals: G. F. Greenfield, Ottawa; Miss M. Willett, Miss M. Labelle and J. Burke, Halifax, N. S.; T. Waugh and Miss Bessie Hemlow, Windsor, N. S.; J. H. Hawarth, Brantford, Ont.; Miss M. Jones, Gaspé; A. T. King, Toronto, and A. L. Burns, J. D. McAneeny and A. E. Burns, Quebec; N. J. Ferguson and J. O. Caron, Montreal; R. E. Chapman and S. F. Moster, New York.

Mr. R. McLachlan, superintendent of the Pacific Cable, Bamfield, B. C., and Mr. J. H. Hemming of the Commercial Cable Company, Hazel Hill, N. S., were recent visitors.

Mr. J. Girard has been promoted to the operating staff. C. Laurie has been transferred to St. James street ticket office, vice J. Tracey, who is relieving the operator at the Windsor Hotel office. Nere Lafond has returned from Lachine, where he had been subbing for the past month.

M. Walton Jones, of New York, spent several days visiting his many friends in this city recently.

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.

OPERATOR'S WANTED, in all important cities, to act as agents for The Alexander Improved Model Word Register. Write for terms and territory.
Amos L. Bougher, care operating room,
Western Union Telegraph Company,
195 Broadway, New York.

WESTERN UNION.

The annual outing of the American District Telegraph Company's employes will take place at Cove Hotel, West New Brighton, Staten Island, on Saturday afternoon, July 25. The price of

tickets has been placed at \$2.00 each. Many interesting athletic sports have been arranged for by the committee. A baseball game will be included, the contest to take place between teams known respectively as the "Uptown" and "Downtown." Dinner will be served at 7 o'clock, after which a mixed programme of entertainment will be provided.

The Yetman Transmitting Typewriter has been installed in the offices of the National Transit Company, No. 26 Broadway, New York, and at Oil City, Pa., and the entire force of operators of the company are receiving instructions thereon.

The Dow, Jones & Co.'s leased wire from New York to Boston and to Philadelphia, is handled by a Yetman operator. The Transmitting Typewriters are also in use at the United States Steel Corporation, American Can Company, Corn Products Company, General Electric Company, American Tin Plate Company, in the general offices of the Delaware, Lackawanna and Western Railroad Company, and in several brokerage concerns.

James Mullen, formerly of Philadelphia, became the father of a daughter on July 10.

Mr. Frank T. Scherrer, private secretary to President R. C. Clowry, has just returned from a visit paid to Chicago, his former home, he having accompanied Col. Clowry when the latter came to New York to assume the presidency of the company. Mr. Scherrer had a most enjoyable visit among relatives and friends and returns looking much better for his brief vacation.

Mr. George M. Eitemiller, of the Western Union Telegraph Company, Pittsburg, Pa., was a recent visitor.

POSTAL.

On July 4, the date that the first message was transmitted over the new Commercial Pacific Cable, our building at 253 Broadway was handsomely decorated with flags in honor of the occasion. Large flags were gracefully draped over the lofty Broadway entrance, and from nearly all the windows of the large building, both on the Broadway and Murray street fronts, flags floated from protruding poles. The effect produced was striking and elicited much favorable comment.

Chief J. T. Needham has been transferred to the electrical engineer's office. Chief Fred Zeiss assumes the duties formerly performed by Mr. Needham.

Mr. J. G. Good has been appointed assistant city chief.

Miss Mabel Bryant and Charles D. Petry, both of whom were for a long time employed in this office, were married June 29 at the residence of the bride's parents in this city. Their wedding tour of a week carried them to the mountains.

Mr. Charles Obst, night chief, has returned from his vacation.

George Thompson is absent on a two weeks' vacation to Sullivan County.

Mr. Robert Mitchell is now in charge of the Postal wires at the "World" newspaper office.

Late assignments are: Mr. V. C. Poe to the Pittsburg bonus wire; Dr. Landon to the Buffalo bonus wire; Mr. W. M. Hawes to the first Boston bonus wire and Mr. C. O. Smith to the second Boston bonus wire.

Mr. Dan Murphy of the first Boston bonus wire has gone on a two months' vacation to recuperate after several years' continuous bonus work.

Lewis Skadden, a late arrival from Denver, Col., received the first cable despatch from Manila, via San Francisco.

The following are on the waiting list: D. J. Sullivan, H. S. Neuson, H. J. Finn, C. Messman and G. Teeter.

THE POSTAL CLUB OUTING.

The first summer outing of the Postal Club, which is to be continued as an annual affair, was held on the afternoon and evening of June 27, at Semler's Midland Park, Grand City, Staten Island. A number of very interesting athletic contests were held for which some handsome prizes were offered. The winners and prizes of several of the events were: Half mile race, silk umbrella, Chas. F. Mason; quarter mile race, box of cigars, A. R. Wilcox; one hundred yard dash, gold stick-pin, A. R. Wilcox; throwing baseball, gold fob, C. J. Anderson. There was also a game of baseball between two picked teams, captained by F. J. Kernan and G. W. Fleming, in which Captain Fleming's team carried off the honors by the score of 11 to 10. After the games an excellent dinner was served, to which the members and their friends did full justice. During the dinner a number of prizes were drawn for. The lucky ones and their prizes were: R. Underhill, stick-pin; A. R. Wilcox, gold cuff-buttons; W. B. Dunn, silver fob; G. W. Fleming, stick-pin; C. J. Anderson, cuff-buttons; P. W. DeBaun, pipe; W. C. Daviet, belt; M. F. Conway, key-ring; W. B. Davids, tie-clasp; J. Hennessey, card-case.

Mr. J. J. Cardona acted as chairman in the absence of the president, Mr. W. S. Hallett. Telegrams of regret were received from Mr. W. S. Hallett, C. A. Seymour and R. Vollbracht. Among those who attended were C. J. Anderson, W. Axelson, W. Horton Baker, J. H. Boyle, E. Frederick Bradley, J. J. Cardona, T. Carter, M. F. Conway, W. B. Dunn, W. C. Daviet, R. J. Doyle, W. B. Davids, P. W. DeBaun, G. W. Fleming, C. A. Good, R. J. Hall, T. E. Hammond, W. A. Hayes, J. Hennessey, F. J. Kernan, C. F. Mason, W. H. Mathews, W. V. Stahl, W. Tenney, R. Underhill, A. R. Wilcox, F. F. Burritt, F. J. Campbell, J. Dolan, J. J. Leahy, C. C. Anderson, S. S. Blackwell, J. F. Cleverdon, W. Cahill, J. G. Clark, J. H. Hess, W. H. Hyde, G. A. Hubbell, S. F. Jones, H. J. McNamee, C. A. Rhodes, C. Rimpo, R. H. Roberts, H. H. Sherman, A. P. Tobey, E. M. Underhill and M. J. Doran.

THE ASSOCIATED PRESS.

Mr. B. S. Cowen, for many years the agent of The Associated Press at St. Paul, Minn., has been transferred to New York City, and has been succeeded by Mr. Hendrick Brusse, of Chicago.

Mr. Fred A. Holden was the first of The As-

sociated Press operators in St. Paul, Minn., to enjoy a two week's vacation which the Association recently concluded to grant to all of its employees.

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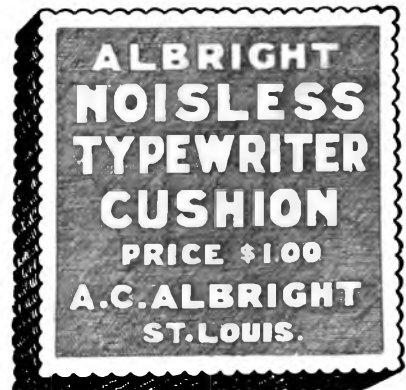
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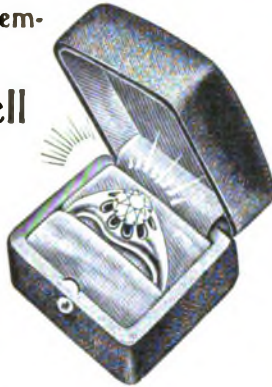


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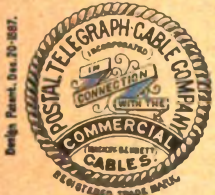
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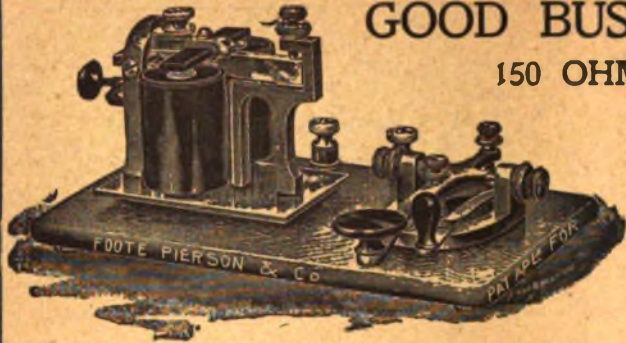
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