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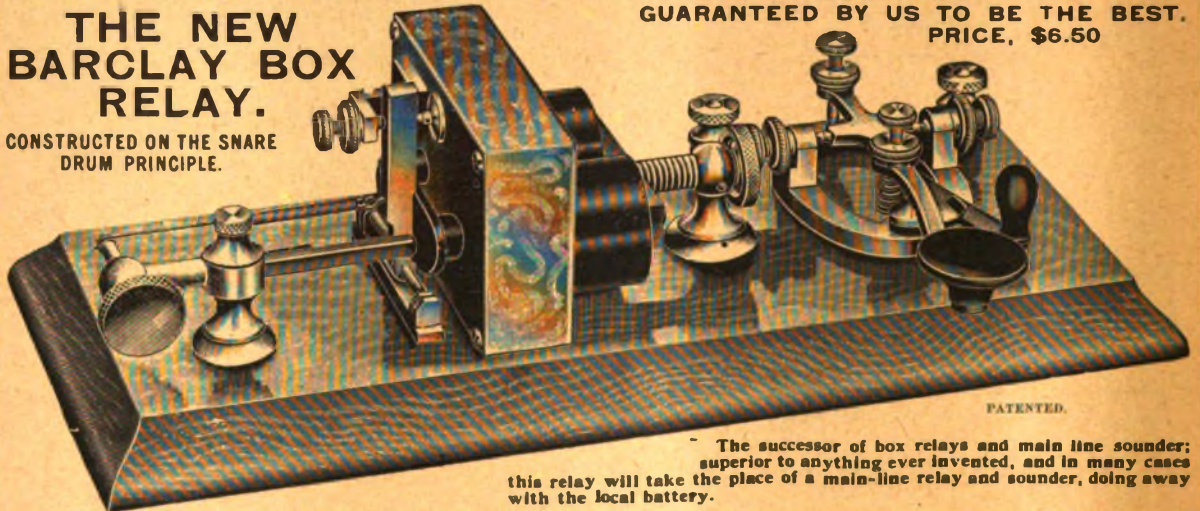
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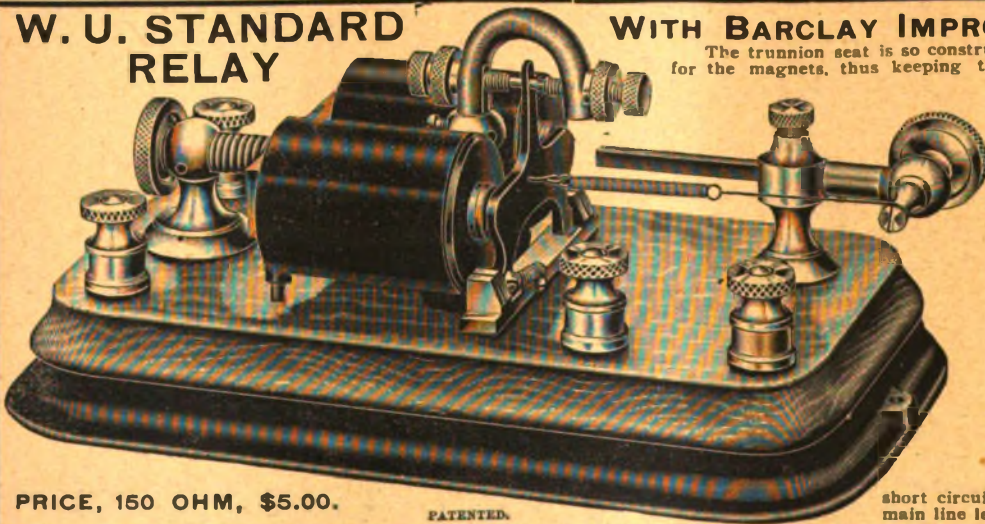
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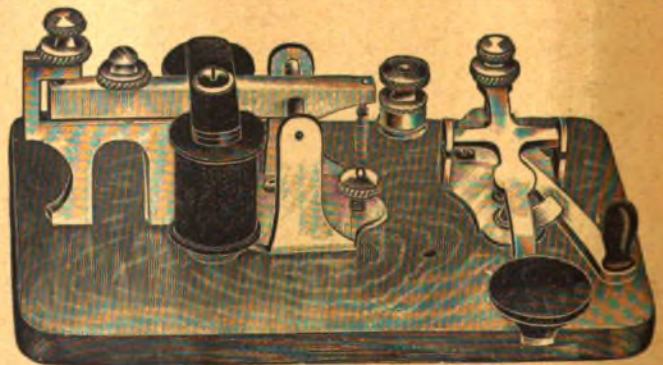
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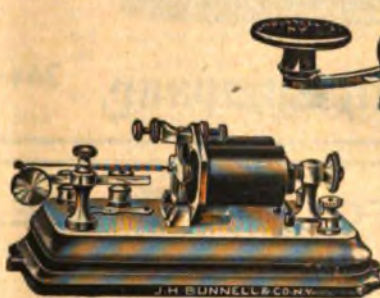
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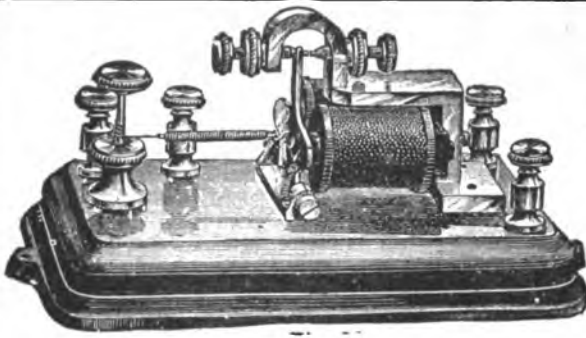
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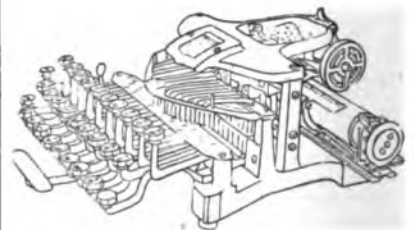
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THE TELEGRAPH AGE

No. 19.

NEW YORK, OCTOBER 1, 1903.

Vol. XX.

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SOME POINTS ON ELECTRICITY.

BY WILLIS H. JONES.

As Others See Us—Apropos of Promotions.

In every large telegraph office there often exists among a certain number of employes a feeling that they have been unjustly overlooked when a comparatively younger man in point of years of service is promoted over their heads. They cannot or will not understand the choice and usually attribute the selection to influence, or favoritism.

Now, let us look at the matter from the other side of the fence, and view ourselves as others see us. Individually, we usually measure our own worth by the possibly one or two virtues we believe we possess and either depreciate or entirely ignore the many objectionable features of our entire combination. From the other side of the fence the vision is reversed. The single virtue is there, to be sure, but it seems so lonely in its setting that the picture to others is not wholly pleasing and the discriminating eye immediately wanders elsewhere. The meaning of this is that we are usually judged impartially by our average qualifications and not by the possible

gifts suspected, or by the glimmer of one or two spasmodic spurts we may have made in a single direction.

It is hard for us to see the fitness of a distant observer's conclusions in its application to ourselves, but we readily agree with him, as a rule, so far as it concerns the other discontents. This evidence of our weakness does not seem to strike home and the lesson is usually lost.

Let us analyze a few cases for the purpose of illustration:

"A" applies for promotion, basing his claim on the ground that during his long years of service he has been faithful, punctual, and never has been reprimanded for neglect of duty. It is true he has never acquired any electrical knowledge but that he thinks he could soon learn. He sees another man appointed to a higher position and wonders why he is left behind.

His friends will not enlighten him as to the cause of his failure to obtain advancement, possibly for fear of hurting his feelings, and he would not believe his enemies, if he has any, were they to tell him the truth.

This is the explanation. The manager upon reading the application sizes up the proposition somewhat like this: "He certainly deserves some credit for the claims made, but from a business point of view the company can quit even with him, for while he has been long in the service, has he not also been given needed employment for the same length of time? His punctuality has also been equally to his own interest as he has been paid in full for every minute he worked. Unfortunately, by his own admission, he has served all these years without ambition enough to learn even the rudiments of the apparatus before him, and now evidently applies for promotion solely for the sake of the few additional dollars that he would gain thereby. He is not progressive and I can see no promise in him. What I want is a man who will push forward, not remain stationary."

Here is another case: "B" applies for promotion on the grounds that he is well informed concerning electrical matters and is familiar with the details of the business, but he is turned down because he has a past. Drink has been his ruin notwithstanding heroic attempts on his part to reform. In many ways he would really be a desirable selection, but cannot be trusted. He is unreliable.

Others fail through various shortcomings. One is a cripple and could not withstand the strain; another's health is against him; still another is too excitable, or ill-tempered to have

charge of a division, while some are lacking in dignity or other qualifications necessary to fill the position successfully.

Of course managers sometimes err in judgment, and now and again a position is secured through influence, but such latter appointees, unless possessing natural ability, usually drift to the bottom or remain stationary the rest of their lives. They never rise above their true level or accomplish anything, and when history records the names of the world's benefactors they are fortunate if posterity succeeds in finding them mentioned at the bottom of the list under cover of the ambiguous words, "and others."

It is high time that operators should begin to find fault with themselves—not with others. It is very pleasant to bask in the sunshine and take life easy through long years of service, but success does not come that way. Achievements are accomplished by hard and persistent struggles, but struggles which become pleasures when one's heart is in his work. If one has not the initial, inborn desire to learn for the mere sake of the intellectual knowledge itself, he will never become an expert or achieve great fame, but it is nevertheless possible to cultivate the trait to the extent that he may yet rise above the average and find work both pleasant and profitable.

The fact is well worth noting that nearly every man who has been promoted to a more responsible position, had previously been unknowingly sowing seeds of promotion by accomplishing something at a time when there was nothing in sight except the bare pleasure he derived from his work.

When the inspectors canvass the field in search of progressive material the man who has accomplished something reaps his reward, while the mere "punctual" one of "long years of service and leisure" sees the plum fall to another.

In conclusion let us repeat. Find fault with ourselves—not others. Employers are constantly looking for eligible men and are actually at their wits end to find them. This is no idle assertion.

Begin by admitting that the measurement of our calibre, as judged by others, is somewhat near the mark; acknowledge our weak points, and then make a fresh start. It is "never too late to mend."

Recent Telegraph Patents.

No. 738,525, telegraphic transmitter; Joseph P. Conway, Los Angeles, Cal. A series of key levers each of which carries notches that are arranged to make and break the circuit in accordance with Morse characters when the lever is pressed by the finger.

No. 738,725, system of submarine communication; Simon Lake, Bridgeport, Conn. A system of wiring laid upon the bed of a body of water and connecting together various stations under water and on land and provided with means

whereby a submarine vessel can make connections at a station and communicate with the other stations.

No. 12,151, apparatus for amplifying electromagnetic signal waves; John S. Stone, Boston, Mass. This patent and the one following relates to a method of developing high-frequency simple harmonic electromagnetic signal waves consisting in producing oscillations of corresponding frequency in a primary circuit and causing the same to be inductively reproduced at an increased amplitude in the elevated conductor. No. 12,152, method of amplifying electromagnetic signal waves; John S. Stone, Boston, Mass.

Wireless Telegraphy.

Signor Marconi went recently to Glace Bay, Nova Scotia, to install at the wireless telegraph station there some of the recent inventions which have not yet been used. He sails for Europe October 3.

Mr. Marconi has completed arrangements for a space-telegraph station at the St. Louis exposition. The location is just east of the Cascades and on one of the highest points in the exposition grounds. Twenty-five thousand square feet will be necessary for this station, which will be one of the most complete in the world. From this point wireless messages may be sent to any part of St. Louis or suburbs with a mast not higher than 15 feet.

The first official test of the De Forest space-telegraph system on Lake Michigan, by which it is proposed to maintain communication between lake steamers during their trips across the lake and the shore stations, was made on September 12th. Some difficulty was at first experienced in getting the apparatus to work satisfactorily, but after a few careful adjustments communication was established and successfully maintained at a distance of 20 miles from shore, beyond which distance the vibrations became quite weak.

The new De Forest space-telegraph station at Cleveland, Ohio, has been completed. It is situated at Irvington-on-the-Lake, about 10 miles east of the city, on a bluff 30 feet above the water. Two large masts have been erected a hundred feet apart and at right angles to the shore of the lake. The masts are among the tallest of their kind in America, being 207 and 209 feet high, respectively. This station is only a part of the De Forest system which is intended eventually to embrace the Great Lakes in a chain of stations.

The naval wireless telegraph apparatus at the torpedo station at Newport, R. I., is now in working order. Communications is had with the station at Montauk Point, a distance of forty-five miles; and on several occasions communication was had with the ships of the North Atlantic squadron off Wood's Hole and while they were going to New York. The pole at the torpedo

station is 168 feet above high water, and is situated on the west side of the island, facing the entrance of Narragansett Bay. There are now at the station six men under instruction, who are to be transferred to the various ships after they have become proficient.

The United States, Germany, Austria, Spain, France and Russia have signed the protocol adopted at the recent International Congress for Wireless Telegraphy held in Berlin. Great Britain and Italy have so far withheld their signatures. The protocol provides for the construction of coast stations to allow communication with ships at sea regardless of the particular system of wireless telegraphy which a vessel may happen to use. To facilitate the transmission of messages the protocol also provides for the technical explanation of all systems. A general system of charges is to be introduced. Services are to be so regulated that signal stations will disturb one another as little as possible. Great Britain thought no system should be used unless a certainty of connection was guaranteed. Italy supported Great Britain, declaring that it could not repudiate its agreement with Marconi.

The Cable.

Mr. E. Ricketts, of the Direct United States Cable Company, Halifax, N. S., spent a few days in New York while on his vacation.

Major G. O. Squier, Signal Corps, U. S. A., is now in San Francisco, having completed his tour of foreign service, and is now stationed as chief signal officer of the military department which includes California, Nevada and the Hawaiian Islands. His experience in cable laying in the Philippines has been quite unique.

The German cable steamship Von Podbielski arrived at New York, September 20, from the Azores. She will lay the shore end of a new cable from Coney Island to a point 110 miles out at sea for the North German Sea Cable Company. The other part of the cable will be laid from the Azores to meet this part. It is expected that the cable will be complete within a year.

Mr. John H. Smart, superintendent of the Commercial Cable Company, New York, who has experienced considerable trouble with his eyes lately, and which compelled him to remain at his home for a short period, has returned to his office and states that he is feeling "first rate." Mrs. Smart, who has been very ill with pneumonia at Cape Cod, whither she went with her family for the summer, is now convalescent and will soon, it is expected, be able to return to the city.

The Pathfinder, the famous sounding and cable vessel of the Coast and Geodetic Survey, recently returned to Manila. She has made the soundings from Agincourt Island, off the farthest northern point of Formosa along the east coast of that Island to Manila. The information gained will

be used by the Commercial Pacific Cable Company, in laying its cable from Manila to Shanghai.

The Pathfinder's survey is over on untraveled course in the Pacific. It is from Agincourt Island along the east coast of Formosa to the islands of Batan, and from there southwest to Manila. The soundings show great depth in some places, in the deepest parts ranging from 3,000 to as many as 5,000 fathoms. The survey is thought to have been made over the shortest route to Shanghai.

At a recent meeting in Canada of the Chamber of Commerce of the British Empire, a resolution, offered by Sir Sandford Fleming, of Ottawa, was adopted expressing the opinion that all the self-governing British communities, around the globe should be united by a continuous chain of state-owned telegraphs. In moving the resolution Sir Sandford said that there should be a continuous chain of state-owned electric telegraph girdling the empire and encircling the globe so that in the event of interruption from any cause, telegraphic communication may, nevertheless, be maintained by sending messages in the opposite direction; that submarine portions be laid, for better security, in deep water; and that no part of the electric telegraph circle touch land which is not British. The new Pacific cable is regarded as part of the chain. The cost involved in completing the whole scheme is estimated at about \$20,000,000. It would be owned by Great Britain, Canada, New Zealand, Australia, India and South Africa.

The United States cable ship Burnside sailed for the North from Seattle, Wash., September 15, to continue the work of laying the cable from the head of the Lynn Canal by way of Sitka, the capital of Alaska, to the city of Seattle. She has a stretch of six hundred miles of cable aboard, which was transferred from the steamship Texan, which brought the cable around the Horn from New York. On board the Burnside when she sailed were General A. W. Greeley, chief signal officer of the United States Army; Colonel James Allen, of the Signal Corps, under whose general supervision the line will be laid; Captain Edgar Russell and Captain George O. Burnett, of the Signal Corps; Henry Winter, cable engineer; Lieutenant Charles P. F. Chandler, of the quartermaster's department. Captain A. H. Laffin is in command of the vessel. The Burnside proceeds direct to Juneau, where, after making a short line connection, she will start for Sitka, paying out about two hundred and fifty miles between the two towns, and continuing south from the capital by the open ocean, as far as the cable rope will reach, possibly to a point off Queen Charlotte Isle. It is expected that the entire consignment of cable on the Burnside will be laid and the vessel be back at Seattle for the final link by October 15.

Time well employed is Satan's deadliest foe; it leaves no opening for the lurking fiend.—Wilcox.

Personal Mention.

Mr. Louis De Goll, president of the Rowland Telegraphic Company, Baltimore, Md., has returned home after an absence of six months in Europe. While abroad he attended the sessions of the International Telegraph Conference held in London in May.

Mr. George G. Ward, vice-president and general manager, and Albert Beck, secretary of the Commercial Cable Company, New York, who have been in England for the past six months on business connected with the service, have returned to this city.

Col. R. C. Clowry, president and general manager; J. C. Barclay, assistant general manager; B. Brooks, general superintendent of the eastern division, and F. J. Scherrer, private secretary to Col. Clowry, all of the Western Union Telegraph Company, New York, and Charles Trippe, superintendent of the Anglo-American Telegraph Company, New York, have returned from an inspection of the cable stations of Nova Scotia and Newfoundland.

General Mention.

Charleston, S. C., is to have a new Western Union office. It is to be occupied for the first time on January 1, 1904.

Mr. C. S. Loewenthal, a well known Chicago telegrapher, has identified himself with the Regent Shirt Company of New York, for which concern he will travel in western territory.

Mr. R. L. Wadlington, formerly manager of the Postal Telegraph-Cable Company, Greenville, Miss., and lately of Birmingham, Ala., is now located with the same interests at Memphis, Tenn.

"Kindly renew my subscription for the ensuing year. Can't get along without TELEGRAPH AGE," is a paragraph taken from a letter recently received from H. D. Bartholomew, of Newark, Ohio.

Mr. Leo Miller, manager of the Broad street station office of the Postal Telegraph-Cable Company, Philadelphia, Pa., together with his son, spent a few days in New York recently while on a vacation.

The Western Union Telegraph Company at Macon, Ga., will, it is expected, occupy its new office on Cherry street, that city, by October 15. The new equipment will include two switchboards with a capacity of fifty wires each.

Mr. J. F. Reade, manager of the Western Union Telegraph Company, Colorado Springs Colo., in remitting to cover his subscription for another year writes: "I am well pleased with TELEGRAPH AGE, which seems to keep well abreast of the times."

Mr. John Hannaford Twyford, well known in New York and Virginia, now chief operator in the

Postal Telegraph-Cable office at Atlanta, Ga., will be married on October 14 to Miss Genevieve Louise Williamson, of Brooklyn, New York. Mr. Twyford's numerous friends extend to him hearty congratulations over the coming event.

Mr. W. L. Dryden, of St. George, Staten Island, N. Y., in renewing his subscription for another year, writes: "I have been a lineman for Charles Selden eighteen years, thirteen of which have been spent at Staten Island as joint lineman for the Baltimore and Ohio Railroad and the Western Union Telegraph Company. On September 1, I assumed charge of all mechanical as well as electrical signals of this road and I can therefore still use TELEGRAPH AGE to advantage."

Recent New York Visitors.

Mr. W. H. Adkins, traffic agent of the Southern Bell Telephone Company, Atlanta, Ga.

Mr. S. R. Crowder, electrician of the Western Union Telegraph Company, Richmond, Va.

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

Col. J. R. McIntosh, general counsel of the Postal-Telegraph Cable Company, Atlanta, Ga.

Mr. W. H. Doherty, manager of the Western Union Telegraph Company, Albany, New York.

Mr. W. F. Williams, superintendent of telegraph of the Sea Board Air Line, Portsmouth, Va.

Mr. I. McMichael, superintendent of the Western Union Telegraph Company, Minneapolis, Minn.

Mr. E. H. Gottschall, of the Pennsylvania Railroad telegraph service, Harrisburg, Pa. He was accompanied by his wife.

Mr. W. H. Thompson, of Harbor Gracs, N. F., the oldest telegrapher in the service of the Anglo American Telegraph Company.

Mr. Alex Craw, a well known former New York telegrapher and now division claim agent of the New York Central Railroad Company, Corning, New York.

Mr. L. S. Wild, manager of the Western Union Telegraph Company, Butte, Mont. Mr. Wild was the guest of Mr. F. B. Giles, general traffic chief of the Western Union Telegraph Company, New York.

Mr. Frank P. Foster, superintendent of the fire alarm telegraph system and secretary of the International Association of Municipal Electricians, Corning, New York. Mr. Foster was accompanied by his wife.

Mr. Joseph W. Kates, superintendent of the Postal Telegraph-Cable Company, at Richmond, Va. Mr. Kates, accompanied by his wife, came North to be present at the celebration of the one hundredth birthday of Mrs. Kates' mother, who resides at Plainfield, N. J.

Resignations and Appointments.

Charles E. Farmer has been promoted to be manager of the Postal Telegraph-Cable Company's office at Lockport, N. Y.

James P. Doyle, manager of the Western Union Telegraph Company, at Oswego, N. Y., for many years past, has resigned to enter the fire insurance business.

Mr. F. Y. O'Bannon, for many years manager of the Postal Telegraph Cable-Company, at Sherman, Tex., has been transferred to Oklahoma City, O. T., and will take care of the same interests.

Mr. E. W. Blakely, chief operator of the Postal Telegraph-Cable Company, at Columbus, O., has resigned, and has been succeeded by H. D. Abbott, promoted from the position of night chief operator.

Mr. T. A. Crawford, manager of the Western Union office at Telluride, Colo., has been appointed to preside over the same interests at Hutchinson, Kan. Mr. A. E. Littler, manager of the branch office in the Equitable Building, Denver, Colo., succeeds Mr. Crawford at Telluride.

Louis B. Biggs, for nine years chief operator, Western Union Telegraph Company, at Lafayette, Ind., has resigned to accept a position with the same company at Chicago, Ill. George Murray, who commenced his telegraphic career twenty years ago as a messenger, has been advanced to Mr. Biggs' place.

Obituary.

G. Winter, aged seventy years, an old time telegrapher at New Orleans, La., died on August 9.

Charles N. Ege, a former well known telegraph operator, died on September 24, at Phoneton, O. He was born at Carlisle, Pa., in 1868, and for ten years prior to 1898 was connected with the Pennsylvania Railroad, at Altoona, Pa. Since that time he was identified with the telephone at Pittsburg, Pa., and Phoneton, as assistant wire chief. He is survived by a widow and four children.

Municipal Electricians.

Mr. Will T. Ellet, superintendent of fire telegraph, Elmira, N. Y., was presented with a solid gold watch chain and a Masonic charm on September 13, by the Independent Hose Company, of Lestershire, N. Y.

The Railroad.

Mr. W. A. D. Short has been appointed superintendent of signals of the Cincinnati, New Orleans and Texas Pacific Railway, with office at Lexington, Ky., in charge of electric and mechanical signals, interlocking and electric light plants. The superintendent of telegraph has been relieved of these duties.

Mr. Percy R. Todd, second vice-president of the New York, New Haven and Hartford Railroad Company, and who will shortly be advanced to be first vice-president, is a native of Toronto, Que., is about forty-four years of age, and was in early life a telegrapher.

Mr. W. P. Cline, chief operator of the Western Union Telegraph Company, at Richmond, Va., to which post he succeeded the late F. D. Cudlipp when the latter was appointed superintendent of telegraph of the Atlantic Coast Line Railway, has again succeeded Mr. Cudlipp to the position of which death had relieved him. Mr. Cline's headquarters will be at Wilmington, N. C.

It is stated that the Pennsylvania Railroad is negotiating with the Edison Manufacturing Company with the view of securing a storage battery with which to light its cars. It is understood that if the order is given the batteries will be built on the general principle of the new iron-plate storage cell, which Mr. Edison invented about a year ago, with certain modifications to meet particular requirements.

The two meetings of the Railway Signaling Club, held in Chicago and New York, respectively, on September 8, as stated in "The Railroad Gazette," were well attended by local members and profitable discussions were had on the appointment of cost in maintaining and operating signals, the principal subject assigned for consideration. Mr. H. C. Hope, superintendent of telegraph of the Chicago, St. Paul, Minneapolis and Omaha Railway, presided at the Chicago meeting.

Frederick D. Cudlipp, superintendent of telegraph of the Atlantic Coast Line Railroad, Wilmington, N. C., died suddenly at his home in that city on September 14. Mr. Cudlipp was a native of Virginia, fifty-four years of age, and was an accomplished telegrapher, well known in the South. For more than thirty years he was chief operator of the Western Union Telegraph Company at Richmond, Va., and upon the consolidation of the Atlantic Coast Line and the Plant System about a year ago, Mr. Cudlipp was appointed to the position lately held by him.

The Railroad Supply Company, of Chicago, has issued its catalogue and price list, denominated No. 5, which is devoted to the consideration of highway crossing signals, electric block signals and signal and electric supplies. It illustrates and quotes prices of the "Chicago Crossing Signal," the "Chicago" type of electric block signals, their parts and all electric signal material manufactured by the Railroad Supply Company; also the R. & H. highway crossing bells, American crossing signals, O'Neil and other highway crossing alarms. The detail of information is clearly stated, and the pamphlet will find a lodgment in the office of every railroad telegraph superintendent.

The Western Union Manager at Oklahoma City.

H. G. Robinson, who has lately been appointed manager of the Western Union Telegraph office, at Oklahoma City, Okla., is still a young man, his age being but twenty-eight. He was born at Blairsville, Pa., on July 14, 1875, and moved West to Kansas with his parents, in 1880. When but thirteen years of age he learned telegraphy at Idana, Kan., and for a number of years worked for different railroads throughout Kansas



H. G. ROBINSON.

Manager of the Western Union Telegraph Company at Oklahoma City, Okla.

and Nebraska. In 1897 he entered the Western Union service at Kansas City, Mo., then under the managership of J. P. Altberger, now superintendent at Philadelphia. Mr. Robinson has had considerable experience in managing large branch offices in Denver, Philadelphia and other points, and as he possesses alertness and executive ability, he will, it is believed, give to the hustling, bustling and rapidly growing city where he is now located, an able, just and wise administration of Western Union affairs.

The English Retiring Age.

It is evident that the English Government is learning by experience that some public servants are extremely efficient and valuable at the retiring age of sixty-five years. We frequently read expressions of regret that officials have been compelled to retire from positions in compliance with post office telegraph rules at a time when they were mentally at their best. In a recent issue of the "Civil Service Magazine" we find the following:

A Treasury minute, dated the 30th day of July, 1903, gives the particulars under which certain civil servants have been retained in the service after they have attained the age of sixty-five. My Lords, in dealing with applications for prolongation, have considered that there were three main grounds upon which the retirement of an officer at sixty-five might be detrimental to the interests of the public service:—(1)

When the number of officers in a department above the prescribed age is such that their simultaneous removal would cause grave inconvenience; (2) When an officer possesses peculiar qualifications which are essential to the performance of the duties of his office, and which it would be difficult to replace by a fresh appointment; (3) Where an officer has been entrusted with the execution of a particular duty which is approaching completion, and it is found that the transfer of the work to another officer who is necessarily less familiar with it would be attended with inconvenience. As regards the civil servants on smaller salaries who are subjected to compulsory retirement at the age of sixty-five, my Lords think that every consideration, consistent with the efficiency of the service, should be shown. Cases of this sort in which service has been prolonged, are stated in Class IV. In a few instances it has been found convenient or equitable to continue an officer's services for a period not exceeding three months. In such cases it has not been thought necessary to include their names in the return attached to this minute.

Our Book Table.

"The Twentieth Century Manual of Railway and Commercial Telegraphy" gives the average operator the knowledge he needs to guide him to a mastery of his art. Full instructions of the most practical kind, couched in the form of question and answer, occupy the book with numerous diagrams for their better understanding. It contains a part on elementary electricity as well as a general exposition of technicalities of railway and commercial work. It teaches one great thing; that is, how to save time. The price of the book is one dollar which covers the prepayment of the express charges. Address, J. B. Taltavall, Telegraph Age, 253 Broadway, New York City.

"Roy and Rosyrocks," from the pen of Mary Agnes Byrne, a telegraph operator, and the author of "The Little Woman in the Spout," is a fine Christmas story of two orphans who were adopted by a poor Irish woman. Roy and Rosyrocks in company with Irish children, decide to surprise the hard-working mother by decorating the home with Christmas greens. In their eagerness to obtain them, they wander into the heart of the great city and become lost. For hours they walk the streets and finally take refuge on the steps of a fine mansion, whose owner proves to be their uncle. In gratitude for the care and kindness shown his niece and nephew, he makes the Christmas a happy one, long to be remembered in the Irish home. Cloth bound, 12 mo., handsomely illustrated. Price sixty cents, express charges prepaid. Address, J. B. Taltavall, Telegraph Age, 253 Broadway, New York.

T. M. B. Association.—Assessment No. 412, dated October 1, has been levied by the Telegraphers' Mutual Benefit Association to meet the claims arising from the deaths of Garrett Winter, at New Orleans, La.; Michael M. McTigue, at Kane, Pa., and Daniel K. Teter, at Palmira, N. J.

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

Telegraphic Bookkeeping. Twelfth Article.

BY W. H. DOHERTY.

In introducing our subject in this issue it will be necessary first to recall a paragraph that appeared in the previous article, of September 16, which read as follows:

"The business can now be sorted for entering in the check ledger, as the total receipts are known, and this action is the next move in the process of booking a day's business."

After sorting a day's business in alphabetical order for entry into the ledger, the business of the State in which the office is located should receive first attention. In fact, this part of the account should be kept in a separate check ledger apart from the rest of the account. It is not necessarily intended that the smaller offices should observe this rule, but an office reporting upwards of one thousand dollars per month, can do so with advantage. The object is to divide and simplify the accounts, which may be balanced in sections, and to make easier the discovery of errors.

In entering the day's business, a sheet known as form 40 should be used in connection with the check ledger, on which should be written the same figures as those entered on the ledger, without, however, including the names of the places under which the amounts in the latter appear. When the day's business has been completed, the addition of the entries on sheet 40, will give the total amount of the transactions for that day. By comparing this total, with that found in adding together the cash and charged accounts, a like figure, or balance, will be found.

Should an error appear, however, repeat the process just described, carefully comparing and checking with sheet 40. Experience has shown that nine times out of ten the error will be discovered in computing the amount of the several messages that go to make up one entry in the ledger.

Having now described both ways of handling a day's business, a short resume may not be out of place.

The writer's method is, to first make up the cash account from the sheets made by the different persons handling cash, then make up the charged account, which when added together will show the total receipts for the day. Sort the business for filing away, but before doing so, enter it on the check ledger, and see that the total entry on the check ledger is the same as the total receipts.

The other method is first to sort the business for filing, and enter it on form 14, (some of the larger offices use form 40 for this purpose) then re-sort again, in order to find the amount of cash and charge; and then again re-sort for entry on the ledger, the latter process bringing the conditions back to their original form, when the business is ready to be filed.

A large amount of unnecessary labor is involved in making up the total day's receipts on

either forms 14 or 40, for which there is absolutely no use, because the entry on the ledger brings the same result. As one must necessarily enter the business, amount and place on the ledger, why go to the extra work of again writing on a separate sheet the names of the places with which business has been done? It is just as easy and as safe to compute the entries for the ledger, as it is for this separate sheet, no matter whether forms 14 or 40 be used.

On a recent visit to a neighboring office, the writer saw a clerk with a stack of business in front of him, a foot high, which he was entering on form 40. That meant a good half day's work, and all for what purpose? True, when it came to entering this business in the check ledger, it could be done a little faster, but the mental note made was that one high priced clerk's time was not profitably spent in that office.

It is on this point that disagreement may result, but after giving the writer's method a good trial, he is free to believe the advantages of it will be apparent, and that its adoption will not only prove to be a time saver, but also a step toward simplifying the duties of a bookkeeper, which in turn means faster and more accurate work.

Selenium and a New Form of Photo-Telegraph.

Professor Korn, of Munich, Germany, has devised a new system of photographing by telegraph. This system depends on the property of selenium which has the characteristic of being a poor conductor in the dark, but becoming a good conductor when exposed to the light, the degree of resistance varying according to the amount of illumination to which the selenium is subjected, says the "Electrical Review." The apparatus at the sending station consists of a hollow glass cylinder which turns on its axis while moving parallel to the direction of this axis. On this transparent cylinder a photographic negative film is fastened. The rays of light emitted by the source are condensed by a lens on the point of the negative which they traverse and then strike the selenium battery placed in the interior of the cylinder. An electric current passing through the selenium, whose conductivity changes at each instant under the action of the more or less intense light that it receives, passes over the line to the receiving station. At this point the current passes through a D'Arsonval galvanometer with a light aluminum needle to a vacuum tube similar to the Geissler tube, entirely blackened save at the lower extremity, where there is a little aperture situated close above a revolving cylinder covered with a sensitive photographic film. When the galvanometer needle moves under the action of the current transmitted by the line, the curved ends of the needle approach to or recede from a metallic piece which causes currents of high frequency to illumine the interior of the vacuum tube. The light rays escape through the orifice, and the photograph is thus reproduced, point by point, as a positive image.

Mr. Edison's Ideas on Radium.

Thomas A. Edison has evolved and announced a theory which he believes solves the problem that has been puzzling scientists ever since the discovery made by Madame Curie of the peculiar properties of radium and the kindred substances uranium and thorium. The phenomenon presented by these substances, as is generally known, is their apparent property of giving off actinic rays of peculiar chemical properties, somewhat similar to the Roentgen rays, without any apparent loss of energy or bulk. Based on these observed phenomena, several new theories of matter have been put forward, all of which accept as a fact the apparent origin of the energy within the substances.

Mr. Edison's theory eliminates this contradiction of accepted natural laws, and indicates the possibility that the energy emitted by radium is merely reflected, as it were, from some unknown source.

"I have made extensive experiments with the Roentgen ray and with radium," said Mr. Edison to a representative of "Harper's Weekly," "and have come to the conclusion that these new substances are not the sources of energy, but are rendered fluorescent by the action of some hitherto undetected ether vibration or ray. Just as the Roentgen ray and the Hertzian wave remained unreared of for centuries after the phenomena of sound, light and heat were well understood, so it is not only possible but extremely probable that there are other rays in the immense gamut from sound to ultra-violet which we have not yet discovered. In my own experiments I have found that the ordinary electric arc when raised to an extremely high temperature gives off a ray which renders oxalate of lithium highly fluorescent. In the same way the Roentgen ray renders platinum baryum-cyanide, tungstate of calcium and cuprocyanide of potassium highly fluorescent—that is, the X-ray sets up in these substances a condition of activity which results in the emission from them of actinic rays and a small amount of heat.

"My theory of radio-activity is that the rays which the new elements emit are set up in the same way, the substances being rendered fluorescent by some form of ether vibration which is undoubtedly all-pervading but has not yet been isolated or measured, and which may have some extra-planetary origin. To accept any other theory is to declare one's belief in perpetual motion, in getting something for nothing.

"It is not at all strange that only two or three substances have yet been found which exhibit this phenomenon, as there are only three substances known which are rendered fluorescent by the Roentgen rays. It is a peculiar coincidence, moreover, that the only one of the known fluorescent substances that is ever found in its natural state, tungstate of calcium, is always more or less closely associated with pitchblende, from which all the radium so far made has been extracted.

"I believe this theory is capable of proof, but I

shall be content to let some one else prove it. I am through for all time with experiments in radio-activity. Two of my assistants have been maimed for life by their close association with Roentgen rays, and I have one eye badly out of focus and am suffering from severe stomach disturbances from the same cause. The new dark room laboratory which I have just completed for such experiments will remain unused or be converted to some other use."

The Telegraph Tournament.

The New York Committee of the American Telegraphers' Tournament Association, met in the office of the Yetman Transmitter, New York, on the evening of September 15, to informally talk over matters pertaining to the approaching tournament, an event which is attracting wide interest among the members of the fraternity in all sections of the country. The New York committee consists of Thomas A. Edison, J. C. Barclay, Minor M. Davis, Fred Catlin, H. R. Clark, G. W. Conklin, A. E. Marr, Morgan Jones, Walter P. Phillips, and J. B. Taltavall, chairman. The Executive Committee of the tournament association which consists of C. A. Stimpson, W. W. Donnelly, D. A. Mahoney, W. S. Sullivan, F. E. Maize, A. S. Weir, G. W. Dunn, E. L. Irving, R. C. Murray, Jr., Ellis C. Abrams, H. W. Hetzel, F. E. Sholes and C. B. Wood, were also present, with the exception of three members, to meet the New York Committee. Two hours or more, were devoted to discussing the rules and conditions of the various contests and a general exchange of views was had which brought out many valuable suggestions for the guidance of the tournament management. The chairman of the Executive Committee, Mr. C. A. Stimpson, spoke at some length testifying to the success so far achieved by the various committees.

Mr. Walter P. Phillips, in a letter, promised the tournament committee his hearty support in every possible way. Mr. Fred Catlin, who has had charge of most all prominent previous telegraph tournaments, gave the committee the benefit of his past experiences in handling affairs of this kind. It is probable that entirely new matter for transmission will be used in the various contests in the coming tournament.

Telegraphs in Abyssinia.

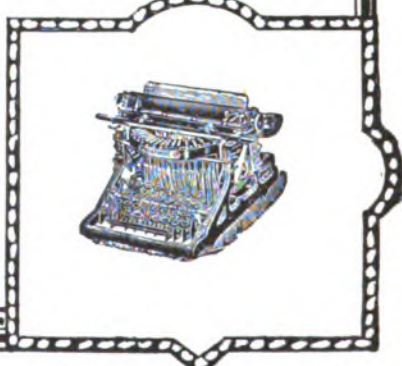
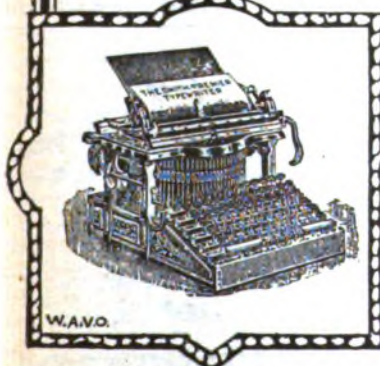
Emperor Menelek is establishing a complete telegraphic and telephonic system in Abyssinia, Africa. Both the telegraph and the telephone have been in operation for some years between the towns of Hara and Addis Abeba, and recently the seat of government has been connected by telegraph with Jibuti. There are thus 800 kilometers of telegraph line already at work in the empire. According to a statement made by the director of the telegraph line from Massowah to Addis Abeba, Eritrea and the capital of the country will shortly be in communication.

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NEW YORK, October 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.

The Folly of Indifferentism.

Never before in the history of this country has the call been so sharp for the employment of skilled labor as now, nor has the reward been so sure. As time passes and conditions governing business change, because of widening and varying demands and closer competition, the need of a keener intelligence, a more alert mind, in order to meet which, not only by the artisan, but among those employed in the higher vocations of life as well, becomes more and more imperative.

This is a truism that all admit. It applies to every department of business, and to none more so than to the telegraph. Yet the amount of indifferentism, apparent on all sides, exhibited by many telegraph operators respecting their present and future status in the service, is becoming alarm and future status in the service, is becoming alarming because of its wide prevalence. This may truly be said to be a deplorable condition of things.

It has been argued that as sending and receiving a message simply, with more or less speed, constitutes the average duty of the operator, of what advantage, then, beyond a certain limit, is the acquirement of greater knowledge and skill on his part. To accept such reasoning is to relegate the operator to the common place; it is an excuse uttered to cover deficiencies, in effect admitting that the operator of to-day is a degenerate, that he has lost ambition and is showing an indifference not only to his profession, but to his manhood as well, and that in consequence former high standards both of skill and of moral well being are becoming lowered. How far this may be true is a question vital in its importance; its consideration should arouse interest and sober thought everywhere. For an operator entertaining such models relative to his employment possesses stunted ideas, and cannot be, or become under the circumstances a first rate worker. Such a state of mind precludes higher aspirations and indicates to a certain extent, if not a conscience blunted, at least a conscience deadened, without which excellence cannot be attained.

The telegraph service has pressing need of skilled men to occupy positions of responsibility. The demand is urgent to-day; it will become more so to-morrow. Young men who are now at the key should ponder well and seriously the situation in which they are placed. If the spirit of indifferentism is beginning to steal over their senses let them overcome it; throw it off before its poisoning influence becomes too deep-seated. There is an honorable and remunerative future in their calling if they will but seek it. But it should not be forgotten that accountability rests with the individual. He alone must force his way upward. Diligence is required; study is necessary; application should be constant. A man in health who has conscientiously equipped himself for life's work, will not be overlooked or forgotten in the call for skilled labor that is constantly going out.

President Roosevelt's Labor Day Address.

In President Roosevelt's Labor Day address he gave utterance to the following words touching on the labor question:

"We can keep our Government on a sane and healthy basis, we can make and keep our social system what it should be, only on condition of judging each man, not as a member of a class, but on his worth as a man. It is an infamous thing in our American life, and fundamentally treacherous to our institutions, to apply to any man any test save that of his personal worth, or to draw between two sets of men any distinction of conduct, the distinction that marks off those who do well and wisely from those who do ill and foolishly. There are good citizens and bad citizens in every class, as in every locality, and the attitude of decent people toward great public and social questions should be determined, not by the accidental questions of employment or locality, but by those deep-set principles which represent the innermost souls of men.

"The line of cleavage between good and bad citizenship lies, not between the man of wealth who acts squarely by his fellows and the man who seeks each day's wage by that day's work, wronging no one, and doing his duty by his neighbor; nor yet does this line of cleavage divide the unscrupulous wealthy man who exploits others in his own interest, from the demagogue, or from the sullen and envious being who wishes to attack all men of property, whether they do well or ill. On the contrary, the line of cleavage between good citizenship and bad citizenship separates the rich man who does well from the rich man who does ill, the poor man of good conduct from the poor man of bad conduct. This line of cleavage lies at right angles to any such arbitrary line of division as that separating one class from another, one locality from another, or men with a certain degree of property from those of a less degree of property.

"We must act upon the motto of all for each and each for all. There must be ever present in our minds the fundamental truth that in a republic such as ours the only safety is to stand neither for nor against any man because he is rich or because he is poor, because he is engaged in one occupation or another, because he works with his brains or because he works with his hands. We must treat each man on his worth and merits as a man. We must see that each is given a square deal, because he is entitled to no more and should receive no less. Finally we must keep ever in mind that a republic such as ours can exist only in virtue of the orderly liberty which comes through the equal domination of the law over all men alike, and through its administration in such resolute and fearless fashion as shall teach all that no man is above it and no man below it."

"Pocket Edition of Diagrams," etc., is \$1.50 per copy.

Annual Meeting of The Associated Press.

At the annual meeting of The Associated Press held at the Waldorf-Astoria in New York on September 16, more than one hundred editors and publishers from all parts of the country were in attendance.

The directors elected were Victor F. Lawson, Chicago News; Harvey W. Scott, Portland Oregonian; Thomas G. Rapier, New Orleans Picayune; Herman Ridder, New York Staats-Zeitung; Albert P. Langtry, Springfield (Mass.) Union.

The hold-over directors are Whitelaw Reid, New York Tribune; W. L. McLean, Philadelphia Bulletin; George Thompson, St. Paul Dispatch; Charles H. Grasty, Baltimore Evening News; W. D. Brickell, Columbus Dispatch; Clark Howell, Atlanta Constitution; Frank B. Noyes, Chicago Record-Herald; Albert J. Barr, Pittsburg Post; Charles W. Knapp, St. Louis Republic and M. H. DeYoung, San Francisco Chronicle.

The banquet in the Astor Gallery in the evening was the first one given by the association since it became a New York corporation.

General Manager Melville E. Stone, who presided, made a most excellent toast-master. He referred to the banquet as a family gathering rather than a public dinner, from the fact that there were no guests present invited by members.

The members were welcomed to the city by Mayor Seth Low, who made a clever speech in which he referred to the great power wielded by the newspapers. Speaking of city government affairs, he said that were Robert Burns alive to-day it would not have been necessary for him to say: "O wad some power the giftie gie us to see oursels as ithers see us."

One of the features of the dinner was the passing of a loving cup which was presented to General Manager Melville E. Stone by the members of the old Illinois corporation of 1897. The cup was passed by Assistant General Manager Charles S. Diehl.

The menu card bore a representation of The Associated Press dispatch boat Chetolah, which was equipped with the Marconi system and used during the yacht races.

At the meeting of the new board of directors held September 17, in the general offices of the association, No. 195 Broadway, these officers were elected:

Frank B. Noyes, Chicago Record-Herald, president; E. B. Haskill, Boston Herald, first vice-president; Colonel J. H. Estill, Savannah News, second vice-president; Melville E. Stone, secretary; Charles S. Diehl, assistant secretary; V. P. Snyder, treasurer.

Executive Committee: Frank B. Noyes, Victor F. Lawson, Charles W. Knapp, Whitelaw Reid and Charles H. Grasty.

The Telegraph in 1865-66.

In our issue of September 16, we published a number of items taken from the October 16, 1865, issue of "The Telegrapher," respecting the telegraph of that date. The following additional items will also be read with interest:

"A correspondent in Raleigh, N. C., writes as follows: 'Telegraphers occasionally give vent to their 'phelinks' in the way of a 'goak.' The latest on our circuit was perpetrated by an operator at Columbia, S. C., who asked Raleigh if he counted 'U. S.' two words? Upon receiving an affirmative answer, he replied: 'I thought so, as we've been trying for the last four years to make two of it.'"

"John E. Selden, late manager of the People's Telegraph Office, Providence, has emigrated to New Orleans."

(Mr. Selden is at present an employe of the Postal Telegraph-Cable Company, New York).

Mr. John E. Zeublin is referred to as an operator in the Indianapolis office. In those early days, as at present, a manager was not considered to be a first class electrician unless he had invented a repeater. William H. Hamilton, of Albany, N. Y., was granted a patent for a repeater, its number being 49,875, and thus raised his standard a few pegs in electrical lore.

"We have seen a very sensible looking deep sea cable, now on exhibition at the American Institute Fair in this city, manufactured by the Bishop Gutta-Percha Company, and give for the benefit of our readers the following specifications for one mile:

Conductor, one No. 9 annealed steel wire.....	330 lbs
Fifteen No. 19 copper wires, spirally laid around the steel wire.....	475 lbs
Insulation, three coatings pure gutta-percha, 9-16 inch diameter outside.....	457 lbs
Outside protection—First coating of Manila yarn, short spiral lay.....	360 lbs
Second coating of Manila yarn, long spiral lay, reversed way.....	540 lbs
One mile weighs.....	2,162 lbs

"It has been asserted that in the Fall of 1860, Mr. James Fisher, of Nashville, transmitted fifty-five words in one minute with a Morse instrument. We cannot give the highest number ever sent in an hour. Eighteen hundred is probably the highest, but we have heard two thousand have been sent, but very much doubt it."

(Mr. Fisher is still identified with the Nashville office of the Western Union Telegraph Company).

"Mr. Richardson, The Tribune's correspondent, who accompanied Speaker Colfax in his recent trip across the Rocky Mountains, in a late letter says:

"At Carson we met Colonel F. A. Bee, of Placerville, builder of the Overland Telegraph, who accompanied us from Virginia City. The Carson paper, in a little local quarrel, had just denounced him as 'a sort of outside telegraph and railroad runner.' During the public speaking after Mr. Colfax's very warm reception, with

banners, processions and an artillery salute, the Colonel was called out. He said the charge was true and the phrase fitted him exactly. He was a runner and an 'outside' one. He had run a telegraph wire outside of civilization across the American continent, and now he was working to run a railroad across. It was 'the retort courteous,' in its happiest vein."

"The preliminary steps toward building the International Ocean Telegraph Line are being taken, and the work will be pushed forward as rapidly as possible. Mr. W. H. Heiss, one of the oldest telegraph superintendents in the country, has accepted the important position of Superintendent of the International Ocean Telegraph Company, and sailed from this city on Saturday, the twentieth of October, for Florida, through a portion of which State the line is to be built. He will make surveys, and determine upon the route to be adopted. Several leading citizens and public men of Florida have suggested that the line be built from Fernandina to Cedar Keys, on the west side of the State, thence by cable to Havana. This will be determined upon by Mr. Heiss, if the practicability of the suggested route is made manifest by personal inspection and survey. It will not be many months ere the cities of New York and Havana will be in telegraphic communication. Mr. Heiss is accompanied by Mr. W. W. Sadler, formerly Superintendent of Repairs of the American Company."

"At a banquet in honor of the laying of the Atlantic Cable, held in London, the title of knighthood was conferred by the Queen upon several of the leaders of the enterprise, and in a message she stated her reason for not conferring distinguishing marks of her regard upon Mr. Cyrus W. Field, which was, an apprehension that it might encroach on the province of his own Government."

"Fire Telegraph Alarm.—At a recent meeting of the Metropolitan Fire Department Commissioners of this city, (New York), the following was decided upon:

'In place of the present system of fire alarm with bells, connection will be made by telegraph with every fire company in the city.

'The following resolution, which was adopted lately, is one of the arrangements desired to complete that result:

'Resolved, That the application be made to the Commissioners of the Metropolitan Police for permission to introduce into such of the Police Station Houses as may be requisite and necessary, instruments and wires for the purpose of perfecting the system of fire-alarm telegraph adopted for the use of this department.'

"Swindling—A New Device.—Some swindler is imposing a new swindling dodge. An envelope is used, purporting to be and having printed upon it in large type 'Money package,' 'American Express Company,' and properly addressed and indorsed as coming from the Navy Yard at Wash-

ington. The wife of an officer of the navy was induced to pay seven dollars to the bearer of such a package recently. She was allowed to open it, and read what appeared to be two telegraph messages of the American Telegraph Company, directing the payment of prize money to her husband. Both the envelope and telegraph blank had been obtained by theft or other improper manner. The public should be on their guard against the scoundrels."

"Saturday Night.—Mr. James Elverson, formerly manager of the American Company's T. W. (Willard's Hotel) office in Washington, is the business manager and one of the publishers of a paper recently started in Philadelphia, bearing the above singular title. May the Saturday night of his week of life keep distant many a year, and may all the greenbacks in his pocket turn to gold at high rates."

(Mr. Elverson is now the leading figure in newspaper circles in Philadelphia).

"In a vacuum, all electrified bodies speedily lose their excitement, while in a dry, dense air, they retain it longest. Nevertheless, slight electrical excitement can be produced in a vacuum by friction."

"It is found that women make the very best clerks for the electric telegraph. The only difficulty is to prevent each young lady at either end of the line from having the last word."

"Buoyant Inscription for the Atlantic Cable.—'To be left till called for.'—Punch."

Quads and Quads.

BY J. W. LARISH.

In discussing the quadruplex, either as a coming or a going institution of vexatious memory, let us stick a little more persistently to the subject of resistance values in the apparatus as a whole.

It has been said that to halve the windings of the relay coils will accomplish nothing of value. I take it that Mr. Jones had in mind the old quad circuits of years ago when wires of relatively high resistance were used rather than the copper lines of more recent times. It is probably not an unfair proposition to advance that the average wire assigned to such service to-day will run less in ohms, circuit for circuit, than will the instruments, etc., counting both terminal stations.

Let us take, for instance, the territory from New York to Boston where quad difficulties are always present, differing with other localities only in degree, perhaps, (certainly not in kind) as against other sections of the country. The total resistance of the wire in almost any given circuit will be from 1,300 to 1,500 ohms according to the route selected, while the apparatus, comprising the No. 1 relay of 400, a No. 2 (Frier) relay of 200 and the lamp or battery resistance of 600 ohms, respectively, give us a total of 1,200 ohms at each station, or a grand total of 2,400, or practically twice the resistance of the wire itself.

Where the Smith coil is used we must add 700 ohms more at each end of the line, making the apparatus of the whole circuit 3,800 ohms, as against a wire of but 1,300, a preposterous condition.

One can see at a glance what it would mean to halve, not only the coils of the relay, but the rest of the apparatus as well. It would, to speak in round terms, nearly double the current if such a thing were needed; but at any rate we should have the relays less susceptible to the influence of "pale disturbances," to say nothing of an easier path for the dissipation of the line static instead of choking it up at both ends of the wire.

This static is, in itself, of almost inconceivably short duration, but its effects are augmented by the prolonged discharge through magnetic coils of high resistance, etc.

Then, again, it would be interesting to know how much of the difficulty encountered by the average quad attendant in balancing his circuit is due to the extra currents set up by the relays. On these low resistance wires the discharge of the relays is often mistaken for static "kick," and being opposite in its effects to that of the static discharges, the unwary quad chief soon becomes discouraged to find that his plugging in and pegging out does not help. Highly wound relays aggravate these conditions.

Why is it that quad instruments are not made to conform more suitably to the various circuits in point of distances in the line? The apparatus today is the same for a wire, or circuit, of fifty miles as for that of 500 miles, so that on the short circuits it is necessary to compensate for extra current effects instead of static induction. Reduce the battery resistance even if it is necessary to change the values of the leak resistances; the danger to apparatus can be averted easily enough.

As for the instruments, have we not learned the value of reduced windings on common relays in single circuits where the instrument resistance exceeds that of the wire? Why then not carry the idea up to the much discussed, strenuously belabored, and now nearly deserted quadruplex? It may smooth our lines, both literally and metaphorically, so that we can endure to the end of the string, perhaps, or at any rate, until the real quadruplex arrives.

Boston, September 22, 1903.

A special describing the renewed activity of Vesuvius, was received by a newspaper a few days ago with the assiduous information embodied therein, that a new crater was forming on the side of the mountain, and that large streams of "lager" were flowing down its sides. The operator who substituted the word "lager" for "lava" was evidently one of the thirsty sort.

Hope is a divinity; a surplus of determination conquers every weakness; vengeance is not for man; holy pictures are not all of religion.

A Test of Telepathy.

In our issue of September 1 we printed an article on the subject of telegraphing by brain waves. The matter is further referred in the daily prints in England and America, and the following, therefore, from the "American and Journal," New York, will be a valuable addition to what has already appeared in these columns:

"I have read with much interest Professor Serviss's response to my statement of Richardson's readiness to repeat his telepathic experiment, under any conditions scientists might impose.

"I have not yet had the opportunity of communicating to Richardson, but I may point out that while Serviss's conditions are eminently reasonable, the first applies to a more advanced stage of telepathy than Richardson, at present, claims to have attained.

"Richardson did not, so far as I know, profess to be able to telepath any message. He hopes to reach that stage of perfection in time. All he professed to do and all he did was to telepath to his friend in Nottingham: First, any point of time between the hours of 6 and 6.30, when the odds were 30 to 1 against the correct guess; second, any one of three numbers; third, any one of three places, both the numbers and places being known to his friend beforehand. The odds in each of these latter cases were 3 to 1 against the guess. That experiment Richardson offered to repeat.

"Serviss's proposed experiment is one of much greater complexity. It is more interesting, therefore, and more valuable, but at present I fear his first rule is ahead of what has been attained."

The scientific duel over the phenomenon of telepathy, in which W. T. Stead, London, and Garrett P. Serviss, the American scientific writer, are engaged, has reached its most critical stage. The great London editor first declared that through the medium of a Dr. Richardson, said to be formerly of New York, he had it demonstrated to him that there is actually such a force in nature as the transference of thought without the use of any apparatus.

Dr. Richardson, from London, communicated to his friend Dr. Frank in Nottingham, a distance of about 125 miles. Mr. Stead and others were present with Dr. Richardson in London, and another committee was with Dr. Frank. A message consisting of figures was transmitted accurately, and to the believers of the creed of telepathy this was proof positive of the existence of such a power.

Mr. Stead described the experiment in the "American," expressing his belief in the sincerity of the experiment. Immediately Mr. Serviss attacked the theory held by the editor, and extended a scientific challenge. Mr. Stead accepted and said he was certain that Dr. Richardson would undertake to transmit another message under any conditions Mr. Serviss might suggest.

Mr. Serviss responded at once, proposing conditions under which the new trial is to be made. These conditions are five in number, and all seem

acceptable to Mr. Stead except the first, to which he expects for the reasons he points out in the despatch. The conditions of the new test imposed by Mr. Serviss are as follows:

First, that the message shall not be known in advance to anybody except the sender, not even to the committee in the place to which they are to be sent.

Second, the messages must absolutely not be invented until the moment when the test is about to be made.

Third, let the committee at the receiving end immediately upon the reception of a message put it in writing and place in a sealed envelope.

Fourth, the message should consist of both numbers and words and of visual images.

Fifth, the committee must consist of men of scientific training, entirely unprejudiced in their views.

When proposing the above conditions Mr. Serviss said of them: "The most important of these conditions are the last and the first two."

Regarding the first, to which Mr. Stead has especially objected, Mr. Serviss said:

"If the messages were in the mind of any person at the receiving end, even barring all chances of collusions, they might reach the receiving telepathist's brain, without transmission from the other end of the line. Therefore it is absolutely essential that the messages shall be invented at the point from which they are to be sent, and that the committee guarding the receiver, in the city to which the messages go, shall have no inkling as to what they are to be."

Directory of Annual Meetings.

Association of Railway Telegraph Superintendents meets at Indianapolis, Ind., at a date in 1904 yet to be named.

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 a place and date in 1904 yet to be named.

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

Old Time Telegraphers' and Historical Association meets at Atlanta, Ga., at a date in 1904 yet to be named.

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 at St. Louis, Mo., third Tuesday in June, 1904.

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

The Scott-Phelps-Barclay-Page Self Winding Ticker.

The ticker bearing this combination of names marks the final outcome of an evolution effecting telegraph printing instruments. Less than thirty-five years ago, about the year 1870, Thomas A. Edison invented a ticker to which was given the name of "Universal Ticker." This device was acquired by the Western Union Telegraph Company and has since been generally used by that company in connection with its Gold and Stock service at points outside of the city of New York. In 1890, George B. Scott, the superintendent of

that should be capable of fully measuring up to modern requirements.

The ticker in local use here in New York, employed for distributing the stock quotations of the Gold and Stock Telegraph Company, is the Scott two-wire printer, heretofore the fastest machine of the kind extant. It was handicapped, however, by the objectionable feature of being fitted with a heavy weight which required to be wound up by hand each day. To overcome this manifest disadvantage, W. P. Phelps, of Philadelphia, invented an improvement by which the weight was done away with and the winding accomplished by means of a current directed from the central office. The practical value of this substitution was quickly recognized, and the Western Union Telegraph Company promptly secured it for the use of their Gold and Stock telegraph service.

With the incoming of Col. R. C. Clowry to the presidency of the Western Union, and Mr. J. C. Barclay, now assistant general manager, to the position of electrical engineer, the latter at once became interested in the Phelps invention. Fully realizing its intrinsic worth, he yet saw that while its adoption would effect a distinct betterment to the old ticker, the result attained fell short of what was really required in the production of an all around ticker. Applying himself to the subject and studying it closely, he came to the conclusion that could a combination of the best parts of the Scott ticker, with the Phelps winding improvement be brought about, perhaps with the addition of some mechanism calculated to improve the working parts, the result would be to produce a machine that would probably meet the aims of the telegraph company. With this end in view he at once called into consultation Mr. Scott and Mr. Phelps, the two original inventors, together with Mr. Jay R. Page, of Chicago, an expert in the ticker field. These gentlemen with, and under the direction of Mr. Barclay, have, after long and continuous labor, at last evolved a machine in which is happily embodied the vital points of both Messrs Scott and Phelps' conceptions, as well as being further perfected by the adoption of several practical suggestions contributed by the four men named.

Of this newly constructed instrument, to which the name of "The Scott-Phelps-Barclay-Page Self Winding Ticker" has appropriately been given, a working model was built, which in its action respecting the essentials of speed, printing, etc., appeared to meet the full expectations of its designers, and its adoption by the Western Union Telegraph Company for its Gold and Stock service was ordered forthwith. The ticker is shown in the two illustrations presented herewith. Fig. 1 pictures the instrument set up in completed form, and Fig. 2 is a diagram indicating the central office connections. Two wires are used for each circuit. One wire governs the typewheel escapement and does the printing, while the other winds up the propelling spring and controls the shifting apparatus which causes the changes to be made



FIGURE 1.—THE SCOTT-PHELPS-BARCLAY-PAGE SELF WINDING TICKER.

the New York Gold and Stock service, made some improvements in the escapement of this machine, which added materially to its value. This was a step forward. Yet the ticker, although a reliable printer, and for years performing acceptable work, was after all capable of but limited speed. In view of the fact of the constantly growing amount of matter sent out from the various exchanges throughout the country, demanding a ticker of much greater capacity in order to meet urgent needs, the desire has been to obtain a more up-to-date substitute for the old machine, something

from letters to figures. The typewheel, directed by reversals of the current, makes 170 revolutions per minute, and as it has 30 characters, the cur-

rent is reversed 5,100 times per minute, or 85 per second. The instrument is small and compact in form,

and the roll of paper on which the printing is done, is entirely contained inside the base, so that there is no projecting reel to obstruct the view of those who may be examining the quotations. The ticker can be placed either on a pedestal, a shelf or a table, as may be most convenient to the user.

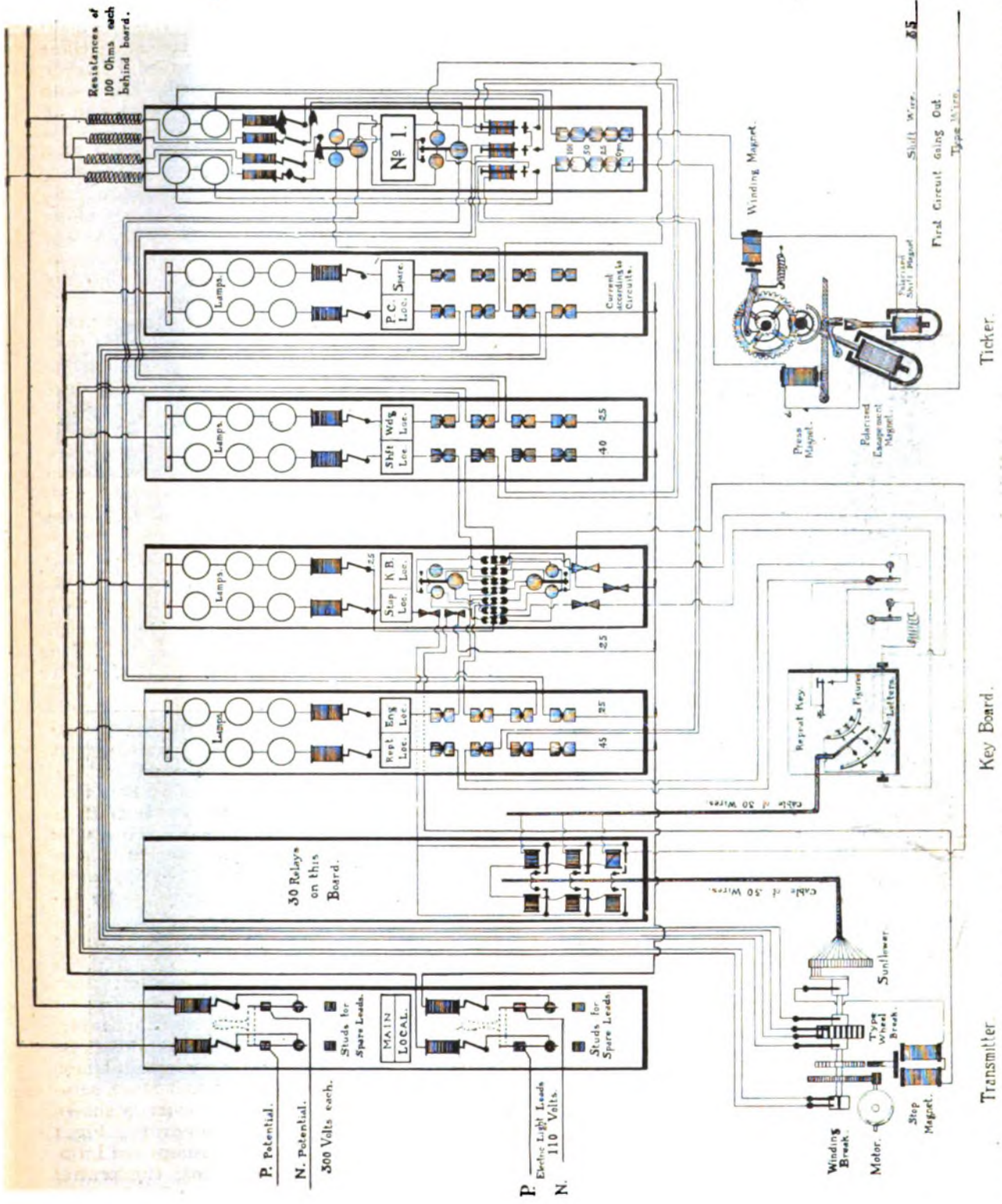


FIGURE 2.—DIAGRAM SHOWING THE CENTRAL OFFICE CONNECTIONS FOR THE SCOTT-PHELPS-BARCLAY-PAGE SELF WINDING TICKER SYSTEM

The Reunion of the Old Timers and the United States Military Telegraph Corps.

There is no doubt that the Old Time Telegraphers' and Historical Association, together with that of the United States Military Telegraph Corps, possesses a strong hold on the heart and affections of telegraphers. Organized for social purposes, to keep alive the spirit of auld lang syne, in which business has no part, save in the formula of an annual election of officers, the frequent rotation of which serves to keep familiar names at the fore, a guarantee, if any were needed, of the continued vitality of the organizations. But this is never doubted as is shown both in numbers and loyalty of membership.

We referred to official changes. These do not seem to effect John Brant, a name as sturdy as the person the secretary-treasurer of the Old Timers; or of Col. Wilson, the president of the old mili-



CHARLES C. ADAMS, OF ATLANTA, GA.
President Elect of the Old Time Telegraphers' and Historical Association.

tary fellows, for never a thought of the disturbance of either of them seems to enter anybody's head, their terms of office being as fixed, apparently, as that of P. W. Drew, secretary of the Railway Telegraph Superintendents, whose official life in that organization is associated with our earliest memories.

The yearly meetings, of which that just held was the twenty-third, are anticipated and prepared for throughout the full twelve months, from the adjournment of one to the assembling of another. They are full of delight; members regretfully say good bye at the close, and eagerly look forward to the time when they shall again come together. And the ladies, bless their hearts! are as much a factor at these festal times as the men. Just try to picture a reunion without their presence! It can't be done.

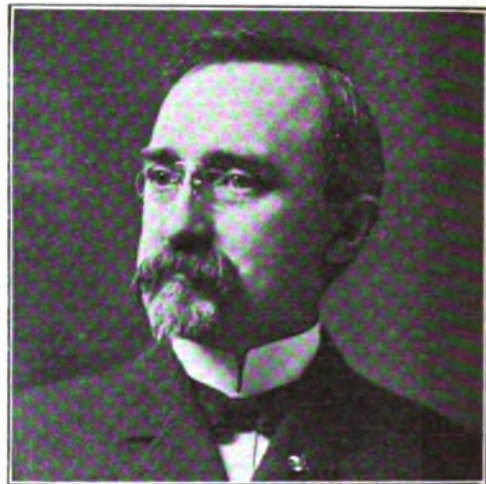
The selection of Milwaukee, the metropolis of Wisconsin, with its central and delightful loca-

tion on Lake Michigan, as a point of gathering, was a fortunate choice. It afforded the several local resident members of the committees, such men as U. J. Fry, the president, supported by



J. M. STEPHENS, OF ATLANTA, GA.
First Vice-President Elect of the Old Time Telegraphers' and Historical Association.

P. W. Drew, L. C. Whitney, H. G. McGill, F. V. Moffitt and F. J. Machette an opportunity to get together for frequent conference, and to determine and plan that the meeting should not fall one whit behind in interest and pleasure any of its predecessors. It was easy also to confer with



W. H. ADKINS, OF ATLANTA, GA.
Second Vice-President Elect of the Old Time Telegraphers' and Historical Association.

their associates on the general joint committee, J. E. Pettit, William J. Lloyd and Joseph Uhrig, for they all resided comparatively near by in Chicago, and were as enthusiastic as their conferrees over the work in hand. When added to this was the excellent labor performed by

members of all the other committees, it is little wonder that the general scheme provided for the entertainment of the visitors was followed out so smoothly and pleasantly.

The attendance at the reunion was large, and came from all parts of the country.

On Wednesday morning, September 23, at eleven o'clock, the business meeting of the Old Time Telegraphers' and Historical Association was held in the Merchants' and Manufacturers' Association Rooms in the University Building at Broadway and Mason street. It was called to order by John Brant, secretary-treasurer of the association. He requested S. A. Duncan, of Atlanta, Ga., to present the badge of the presidential office to President Fry. This badge consists of a miniature portrait of Prof. Morse, and it is always worn by the president of the association on the lapel of his coat during the term of each annual meeting.

Mr. Fry, on taking the chair, warmly greeted the four hundred members who had responded by their presence to Milwaukee's invitation to entertain the Old Timers.

Hon. Carl Runge, the city attorney of Milwaukee, greeted the visitors on behalf of the city. He said that the City of Milwaukee felt proud and honored to entertain the Old Timers and he hoped that the stay of the visitors would be a pleasant one.

Col. Wm. B. Wilson, of Philadelphia, thanked the representative of the City of Milwaukee for his warm welcome. Col. Wilson, on behalf of the Old Timers and Military Telegraphers, then went on to give a brief history of the telegraph and the part it plays in the management of the railroads and the transaction of the commerce of the world.

The reading of the minutes of the previous meeting were dispensed with.

The secretary's report was then read. It showed that the affairs of the association were in a satisfactory condition. The treasurer's report showed a balance of \$772 on hand.

Mr. C. A. Stimpson, of Philadelphia, invited the Old Timers and Military Telegraphers to visit that city on October 30 and 31 to take part in the telegraph tournament. A resolution endorsing and encouraging the tournament was passed.

Atlanta, Ga., was selected as the next place of meeting in 1904, the date of which to be determined by the Executive Committee.

The Committee on Nomination, Time and Place, consisting of D. C. Sims, W. G. Moffett, John Wintrup, George Henderson and S. A. Duncan, reported on the following named as officers for the ensuing year: C. C. Adams, general superintendent of the Postal Telegraph-Cable Company, Atlanta, Ga., president; J. M. Stephens, superintendent of the Western Union Telegraph Company, Atlanta, Ga., first vice-president; W. H. Adkins, traffic manager of the Southern Bell Telephone Company, Atlanta, Ga., second vice-

president, and John Brant, of New York, secretary-treasurer. These gentlemen were unanimously elected.

An Executive Committee, comprising the following, was also elected: U. J. Fry, of Milwaukee, Wis.; G. H. Corse, of Ogden, Utah; L. B. McFarland, of Montreal, Que., and H. C. Hope, of St. Paul, Minn.

Mr. T. J. Benson, of Chicago, Ill., suggested that an International association be formed. The proposition did not appear to meet with favor, many of the members believing that the conditions surrounding the craft in this country were not similar to those that prevailed abroad and that a move in this direction meant the undertaking of considerable correspondence without any promises of beneficial results. The subject was therefore voted down.

Resolutions of thanks were voted to the railroads for their courtesies, and to Col. R. C. Clowry, president and general manager of the Western Union Telegraph Company, New York, for many favors extended. Both telegraph companies and the Long Distance Telephone Company were also thanked for courtesies of free service extended to the members. The convention then adjourned sine die.

The association deemed it wise to have in future two vice-presidents instead of one as formerly, hence the double filling of that office.

The meeting of the United States Military Telegraph Corps was called to order at 12.30 o'clock on Wednesday, September 23rd, by Col. W. B. Wilson, of Philadelphia, president of the society. There were twenty-five telegraph veterans of the Civil War and four ex-Confederate operators present in addition to a large number of the members of the Old Time Telegraphers and Historical Association.

President Wilson's report recited some interesting facts and reminiscence bearing on the excellent work accomplished by the telegraph boys during the rebellion.

Mr. J. E. Pettit of Chicago, secretary-treasurer of the society, followed with his report, which showed a balance of \$131.09 on hand. Mr. Pettit then at some length spoke of the honor recently bestowed upon the president of the society, Col. W. B. Wilson, by the State of Pennsylvania, his native State, which had presented him with a gold medal suitably inscribed as a token of the State's recognition of faithful services performed during the war. The medal was authorized by the Legislature of Pennsylvania and it was recently presented to Col. Wilson by Gov. Pennypacker of the Keystone State.

Mr. W. L. Ives moved that the history of this memorable occasion as read by Mr. Pettit be incorporated in the printed minutes of the society. The motion was agreed to. The thanks of the society were also voted to Governor Pennypacker and Speaker Henry F. Walton, Hon. Walter C. Burton of New York, spoke eloquently of the

war record of Col. Wilson, and said that such men were an honor to the telegraph profession and the country in which they reside.

Letters of regret were read from some twenty-five members of the society who were unable to be present, including Col. R. C. Clowry, J. D. Cruise, Col. W. L. Gross, R. B. Hoover, C. D. Hammond, O. M. Shepard, Col. A. B. Chandler, D. H. Bates, E. C. Green, Richard O'Brien, Dr. J. E. O'Brien, George J. Goalding and G. C. Maynard.

Three members died during the year, T. Q. Waterhouse, L. N. Chasteau and John Galvin.

The old officers were reelected as follows: Col. W. B. Wilson of Philadelphia, president; W. L. Ives of New York, vice-president, and J. E. Pettit of Chicago, secretary-treasurer; Executive Committee: E. Rosewater, chairman, Omaha, Neb.; A. H. Bliss and W. R. Plum, Chicago, Ill.; Col. A. B. Chandler and R. B. Hoover, New York; George C. Maynard, Washington, D. C.; D. Wilmot Smith, Breckinridge, Minn.; L. A. Somers, Cleveland, O., and J. D. Cruise, Kansas City, Kan.

Atlanta, Ga., was chosen as the next place of meeting, and a vote of thanks was recorded for favors extended.

At 2.30, on Wednesday afternoon, September 23rd, the entire party boarded three special trolley cars which carried them to the Marconi wireless telegraph station on the shores of Lake Michigan, where demonstrations in this new method of telegraphing were given and several wireless messages were exchanged with Chicago. After the inspection of the station was made a photograph of the entire company was taken. The cars were again boarded and a ride through the principal streets of the city and suburbs, including a visit to the Soldiers Home, followed.

In the evening three hundred of the visitors witnessed the performance of "King Dodo" at Davidson's Theatre. Mr. Richard Golden, who personated King Dodo, took occasion to work off some clever witticisms at the expense of several of the delegates.

On Thursday, September 24, the visiting ladies under the guidance of the Ladies' Committee, visited the various excellent shopping centres. Afterwards an expedition was organized to inspect some of the large brewing plants for which Milwaukee is famous. Much courtesy and hospitality was shown to the visitors. After luncheon all embarked on the magnificent lake steamer Pere Marquette for a three hour sail on Lake Michigan. During the trip refreshments were bountifully served to all on board. The return was made in sufficient time to enable all to rest and prepare for the banquet which took place at the Hotel Pfister.

At 8 o'clock in the evening two hundred and forty members and friends of the Old Timers Telegraphers and Historical Association and the Society of Military Telegraphers sat down at the banquet tables, which filled the large and beautifully decorated dining-hall of the hotel. On the

wall back of the toast-master was an illuminated sign bearing the symbol "75", which gave way to the symbol "30" at the close of the banquet.

The tables were ornamented with carnations, while vines of smilax trailed them from end to end. Those occupying the seats of honor were W. B. Wilson of Philadelphia, president of the United States Military Telegraph corps; U. J. Fry, president of the Old Timers; W. J. Lloyd, vice-president, Chicago; John Brant, secretary, New York; Joseph Uhrig, Chicago; C. H. Bristol, W. Maver, Jr., State Senator W. C. Burton, New York; S. A. Duncan, Atlanta, Ga.; A. C. Thomas, of The Associated Press, Chicago; F. V. Maffitt, Carl Runge and H. G. McGill, Milwaukee, and Mayor W. C. Cochrane of Montreal, Canada.

William J. Lloyd was introduced as toast-master, and after a brief address called on Miss Bessie O'Brien of Chicago, to open the post prandial exercises with a song, that caused the wildest outburst of enthusiasm. Her rich soprano voice rang out over the great banquet hall filling it full of sweetest sound, and when she concluded the old timers and the military corps arose in their seats and made the room echo and reecho their applause. Miss O'Brien responded with "The Last Rose of Summer," and the scene was re-enacted, and she responded a second time, with "Coming Through the Rye."

City Attorney Carl Runge was introduced as the first speaker and made a brief address in which he thanked the telegraphers for their visit to Milwaukee. A song by the Puritan quartette and an encore followed, after which Col. W. B. Wilson spoke of the important service performed by the telegraph operators during the war of the rebellion, which, he declared, was not second to that of the commanding generals of the armies.

State Senator W. C. Burton of New York, was the next speaker. He paid a tribute to the city and its people, declaring that its fame rested on the character, the generosity, and the hospitality of the people. "We of the east sometimes think that in no part of the country can they do things quite as well as we can," he said, "but when we come to Milwaukee we have to think twice before we are aware that we are not in Boston."

Senator Burton then spoke on "The Right Arm of Commerce," which was, of course, the telegraph, and in the course of his remarks referred to James Igoe, a telegraph operator for the Associated Press and W. E. Miles the Associated Press correspondent, also an operator, both of whom lost their lives in the fire in the Minneapolis Tribune Building at midnight, November 29, 1899. Igoe, with Miles at his side, remained at the wire to finish the item he was receiving, when the alarm was sounded. They found their escape cut off. Miles while making his way down a fire-escape was knocked off and killed. Igoe made a daring attempt to escape hand over hand across the wires that spanned the street from the burning building. When he was more than half way across, the wires parted under his weight

and he was dashed to death on the pavement below.

The toastmaster then proposed a standing toast to the memory of the heroes of the telegraph in war and in peace. Wm. Maver, Jr., of New York, responded to the toast "Wireless Echoes." He spoke on the development of wireless telegraphy and related several interesting and amusing anecdotes relative thereto.

Mayor Cochrane of Montreal, was the next speaker. He said that while he noticed a great many Canadians around the tables, there was, however, no politics, no religion and no nationality represented in an organization such as the Old Time Telegraphers; all were one. He also referred to the large number of young Canadians who enlisted in the Union army during the war.

Mr. L. B. McFarland of Montreal, a former president of the Association followed in a brief address.

The Star Spangled Banner was then sung by the Puritan quartette, after which a standing toast was drunk to the President of the United States and the King of England.

Mrs. H. A. Tuttle of Minneapolis expressed her pleasure at being present and spoke briefly in behalf of the visiting ladies.

Mr. M. J. O'Leary of New York, responding to the toast "The Fraternity," declared that this was the grandest reunion of the entire series given so far, and that the success of the meeting was largely due to the generosity and courtesies of Col. R. C. Clowry of New York, who might properly be called the father of the Association, he having given it its name at the initial meeting which took place in Cincinnati, O., in 1880.

Mr. S. A. Duncan of Atlanta, Ga., another former president of this Association, read a despatch he had just received from the newly-elected president. Charles C. Adams, who expressed his thanks for having been chosen to that office for the ensuing year, saying that he would be very glad to entertain all who could make it convenient to visit Atlanta.

Mr. Henry W. Pope of New York, responded to the toast "Voices From Across the Sea" dealing with the problem of ocean telephoning.

The banquet closed by the assembling company singing the "Star Spangled Banner" in chorus as the talismanic figures "30" good-night shown on the wall above the head of the toastmaster.

Col. R. C. Clowry, president of the Western Union Telegraph Company; Toastmaster W. J. Lloyd; President U. J. Fry; F. V. Moffitt, H. G. McGill, F. J. Machette, the ladies and other members of the local committee, who had contributed much to the success of one of the most enjoyable occasions in telegraphic history, were unanimously thanked by the assemblage.

On the morning of Friday, September 25, three large trolley cars conveyed about 200 of the visitors to Whitefish Bay on the shore of Lake

Michigan, eight miles north from the city of Milwaukee. Here, after viewing the natural beauties of this charming place, the call for luncheon was sounded at half-past twelve o'clock. The long tables were soon filled, and after partaking of the excellent repast, Mr. P. W. Drew rapped for order. He recounted the labors of the committees, expressed their pleasure in the satisfaction which had been so generally expressed by the visitors. He then introduced "Senator" Wm. L. Ives, who made an excellent address, commending in glowing terms the ability and grace of the Milwaukee ladies in the hospitalities extended by them. Short addresses were delivered by Geo. H. Corse of Ogden; T. E. Fleming of New York; State Senator Walter C. Burton, of New York; D. C. Sims of Atlanta; H. W. Pope of New York; M. J. O'Leary of New York; John Winthrop of Philadelphia, and J. E. Pettit of Chicago. Cars were boarded for the return to the city at 2.30 P. M., and the Milwaukee festivities were at an end.

The unanimous expressions of the visitors were to the effect that Milwaukee had done herself proud and earned the abiding gratitude of all who were privileged to enjoy her hospitality.

U. J. Fry and Mrs. Fry, William J. Lloyd, F. V. Moffitt, H. G. McGill and Mrs. Moffitt were indefatigable in their efforts to make all feel at home. To Mrs. Moffitt particularly are the thanks and appreciation of all most cordially extended for the many courtesies extended with much grace and charm of manner.

In conversation with Mr. U. J. Fry, the president of the Old Time Telegraphers' and Historical Association, at the close of the reunion, that gentleman said:

"May I ask, please, that when preparing your matter relative to our entertainment you have in mind for special mention, Mr. McGill and Mr. Moffitt first, then Mrs. Moffitt and her committee. It would be but fair to them to say the success of the occasion was due to their wise judgment and untiring energy and to them belongs the honor. All others should be remembered as contributing very materially both with suggestions and assistance. The only honor I claim for myself exclusively, is the fact that I secured such valuable assistants; they did the work and it should be shown such was the case.

"I would be pleased if you can find it consistent to make prominent mention of the hotel service, etc. Mr. Machette, proprietor of the St. Charles, and Mr. Severance, of the Pfister, were exceedingly kind and aided us very materially. In fact (they promised us substantial subscriptions without which we would have been short of funds) they aided us very materially in many ways. Mr. Whitney secured the service of the boat at cost for operating it only, and as to Mr. Drew, he was always on deck and should be remembered in a prominent place."

Among those present were:

Albany, N. Y.—F. W. Sabold.

- Altoona, Pa.—Dr. W. F. M. Findley and wife.
 Atlanta, Ga.—D. C. Sims and wife; S. A. Duncan.
 Bangor, Me.—P. J. Feeney and wife.
 Borden, Va.—W. G. Moffett.
 Boston, Mass.—G. H. Yetman, E. A. Smith, J. McCoy and daughter; H. W. Gillespie and wife; J. H. Connors and wife; J. C. Wilson.
 Buffalo, N. Y.—H. D. Reynolds, N. Hucker, L. M. More.
 Burlington, Vt.—John K. Butler.
 Chenoa, Ill.—A. H. Copeland.
 Chicago, Ill.—John S Henderson, W. R. Plum and wife; H. W. Plum, A. H. Bliss, F. W. Conger and wife; C. E. Potter, A. W. Nohe, D. S. Anderson, wife and daughter; Frank Richardson and wife; J. N. Crittendon, G. M. Dugan, R. W. Ledwith, B. F. Powell, A. C. Thomas, E. G. Sheckler, Gordon Parker, A. F. Sherwood, Hy Behl, T. P. Cook, N. D. Pratt, L. K. Whitcomb and wife; W. E. McDonald and wife; J. C. Frame and wife; J. E. Pettit and daughter; L. L. Smith, F. E. Crawford, F. M. Crittendon, D. J. Duey, Joseph Uhrig and wife; W. L. Brant, Wm. J. Lloyd and wife; Louis Casper, T. J. Benson, M. P. Cook, and Mrs. Robert Burton.
 Cincinnati, O.—J. J. Grant, wife and daughter; J. P. McCabe and sister.
 Columbus, O.—O. H. Newell.
 Covington, Tenn.—W. N. White.
 Cumberland, Md.—C. H. Meyers and wife.
 Detroit, Mich.—H. Bresee, C. J. Ryan and daughter, and J. Currey.
 Dallas, Tex.—Will C. Long.
 Defiance, O.—J. J. Mallay, and C. B. Squire.
 Dundas, Ont.—Mrs. Wm. C. Burton.
 East Liverpool, O.—W. E. Richey.
 El Paso, Tex.—W. B. Latta and wife.
 Englewood, N. J.—Mrs. A. E. Chamberlain.
 Hackensack, N. J.—Perry Chamberlain and wife.
 Hancock, Mich.—A. C. Fuller.
 Houston, Tex.—Philip H. Fall.
 Indianapolis, Ind.—F. W. Samuels and wife.
 Jersey Shore, Pa.—M. James Morrow and wife.
 Johnson City, Tenn.—T. L. Earnest.
 Johnstown, Pa., Peter Weitz, wife and son.
 Knoxville, Tenn.—W. M. Patton and wife.
 Louisville, Ky.—F. B. Williams.
 Milwaukee, Wis.—F. V. Moffitt and wife; H. G. McGill, F. J. Mchette and wife; E. V. Eller, P. W. Drew and wife; C. S. Clark, Henry Sawke and wife; H. F. Butler, G. E. Copeland, U. J. Fry and wife; E. H. Dunden, U. W. Boggess and wife; L. C. Whitney, C. Dean and wife; H. S. Hughes, W. C. Williver and wife; J. O'Connell, H. B. Earling, B. F. Van Vleet, E. B. Duffy and wife; W. P. Hughes, Wm. Plant, A. C. Adams, Charles Salb, A. G. Douglass, R. J. Nicoud, Carl Runge, and R. S. Fry and wife.
 Minneapolis, Minn.—H. A. Tuttle and wife; J. P. Cassidy and wife; D. G. McIntosh and wife; I. McMichael and wife, and G. E. Clark and wife.
 Mt. Pleasant, Pa.—J. Landis and wife.
 Montreal, Que.—Hon. James Cochrane and wife; L. B. McFarlane and daughter; W. J. Camp, son and daughter; Thomas Rodgers and wife.
 Nashville, Tenn.—John F. Fleming and wife.
 Newark, N. J.—J. A. Sutherland.
 Newark, O.—C. A. Anderson.
 Newbern, N. C.—Geo. Henderson and wife.
 New Orleans, La.—N. J. Petrich, E. J. Davis and H. F. Farmer.
 New York, N. Y.—M. J. O'Leary and wife; C. A. Hicks and wife; Hon. Walter C. Burton, John Brant and wife; W. L. Ives, F. D. Murphy and wife; J. A. Regan, Miss M. D. Abercrombie, J. B. Taltavall and wife; F. Pearce and wife; R. C. McDonald, G. W. Hickey, D. J. Mallon, J. F. Howell and wife; C. A. Gill, F. E. McKiernan, A. Dougherty and wife; G. F. Randolph and wife; R. L. Bamford and wife; T. P. Scully, H. W. Pope, T. E. Fleming, M. Green and wife; Wm. Maver, Jr., and wife; E. L. Cohn and wife; E. P. Griffith, and C. H. Bristol and wife.
 Ogden, Utah.—A. W. Brown and wife; G. F. Brown and wife; G. H. Corse and wife; John Hutchinson and wife, and F. M. Kiernan.
 Omaha, Neb.—W. W. Umsted, C. B. Horton, and G. Gardner.
 Paterson, N. J.—J. E. Dunning and wife.
 Philadelphia, Pa.—J. Wintrup and wife; J. E. Janney and wife; C. A. Stimpson and wife; F. E. Maize, H. C. Robinson and daughter; Paul Bosser and wife; Col. William Bender Wilson.
 Pittsburg, Pa.—J. A. Wilson, C. R. Stough, P. J. McKeever and wife; W. J. Byrne, C. A. Mitinger, S. J. Armstrong, Dr. Z. T. Miller and wife; J. E. Rowe, sister and niece; E. D. Kelly, J. Murphy, Dr. G. E. Stuart, and J. W. Stump and wife.
 Prescott, Wis.—H. B. McCray.
 Rutland, Vt.—F. W. Gary.
 Salt Lake City, Utah.—S. F. Fenton and wife.
 San Francisco, Cal.—W. B. Waycott and wife; A. J. Esken and wife.
 Seattle, Wash.—E. C. Keeler.
 South Elgin, Ill.—J. D. Voltz.
 St. Louis, Mo.—J. P. McClure and wife; J. R. Magill and wife; Miss Fanny Myer and sister; M. Tully and L. N. Boone and son.
 St. Paul, Minn.—Miss Nellie Hope, W. Wiesel and wife; G. G. Cooper and wife; W. L. Cullen, F. J. Erskine, and E. S. Fitch.
 Washington, D. C.—D. W. Daly and wife.
 Waukesha, Wis.—Joseph J. Hughes.
 White* River Junction, Vt.—C. W. Gulick and wife.
 Winsted, Conn.—C. K. Hunt and wife.
 Worcester, Mass.—F. N. Cooke.

Don't resort to idleness. The boy who wears out the seat of his trousers holding down dry goods boxes on the street corners will never be President of the United States. The farmer who drives to town for pleasure every other day in the week will soon have his acres advertised for sale. An idle man is soon in the hands of a receiver.

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LETTERS FROM OUR AGENTS.

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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.]

SAN FRANCISCO, CAL., WESTERN UNION

Mr. Charles F. Weiler, an old timer of this office, has resigned to accept a position at Seattle, Wash.

We are glad to again see Miss Sanquist back at the timekeeper's desk, after an extended absence at her home in the northern part of the State.

Mr. Charles Myers has a new son at his house, and Mr. R. D. Weeks is also in line with a new daughter.

Recent arrivals: B. D. Johnson, J. S. Hiseler, William Martin, C. Patrick, G. M. Terry, R. J. Dyer, H. B. Meyer, A. A. Walsh, Miss Emma S. MacDonald and Miss Jennie O'Brien.

Departures: H. B. McChesney, J. T. Egan, P. J. Morgan, J. J. Fuller, J. P. Cleary, J. H. Hunt, C. S. Raleigh and J. A. Pawlasek.

MONTREAL, QUE., GREAT NORTH WESTERN.

W. M. Thompson, one of our best telegraphers, who resigned some eight months ago to go on the railroad, has been appointed despatcher for the Canadian Pacific Railroad at North Bay, Ont.

CEDAR RAPIDS, IA., WESTERN UNION.

Many changes have occurred here during the past few months, a number of operators having left for more lucrative positions elsewhere.

Edward Potter, who came here for only a short stay, has left to take night press at Danville, Ill. Mr. Potter made hosts of friends during his time here.

Mox Dehner is on the sick list, yet is now on the road to recovery.

Cedar Rapids is one of the heaviest relay offices in the State, handling nearly 1,000 relays every day and business is worked off in a first class manner.

W. H. Davis is our manager, he is congenial and a business man of no mean ability.

E. J. Mahoney, who is chief operator, recently

came here from Peoria, Ill., where he had worked for years.

The personnel of the office is:

W. H. Davis, manager; E. J. Mahoney, chief operator; William Supple, traffic chief; B. E. Brill, night chief; James Supple, Mox Dehner, quad, days; R. C. Allen, day report; C. E. Wood, night report; M. E. R. Prazak, quad, nights; Miss Grace Tamm, Miss Mable Hinish and "Doc" Anderson, straight, days; Miss Bessie Hinish, split trick.

CEDAR RAPIDS, IA., POSTAL.

The personnel of this office is made up as follows: John R. Rose, manager, who has been an operator for upwards of thirty years, a number of which were passed in taking The Associated Press report of "The Republican;" George B. Allison, another old operator, for twenty-five years a resident of Cedar Rapids, and W. W. Hicklen, also a well known operator, who has lived here for fourteen years. With this trio of efficient representatives, always courteous and painstaking, the Cedar Rapids office of the Postal fully deserves all the kind words that are constantly heard about it.

PHILADELPHIA, PA.

MY MOTTO—HONORABLE DEALING.

Come on you "BONUS" men from any and every old place and bring one or two of your "FAST MILLS" with you. They will need to be such if you expect to catch Harry V. Emanuel and his FAY-SHOLES No. 6.

At the great American Telegraphers' Tournament meet next month he will, for the third successive time, use the FAY-SHOLES in the "message receiving" event.

Boys, aside with your prejudice and investigate the merits of the slickest "mill" made for the rapid handling of messages and newspaper work. Booklet and easy monthly payments to right people. All makes rented \$3 monthly, D. A. Mahoney, Western Union Telegraph Company, Philadelphia.

WESTERN UNION.

Mr. W. W. Charles, assistant to the transfer agent, has been appointed cashier, vice W. E. Vanarsdale, resigned, to take up another line of business.

W. B. Powell, late of Denver, Colo., has been appointed manager of the Front and Chestnut streets office, vice D. K. Teter, deceased.

F. M. McClintic, who holds the Carnegie medal, writes from Dallas, Tex., that he and Mrs. McClintic, who, by the way, is a star operator, will be contestants in the coming telegraphic tournament. On their way North they will stop at Memphis for a week, where Mr. McClintic will do a little preliminary practice on message work, something he has not done in the past 14 years, his previous work having been press matter exclusively.

Broker operators of this and adjoining cities are taking great interest in the "Contest for

Broker Operators," which is scheduled for the tournament. It is to be exclusively for this class of work and some great things are expected because, as we all know, these men work extremely fast. "Swiftly" Williams, of this city, will try his skill in four different classes.

E. E. Bone, who has been assisting Manager M. E. Meloney at Atlantic City, N. J., during the summer, is with us again.

A. P. Jones has resigned and will go West.

Miss E. Sachs, of Pittsburg, and Manager John Morsland, of Chester, Pa., were recent visitors.

PHILADELPHIA, PA., POSTAL.

The terrors of the mighty deep hold out no fears for Cashier George G. Glenn who has just returned from a coast cruise in which he braved a cyclone off the mouth of the Savannah River with the calmness of an experienced sailor.

After a most enjoyable vacation season, Manager C. E. Bagley resumes his duties under a very much tanned cuticle.

With the falling off of the heavy sea-shore traffic the number of applicants for positions in this office has considerably increased.

M. Auerbach is again on duty at the main office; Chicago was good enough but Philadelphia is nearer home.

Mr. Samuel F. Higo had the pleasure of subbing at Reading, Pa., his home, returning quite satisfied with his experience.

Manager Phillips, of the Reading Pa., office, accompanied by his wife, was on a brief visiting trip to friends in this city.

A week's vacation was enjoyed by Mr. Al Zintl, night manager of the Broad Street Station, Pennsylvania Railroad branch office.

The handsome Carnegie medal won at last year's tournament by Mr. McClintic, is in the hands of the Tournament Executive Committee who are giving it extensive publicity. It is exciting much admiration.

Chief Operator C. A. Stimpson went to Milwaukee to attend the annual reunion of the Old Timers.

The Messrs. Driscoll and Yoell, bonus operator at the New York end of the first Philadelphia local, and operator at the New York "Journal" office, respectively, were among our most recent visitors.

Thursday, September 17 will be long remembered by the members of the Commercial Telegraphers' Union in this city. A most interesting "smoker" was held on that evening. The Messrs. Long, Eastlake and Tansaelier, addressed the assembly. About 350 attended.

LOS ANGELES, CAL., WESTERN UNION.

The operating force of this office numbers forty-five. Mr. E. A. Beardslee, who is now on a vacation East, is the manager. In his absence Mr. C. B. Goodell is acting in his stead.

Robin W. Vaughan, than whom there is none more popular with the company and with his employes, formerly manager at Houston, Texas,

is our worthy chief operator, his able assistants being Ralph H. Miller, E. E. Nye, night chief, and C. C. Hawcroft, dynamo and all night chief.

Mr. Vaughan and Miss Dora Slack, formerly the manager of the office at Victoria, Tex., were married on September 15. The wedding gifts were numerous and handsome, among them from the force a beautiful one hundred-piece dinner set of Haviland china. Mr. Vaughan and wife passed their honeymoon at Long Beach, California.

Business has held up remarkably well during the summer just past, and is now increasing every day. The fruit season (oranges and lemons) will open up in full blast about October 15 and business will then be very active.

CHICAGO, ILL.

Typewriters of all kinds; very easy payments; we handle everything a Telegrapher needs; write us for catalogue. "Mills" shipped all over the United States. Telegraphers Typewriter Company, O. T. Anderson, Manager, Member C. T. U. and O. R. T., 405 Monon Building, Chicago, Ills.

WESTERN UNION.

Charles Phelps, of this office, displayed some beautiful photographs recently, taken by himself, of views in Springfield and vicinity. The picture of the State capital was finely executed.

Another section has been added to the switchboard in the Metropolitan department, which will bring added duties to Wire Chief Cliff.

Edward J. Liston, formerly of the Postal, New York City, while attending the North-Western picnic on August 22, rescued two young ladies from a capsized boat on the Des Plaines river.

Charles Case, night division chief, was called recently to his home in the west, because of the illness of his mother, which culminated in her death.

George Dunning, night chief operator, and A. B. Cowan, assistant night chief operator, have both been away on vacations, the good results of which are clearly noticed.

Assistant Chief C. D. McDermott, of the St. Paul division, has also been away.

Assistant Chief Operator C. H. Finley recently returned from a fishing trip in Michigan. He has a goodly stock of country air and some fishing stories on tap.

Other fishermen were J. F. Stickle and P. L. Stevenson who had a two weeks' outing in Wisconsin, from whence they brought back some bass and — some stories.

Mr. John Foster has returned from his Canadian home where most of his six weeks' stay was devoted to attendance upon his sick mother.

James A. Garfield, formerly of this office, died at his home, Marion, Ohio. He went south for some months hoping to recuperate his health, but failing, returned in a weakened condition. He leaves a wife and child.

A New Mechanical Wonder in Telegraphy

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TWO MACHINES IN ONE

The Nerve-Destroying Slavery of Hand-Sending Forever Done Away With

A SPLENDID TYPEWRITER built expressly for telegraph work, and a wonderful device for transmitting Morse Signals. Either part of the machine may be used separately and independently, or both may be used together to secure a mechanically correct copy of the matter transmitted. The writing machine with its "Keyboard Idea" has worked wonders for penman. **The Transmitting Typewriter** for the first time makes application of this same principle to the transmission of Morse signals and performs a *veritable miracle* for telegraph operators. **The Transmitting Typewriter** is the only typewriter worth a moment's consideration for telegraph work.

THE TRANSMITTING TYPEWRITER copies train orders beautifully. It does vastly more than that. It **transmits them beautifully and repeats them back** beautifully.

THE SALIENT FEATURE of the typewriter part of the **Transmitting Typewriter** is the perfect visibility of its work. Every letter, every word, and every line is in plain sight of the operator from the instant it is written until the printed sheet has been removed from the machine. To read the work done by this typewriter there is no time wasted lifting the carriage, no peering behind obscuring typebar guides, no changing of the focus of the eyes to make them reach into some dark hole in the typewriter mechanism, no pushing of the carriage to bring the printed matter into view, no stretching of the neck to look over intervening barriers, no rolling of the cylinder to bring into view written lines, but a simple easy glance is all that is necessary to discover to the operator the work which has been done.

THIS IS THE ONLY TYPEWRITER now on the market in which the pointer, the divisions on the scale, and the printed letter are in plain sight at the same time. The value of this feature for making corrections quickly in telegraph work cannot be over-estimated. Other up-to-date features are: perfect ball-bearing typebars, quick carriage return, automatic line spacing, automatic ribbon reverse, and many other features valuable for telegraph work and never before incorporated in a typewriter. We do not hesitate to say that **the Transmitting Typewriter** excels all others in speed, ease and uniformity of touch, permanence of alignment, manifolding and durability.

THE TRANSMITTING PART of the **Transmitting Typewriter**, like the typewriter portion of the machine, is operated by the keyboard. Simple unskilled strokes upon the keys produce absolutely perfect Morse signals. Every intelligent operator may become an expert sender. The work of this device upon a wire increases its capacity and accomplishes, at the same time, an enormous saving of nervous and physical strain to both sender and receiver.

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A penny risked—a postal card—and his wife might have been well.

For later I cured the man.

No doubt I could have cured his wife.

Sick one—delaying—doubting—this is a lesson for you.

Dr. Shoop's Restorative

Fill out the coupon. Send to me. I will arrange with a druggist near you for six bottles of Dr. Shoop's Restorative. Take it a month at my risk. If it succeeds, the cost is \$5.50. If it fails the druggist will bill the cost to me. And I leave the decision to you.

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Mine is the largest medical practice in the world—I say this, not boastfully, but to explain.

Where most physicians—other specialists even—treat forty cases I probably treat thousands. I have done that year after year, and experience—more than all else—teaches a physician to cure.

My practice was large before I made my discovery—how to treat, not the vital organs themselves, but the nerves that operate them.

Now I have patients all about you—your neighbor; your friends perhaps. Few of them care for the guarantee. They know the remedy—Dr. Shoop's Restorative—and its value. But I offer the guarantee cheerfully—gladly, to new patients, that those who are sick may learn without risk.

My past records show that 39 out of 40, who accept my offer, pay for the medicine—and pay gladly.

Would they pay if it failed?

The offer is everywhere. Over 600,000 sick ones have accepted it. Failure would bankrupt me. Yet I continue the offer—and to everyone everywhere.

Could I if it failed?

Simply Fill Out the Coupon

That is all. No reason to wait—nor to postpone. Nothing to consider—no preparations to make.

The risk is mine and mine alone.

You or some friend is sick. I can help you. The sun shines brightest on well days. My offer brightens the dark days. Then sign the coupon today.

Let me hear from you now.

At the Doctor's Risk

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Send me book No.
and tell me where I can secure six bottles Dr. Shoop's Restorative on 30 day's trial.

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Just to give you a little idea of the wonderful values we are offering we show two popular stoves taken at random from our big assortment as shown in our free stove catalogue.

\$3.98 Buy this handsome NEW 1904 MODEL OAK HEATER. Burns WOOD OR COAL and is one of the handsomest oak heaters made. Beautiful recess cast iron base, top and front, best sheet steel body, very elaborate nickel plated ornamentations and trimmings including side rails, hands, top, handsome urn, medallions, checks, drafts, etc. **OUR FREE STOVE CATALOGUE** shows a very large picture of this and an endless variety of other direct draft and double heater WOOD AND COAL HEATING STOVES. Buy this handsome COOK STOVE, latest 1904 model.

\$4.85 one of the latest and best cook stoves made; highest grade casting, large oven shelf, oven door klicker, nickel medallions and trimmings, heavy covers and centers. Our free stove catalogue shows a very large picture of this and an endless variety of other cast iron cook stoves and cast and steel ranges AT CORRESPONDINGLY LOW PRICES. Our big \$11.98 nickel trimmed steel range is the greatest steel range value ever offered. Our \$13.95 reservoir nickel trimmed steel cook stove and our big 500-pound reservoir high shelf range, which we sell at \$18.98 are the equal of ranges that sell elsewhere at double the price. Our free stove catalogue shows large pictures and complete descriptions of all the stoves we make, explains our liberal terms, 30 days' free trial proposition, our guarantees, etc., and carries with it the most liberal stove offer ever named. Don't buy a stove anywhere until you see our free stove catalogue. Simply write us a letter or on a postal card say "send me your free stove catalogue," and it will go to you by return mail, postpaid, free of charge. Address, **SEARS, ROEBUCK & CO.,** Chicago, ILL.

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SEATTLE, WASH., WESTERN UNION.

The vacation outing is a form of summer rest and pleasure that the Seattle telegrapher takes kindly to.

Miss M. R. Knox has returned after a two weeks' visit in Oregon.

Samuel Gloor insists that he caught all the fish and game on Mount Hood, Oregon, during a two weeks' sojourn, although the proof is sadly lacking up to date.

Frank Holder put in ten days' "residence" on his timber claim recently. He incidentally supplies the benedict force with fresh dairy butter from the ranch, guaranteed "original package."

Frank Bowes spent two weeks at his home in Victoria, B. C.

Henry Luithle has finished painting his new house.

A. Z. Washburn and family spent the summer in "Tentville," at Alki Point.

Frank Blashfield is experimenting with a chicken ranch, in addition to his day trick.

John O'Rourke is doing "race" duty at The Meadows, and knows a winner when he sees it—win.

James A. Weeks, late of this office, has accepted a Government position in connection with the wireless telegraph system, which is being established between the various artillery posts on Puget Sound.

Bert Swatt's official title of "traffic chief," with a financial accompaniment, is chronicled with general satisfaction.

Various other increases in the operating room, are bona fide evidences that Superintendent Goulding and Chief Operator McDonnell are conducting affairs in a way that is thoroughly appreciated by the force.

Additions to the regular force: J. J. McDonnough, Wm. Kuchen, J. R. Jandorff, F. H. Blashfield, J. M. Fraser, T. M. Thomas and W. R. Bow.

Extra list: R. J. Ince, W. C. Neele, T. Brophy and J. F. Johnson.

THE ASSOCIATED PRESS.

Arthur McDonald, aged twenty-two years, an Associated Press operator at Denver, Colo., died in that city on September 16 resulting from the effects of an injury sustained to his knee. He was a popular, young man and his untimely death is mourned by a wide circle of friends. The telegraph people sent an abundance of flowers on the day of the funeral, including a large piece in which was included a design of "30" and "M."

ST. LOUIS, MO., WESTERN UNION.

Mr. Henry Gosting and Miss Portia Brooks, were married recently.

The Hon. Dip McCrudden has returned to St. Louis to resume his duty, after several months' stay in Chicago.

C. H. Shell, Jr., one of our bright check boys, has been transferred to a brokers office, to a position as an operator.

George Schmittgens, night service clerk, who has been absent for several months, has returned and we hope to keep him with us for many years, as he is an expert on service messages.

Chief Operator L. N. Boone, Mike Tully, James P. McClure and Miss Fannie Meyers, have returned from Milwaukee, where they spent a few days with The Old Time Telegraphers.

DENVER, COL., WESTERN UNION.

Assistant Superintendent A. A. Gargan, Night Chief "Old Farmer Lawton" and F. E. Gargan, went to Hugo to meet the Washington correspondents, on the night of September 8. The party were entertained by the citizens of Hugo with an old-fashioned cowboy supper. The meal was served out of the same chuck wagon as used at the time President Roosevelt and party spent the night there about a year ago. After supper a dance was had at the school house.

Mr. E. E. Lash, who has been night wire chief for the past year, has resigned to accept the chief operatorship at Oklahoma City, O. T., for this company. The force presented him with a fine gold chain and charm the night he left. Mr. Lash was very popular with all the employees.

Mr. F. W. Hutchins, overland chief, takes Mr. Lash's place on the night force, and Mr. Joseph White, of the Omaha local, relieves Mr. Hutchins on the overlands.

Chief Operator J. E. Jenkins has gone to Amarillo, Tex., to install two new quad sets for our new Dallas circuit, which is expected to be completed very shortly.

Mrs. Early has returned from her two weeks' vacation.

Miss Maud Williams has returned to Fort Worth, Tex., after spending the summer in Denver and vicinity.

Mr. W. H. Skidmore left for El Paso, Texas, after a temporary stay in Denver.

George Allen, chief operator of The Associated Press, New York City, called on all his friends and acquaintances here a few days ago. Mr. Allen likes New York, yet returns to Colorado to spend his vacations. He states that all our other Denver people, now located in the metropolis, are enjoying the summer in and around that city.

M. I. Hyland, who has been with us for the past three months, returns to his home in Lincoln. Mr. Hyland made a number of friends while here and all regret his departure.

Arrivals: J. M. Clark, from Victor, Colo.; C. J. Killick, from Armour & Co., Kansas City, Mo.

Miss Katherine O'Brien, manager at Greeley, Colo., made this office a pleasant call the other day. Miss O'Brien was on her way to resume her duties as manager at Greeley, after an absence of five months.

Miss Anna Davy has had a vacation, and enjoyed a trip about the State.

Chester Neimver left on September 20 for the gold fields at Waunita, Colo., to look after his claims in that vicinity.

Harry E. Madison, one of our popular operators, was married a few weeks ago to a lady at Boulder. The announcement was a surprise to his friends.

E. J. McLaughlin and W. L. DeHoff spent ten days upon the Gunnison, fishing. E. B. Spencer, of Kansas City, is on the extra list.

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WESTERN UNION.

Most all of the summer offices have been closed and the operators have returned to New York where all of them who wish to remain here will be provided with employment for the winter.

Mr. Willis H. Jones has occupied all of his spare time during the past three months working on a new edition of Jones' Diagrams which we understand is now on the press. The book will be up-to-date in every particular and will include the latest developments in telegraphic apparatus. All of the recent improvements in the Western Union and Postal telegraph systems will have a place in this latest edition which we understand will be ready for delivery in a month or so.

Miss Clara E. Hull has been appointed manager of the office at Whitehall, N. Y., vice Mr. C. Ray Cole, transferred to the general operating department in New York city.

Mr. W. H. Jackson, chief in charge of the seventh floor, has returned from his vacation spent in Canada.

Mr. James Mullen has returned from a vacation of a week spent at his home in Philadelphia.

Owing to the sudden death of a relative, Amos L. Bougher was lately called to Philadelphia to attend the funeral.

Mathew Redmund, of the New York Stock Quotation Company, has become the father of a daughter.

The recent slump in the stock market which has prevailed for a month past has resulted in the discontinuance of a number of leased wires and the throwing out of employment of many first class operators. Most of these men are finding employment in this office. As their ability is of a high order their services are consequently appreciated.

Mr. John Brant, secretary of the Old Time Telegraphers' and Historical Association; "Senator" Wm. L. Ives and Frank D. Murphy, the delegates from this office to the Milwaukee reunion, have returned and express themselves as well pleased with the treatment accorded them in the metropolis of Wisconsin.

POSTAL.

A new pen record was made at the Postal Cotton Exchange office a few days ago. Seven hundred and eighty messages were received from 10

A. M. to 3.30 P. M., of which William Wendover received 391 and Jerry Sullivan 389.

The following named persons have returned from vacation: Chief E. J. Rankin; Night City Chief J. M. Mearns; General Traffic Chief S. B. Haig; City Chief S. C. Dodd; Miss M. Lott; D. J. Murray and R. F. McKune.

Vice-president E. C. Bradley has returned to his office after enjoying a brief vacation.

Wire Chief Frank McKiernan and Western Traffic Chief O. J. Nourse, are absent on vacations.

The following have been transferred to positions on the split trick: G. H. Fleetwood, A. G. Williams, J. F. Cronin, C. A. Cuneo, F. G. Bagley, Samuel Perrin, C. J. O'Connor, C. A. Savage, W. D. Saunders and A. J. Davis.

From the split trick to the regular force the following transfers have been made: A. J. Davis, E. W. Connelly, H. B. Kaufman, W. L. Riker, W. C. Mullin and R. M. Allands.

Arrivals: Mrs. Scofield and J. C. Bishop.

Let D. A. Mahoney, of the Western Union, Philadelphia, quote you a price and easy monthly payment plan for your old machine in exchange for the **FAY-SHOLES** No. 6 or the **FOX** No. 3. Both are machines of merit.

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It will strengthen the relaxed cords of the hand, wrist and arm ' will arrest and cure all cases of paralysis and cramp of years standing ; also stiff joints caused by accident.

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The directions for use are easily followed:—Place the Exerciser on the hand as shown in cut. Press the bulb for 10 or 15 minutes at a time or until the hand becomes tired. In cases where the paralysis is of long standing the Exerciser can be kept on the hand. This keeps the fingers in position and prevents them from cramping while writing. In case of feeling the paralysis coming on, use the Exerciser for 10 or 15 minutes and it will relieve the bad feeling.

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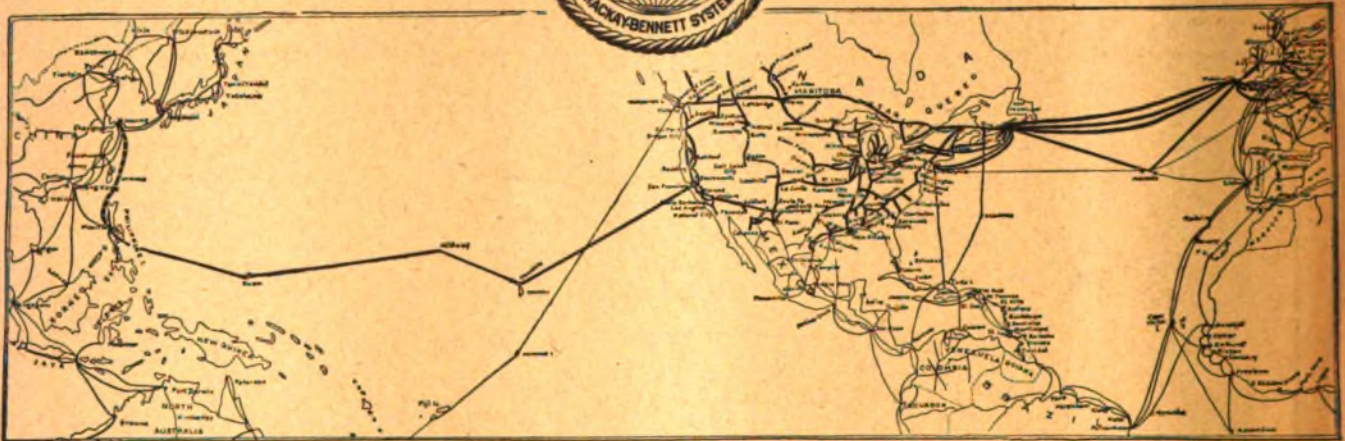
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Every man in the "Postal's" service is proud of the company's success.

These are the reasons why the "Postal" Company has been successful in the past and will be successful in the future.

The progress of the Postal Telegraph System is evidenced by the continued extension of land lines, the numerous and important railroad connections recently made, the valuable connections with the German cables, the Pacific cable, the Direct West Indies cable, the Bermuda cable, etc.

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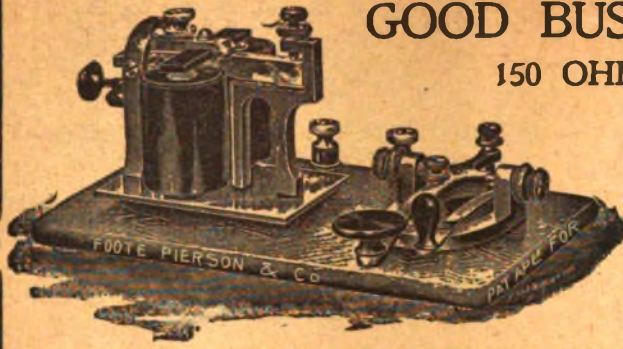
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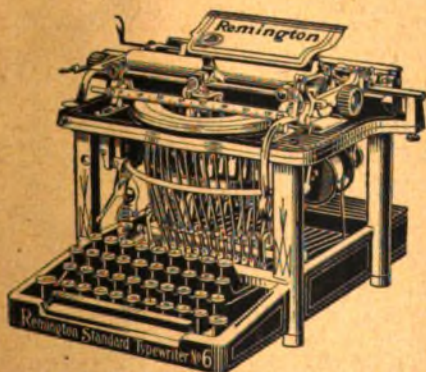
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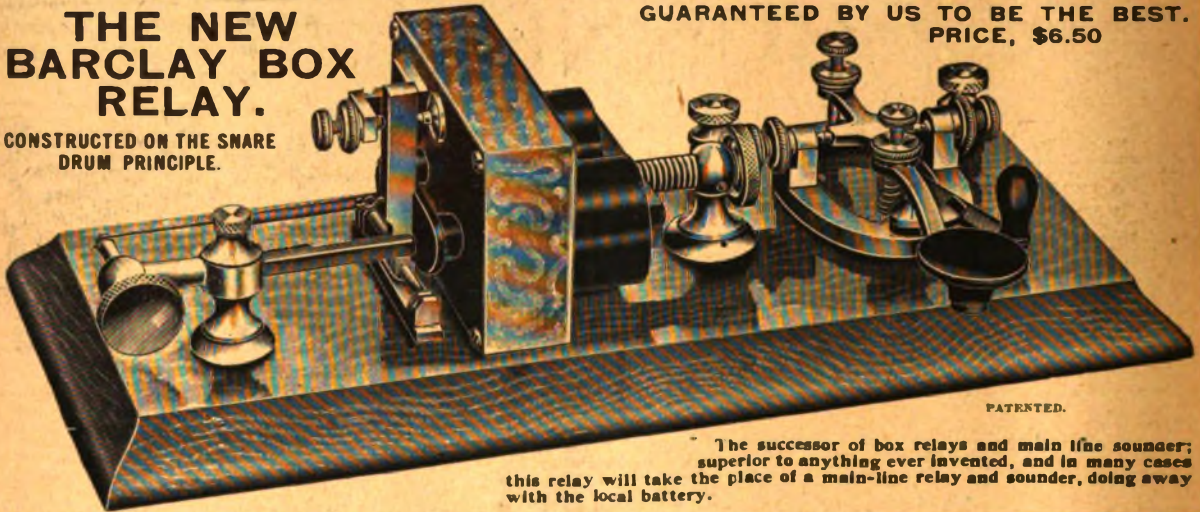
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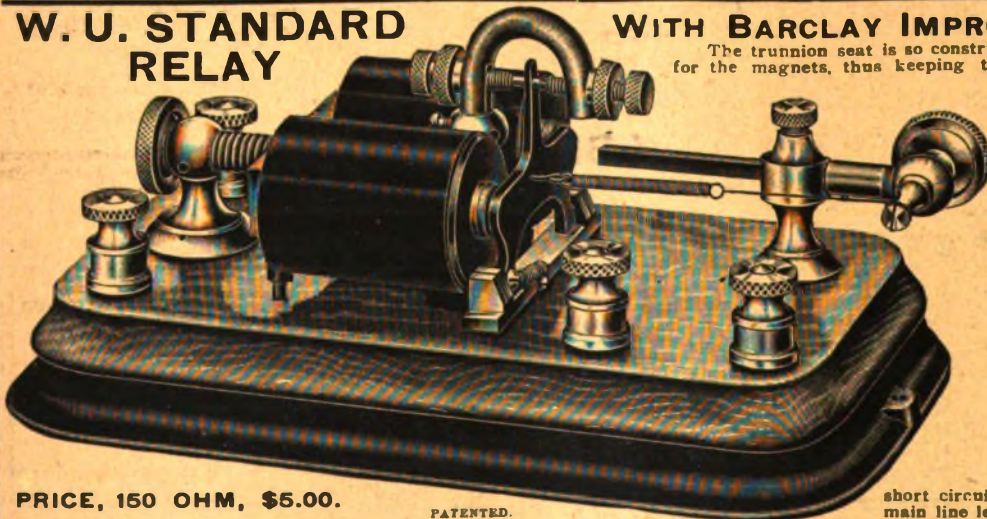
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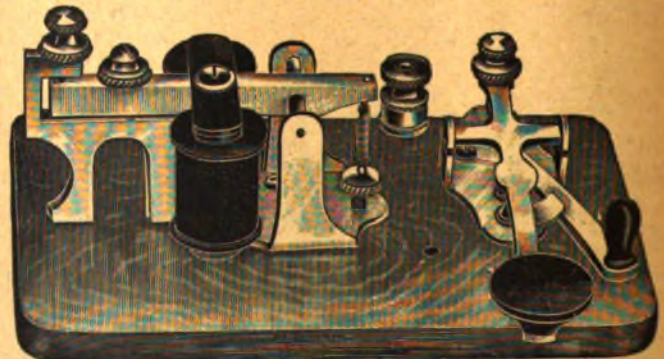
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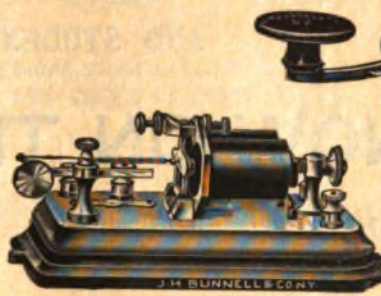
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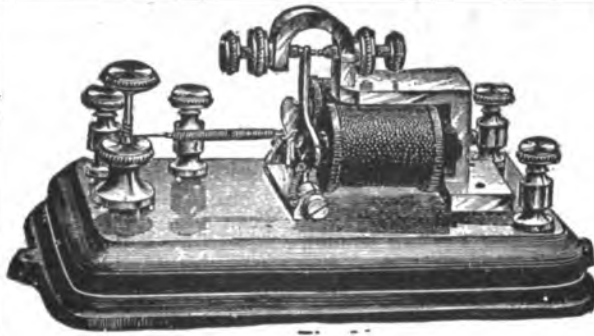
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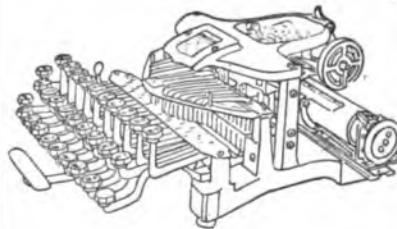


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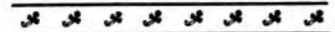
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THE TELEGRAPH AGE

No. 20.

NEW YORK, OCTOBER 16, 1903.

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SOME POINTS ON ELECTRICITY.

BY WILLIS H. JONES.

Experimental Work.

Several requests have been received by the writer during the past year for an article on experimental work for students and others, possessing an inventive turn of mind, with particular application to the construction of telegraph apparatus.

In the absence of a specified line of experiments, however, the request is obviously too ambiguous to indicate just what is wanted, but as the perplexity is just about on a par with the uncertainty of mind of many who start out to experiment and "do something," perhaps it will be more interesting and instructive to describe the numerous phenomena appertaining to magnetism and the electric current, and thus acquaint the reader with facts that indicate the next move in any particular direction desired. To experiment blindly is the height of folly and little or no progress can be made under these conditions. First decide upon some particular end you wish to attain and then acquire all the knowledge you can about the material and rules employed to accomplish it.

For example, suppose you desire to construct an electro-magnet. Do not begin by indifferently winding copper wire around an iron core, but first learn all you can about the action of the current in coils of different sizes, and its effect on various lengths, diameter and shapes of iron. When you have acquired this knowledge, and it can be found in most standard text books, you will then be able to construct a magnet that will do the work for which it is intended.

Let us see how many curious and interesting phenomena may be discovered by observing the various magnetic effects in metal resulting from the action of a current of electricity flowing in a convolution of wire around a horseshoe shaped piece of iron. The first and fundamental phenomenon observed is that a current of electricity of any degree of strength, flowing either once, or many times around the core, invariably produces magnetism, or lines of magnetic force, as they are technically called, in the iron; but the strength and control of this force depends upon the length and shape of the iron, the manner in which the coil is wound, and the strength in amperes of the magnetizing current. The magnetic lines flow through the iron conductor, which latter offers a resistance, or reluctance, as it is called, in proportion to its length, of the core, and inversely as to its diameter, after Ohm's law for the electric current. The magnetizing force is the strength of the current flowing in the wire with which the core is wound, multiplied by the number of turns of wire in the spools. Thus with a wire carrying one ampere of current, one convolution will produce in the iron a certain number of magnetizing lines of force, 10 turns, ten times that number, and 1,000 turns one thousand times that of the single convolution. If you know how many lines of force one ampere will produce in a given size and length of iron, and the information may also be ascertained from text books on the subject in question, the problem of designing a magnet for any given strength becomes simply a matter of a little mathematical calculation. In order, however, to obtain the best results the shape and size of the iron core and armature or keeper, must be carefully and skillfully designed. If this part of the construction is neglected a great proportion of the magnetic lines may be diverted into useless byways.

For instance, the little travellers in a horseshoe shaped magnet flow through the body of the metal as far as they can, in their efforts to reach the other pole, in preference to jumping off and returning through the air. When they finally reach the end of the core they are compelled to take

the air route across from pole to pole unless an iron armature or a keeper offers a better path. If a properly constructed relay armature be placed within, say a quarter of an inch, of the two ends of the iron core the small air gap intervening offers so much better facilities for getting across that most of the lines take that route, but there are always a few that take the longer route, and such are lost so far as their utility is concerned. Hence it follows that for magnets intended to act across an air gap, the horseshoe must not be bent in a manner that will bring the two poles too near together. Then, in order that the armature may collect as many lines as possible, there should be no angles or ragged edges on the pole ends of the magnet's core. If these exist, the lines crowd into the projections which reach farthest toward the armature and strike the latter in one or two spots, while the tendency is to encourage others to refuse to be squeezed, and thus compel them to take the undesired path. This indicates plainly that for attraction at a distance the ends of the core should be made perfectly round and flat on the end, and the width of the armature and diameter of the core made exactly the same size in order to intercept and collect all the lines that go across.

On the other hand, if the magnet is intended for lifting purposes, that is to say, one, the poles of which make direct contact with the keeper, projections, or rather the pointing or narrowing of the ends of the two pole pieces, is the proper construction, while the armature or keeper in turn should be set edgewise instead of flankwise across the poles.

In order to see the wisdom of constructing a magnet intended to act at a distance, differently from one where the keeper makes actual contact with the pole pieces, the reader must first understand thoroughly the law governing the action of these mysterious lines of force. The rule is usually expressed, without qualification, in the words, "the pull, or attractive strength of a magnet is equal to the square of the number of lines of force traversing the core," or words to that effect. What is meant, is that the strength of the magnet is determined by the square of the number of lines that actually pass into the keeper or armature from the pole pieces. This clearly indicates that the armature to be attracted from a distance should be set flankwise in order to furnish ample metallic surface for all the lines that shoot out from the pole pieces, and thereby prevent their turning back and disappearing in useless channels.

Where the keeper and pole pieces make actual contact there is practically no magnetic loss, hence the rule quoted is only true in cases of traction, or in other words, magnets of this kind. Then, again, there being no loss of magnetic lines in the latter class, the pole pieces and keeper are decreased in size and the latter set edgewise across, in order to concentrate all the strength in as small a space as possible, for that same reason that a string uniting two small bodies will

possess more strength than the separated fibres would jointly connecting two objects possessing greater area.

Still, again, the quality and capacity of the iron itself must be considered. Nothing but the best soft iron should be used. If the core is made of steel or hard iron, it will not demagnetize completely after the current is removed, nor will it absorb as many lines of force. Iron acts very much like a sponge. When it becomes fully saturated with magnetism it would be as useless to waste more energy trying to make the magnet stronger as it would to continue pouring water into a sponge already filled with water.

Sylvanus Thompson says that the practical point of magnetic saturation in the best iron is reached when the magnetic density is 16,000 lines per cubic centimeter. Hence it is necessary to cut the iron in an intelligent and economical manner. No more or less than is actually required to carry the magnetism should be used.

The foregoing hints and suggestions selected at random are but a few of many that might be given in connection with the construction of a magnet, but will serve to show how foolish it is to experiment in any direction without first ascertaining, at least, the fundamental principles governing the project in mind. In other words, it is better to experiment from the point where others left off than to waste time retracing old foot steps.

Recent Telegraph Patents.

No. 739,326.—Step for telegraph poles or the like. Sylvester S. Leonard, Chicago, Ill.

No. 740,314.—Insulator. Charles B. Robertson and John J. Robertson, Ottumwa, Ia. The head of the insulator is formed with angular slots for locking the wire in place.

No. 738,302.—Signal transmitting system. Edward B. Ellicott, Chicago, Ill. A master circuit contains a transmitting key and a series of magnets, each of which operates a key in a signal circuit. By a suitable device any of the signal magnets can be made inoperative.

Business Notices.

The Standard Underground Cable Company announced the removal of its San Francisco office, October 1, from the Mills Building to more commodious quarters in the Crossley Building at Mission and New Montgomery streets.

The Novelty Electric Company of Florence, Mass., well known manufacturers of electrical novelties, makes a very liberal offer to telegraphers this month by selling the Marvel Grip, for telegraphers at half price. These grips are highly recommended, being simple and inexpensive.

The following letter, which explains itself, has been received by Mr. E. S. Russell, 253 Broadway, New York, from H. K. Hibbets, an operator at the Commercial Cable office, New York: "After an extended experience I am glad to

say that the Twentieth Century Key is to the old-time telegrapher, on the sending side, what the typewriter is to him on the receiving side. The operator with writers' paralysis finds in the typewriter a Godsend that saves his life in the telegraph business. The operator, with a 'glass arm,' worn out on the old fashioned key, finds the Twentieth Century Key, not only a substitute which relieves, but, in many cases, an improvement which cures the ailment with which he has been afflicted. Without a trial of the Twentieth Century Key no operator will ever realize how truly tiresome the old fashioned key has been, just as a man seldom realizes how sick he has been until he has recovered."

The Cable.

The War Department has received a cablegram from General Greely, chief signal officer of the army, stating that the cable between Sitka and Juneau, Alaska, was opened for business October 3.

The bone of contention between the Central and South American Telegraph Company, and the Government of the United States of Colombia, which has been aired in the public press of late, is due to the refusal of the Colombian Government to grant an extension of the cable company's franchise for another twenty years.

Late despatches to the newspaper press from Tacoma, Wash., state that the striking of a submerged iceberg by the United States cable ship Burnside did not prevent her from laying the Alaskan cable in short order three weeks ago. As a precaution against accidents the Burnside took several days going to Juneau from Puget Sound, lying to every night. Despite this safeguard, she struck a submerged iceberg on the morning of September 22, and several plates were punctured, flooding her forward compartments. Examination showed that pumps could keep her afloat, and Captain Burnell, of the Signal Corps, decided to commence laying the cable at once. One object was to lighten the ship, and thereby save as much of her valuable cargo in the event of the vessel sinking as possible. Engineers made temporary repairs and kept the pumps at work so successfully that forty-six miles of cable had been unreeled when the ship arrived at Douglas City. An inspection there showed that the Burnside's hull could be repaired by the ship's crew. This is now being done. General Greely, Chief of the Signal Corps, is directing the laying of the remainder of the cable. He will recommend a branch cable from Juneau to Urangel and Ketchikan.

Wireless Telegraphy.

The Navy Department will buy twenty-five more sets of wireless telegraph instruments, in addition to the twenty sets bought not long ago as noted at the time. The twenty sets are on the principle vessels of the North Atlantic fleet

and on shore stations, and the new sets will be put in at Key West, Pensacola, Tortugas, Culbra and Porto Rico, and on other vessels of the fleet.

Wireless telegraphy has now reached a stage of development in which even airy persiflage is possible, to judge by the report of a conversation that travelled from one ship to another last week in mid Atlantic. Two New Yorkers arranged that they should communicate with each other in passing. So the young woman whose telegram was received first attempted some flippancy.

"There is going to be a dance on board tonight," the message came. "Won't you come over and join us?"

"Delighted," the young man's answer read, "but you must promise first to come over and dine with me."

Personal Mention.

Mr. W. A. Porteous, superintendent of the Postal Telegraph-Cable Company, New Orleans, La., accompanied by his wife, recently visited California.

Mr. Henry A. Reed, secretary of the Bishop Gutta Percha Company of New York, and a forty-niner of the telegraph, has just returned from an extended vacation spent in the woods of Maine. Mr. Reed was manager of the Poughkeepsie, N. Y., office in the earliest days of the telegraph when Prof. Morse, its inventor, was a resident of that place. Prof. Morse at that time made Mr. Reed's office his headquarters.

Recent New York Visitors.

Mr. John F. Butler, of Chicago, manager of the telegraph department of the Armour Company.

Mr. Thomas D. Lockwood, of Boston, electrical engineer and patent expert of the American Bell Telephone Company, and an old time telegrapher.

Mr. S. A. D. Forristall, superintendent of telegraph of the Boston and Maine Railroad, Boston, Mass. Mr. Forristall was accompanied by his son.

Mr. Charles C. Adams, of Atlanta, Ga., general superintendent of the Postal Telegraph-Cable Company, and president elect of the Old Time Telegraphers' and Historical Association.

Mr. H. J. Pettengill, formerly superintendent of the Postal Telegraph-Cable Company, at Boston, Mass., now a vice-president of the Bell Telephone Company at the same place.

Mr. W. W. Kelchner, an old time telegrapher formerly, and for twenty-five years manager of the Western Union Telegraph Company at Springfield, Ill., and for the past ten years in other business at Altoona, Pa.

Start your telegraph career right by subscribing for TELEGRAPH AGE.

Annual Report of the Western Union Company.

At the annual meeting of the Western Union Telegraph Company, held on October 14, at 195 Broadway, New York, the report of President Robert C. Clowry was received and approved. The report reads:

The capital stock outstanding is unchanged, namely, \$97,370,000.00, of which \$29,495.86 belongs to and is in the treasury of the company.

The bonded debt at the close of the year was as follows:

Funding and Real Estate Mortgage Bonds due May 1, 1950, four and one-half per cent.	\$16,000,000 00
Collateral Trust Bonds due January 1, 1938, against which bonds and stocks bearing the company's guarantee of interest or dividends at six per cent. per annum have been deposited with the trustees, five per cent.	8,504,000 00

\$24,504,000 00

\$3,000,000.00 of the above mentioned Funding and Real Estate Mortgage Bonds were issued during the year under the terms of and for the purpose prescribed in, the mortgage of May 1st, 1900.

The business of the year was:

	Year ended June 30, '02.	Year ended June 30, '03.	Increase.
Revenues . . .	\$28,073,095.10	\$29,167,686.80	\$1,094,591.70
Expenses, see statem't below	20,780,766.21	20,953,215.07	172,448.86
Net revenue . . .	\$7,292,328.89	\$8,214,471.73	\$922,142.84
Interest on bds.	992,580.35	1,077,700.00	85,119.65
Profits	\$6,299,748.54	\$7,136,771.73	\$837,023.19
Appropriated for dividends . . .	4,868,031.25	4,868,050.00	18.75
Surplus	\$1,431,717.29	\$2,268,721.73	\$837,004.44

Surplus July 1st, 1902. \$10,751,002.82

Carried to surplus as above. 2,268,721.73

Surplus June 30th, 1903. \$13,019,724.55

Statement of expenses for the year:

Operating and general expenses, including taxes	\$15,553,337 31
Rentals of leased lines.....	1,567,705.98
Maintenance and reconstruction of lines..	3,431,822 21
Equipment of offices and wires.....	400,349 57

Total expenses as above.....\$20,953,215 07

There were added to the company's system during the year 402 miles of poles, and 59,228 miles of wires.

Of the newly constructed wires 47,000 miles were of copper.

The number of messages transmitted by the employes of the company was 69,790,866, being 415,983 more than for the previous year. As stated before, these figures do not include the messages transmitted by the lessees of wire, nor the messages of the various railroad companies that are sent between their local stations under our contracts. The uses of the leased wires were probably the equivalent of 10,000,000 messages for the year.

There was an increase of \$1,094,591.70 in the revenues for the year. Of this amount the transmission of regular commercial messages con-

tributed \$321,759.90, and leased wires \$282,774.28, the remainder coming from sundry other sources.

The increase in the operating and general expenses, including taxes, was \$250,598.55, and for equipment of offices and wires \$81,921.69. Reductions of \$159,242.96 in the cost of maintenance and reconstruction, and \$828.42 in rentals of leased lines, made the net increase in expenses \$172,448.86.

\$1,077,700 was disbursed for interest on bonds, leaving \$7,136,771.73 as the profits for the year.

After paying \$4,868,050 for dividends on the capital stock, \$2,268,721.73 was added to the surplus account.

The average receipts per message transmitted by the company were 31.4 cents, and the average cost was 25.6 cents.

The cost of construction for the year was \$3,351,644.94.

Since my last report the reorganization of the service has been completed. The system of thorough inspection, including our Atlantic and Cuba cable terminals, has been continued, and a further reduction of expenses has been effected, bringing the total up to \$612,000 per annum.

During the past year contracts covering 3,840 miles of railroad have been closed with the following named railroad companies:

St. Louis Southwestern Railway Company; East Carolina Railway Company; Manitou and Pikes Peak Railway Company; Boston and Maine Railroad Company; Nevada Central Railroad Company; Manhattan Railway Company; Brooklyn Heights Railroad Company, as lessee of the Prospect Park and Coney Island Railroad Company, the Sea Beach Railway Co. and the Nassau Electric Railroad Company. (Covering Brooklyn, Bath and West End Railroad Co.); Brooklyn Union Elevated Railroad Company and the Brooklyn Heights Railroad Company. (Covering elevated railroads in Brooklyn).

APPENDIX TO ANNUAL REPORT.

Securities belonging to the Company and held by the Treasurer.

STOCKS.

	No. of shares.	Par value.
Anglo-American Telegraph Co....		£1,368 00
American District Telegraph Co., of New Jersey.....	7,835	\$783,500 00
American District Telegraph Co., of New York.....	4,114¼	411,425 00
American Speaking Telephone Co.	12,075	1,207,500 00
Brooklyn District Telegraph Co....	250	6,250 00
Chicago & Mississippi Telegraph Co.	2,500	125,000 00
California State Telegraph Co.....	23,816	2,381,600 00
Continental Telegraph Co.....	5,268	131,700 00
Dominion Telegraph Co.....	5,766	288,300 00
Delaware River Telegraph Co.....	1,311	32,775 00
East Tennessee Telegraph Co.....	513	25,650 00
Franklin Telegraph Co.....	6,329	632,900 00
Gold & Stock Telegraph Co.....	14,438	1,443,800 00
International Ocean Telegraph Co.	231	23,100 00
Illinois & Mississippi Telegraph Co.	2,007	100,350 00
Lynchburg & Abingdon Telegraph Co.	272	27,200 00
New York Telephone Co.....	97,331	9,733,100 00
Ohio & Mississippi Telegraph Co..	1,629	81,450 00

Pacific & Atlantic Telegraph Co....	58,325	1,458,125 00
Philadelphia Local Telegraph Co....	8,000	200,000 00
Southern & Atlantic Telegraph Co.	15,619	390,475 00
Vermont & Boston Telegraph Co....	2,395	119,750 00
Western Union Telegraph Co.....	294	29,400 00
Washington & New Orleans Telegraph Co.....	10,639	531,950 00

BONDS.

Kansas City N. W. R. R. Co.....		\$2,500 00
Paris & Danville Railroad Co.....		3,000 00
Chicago & North Western Telegraph Co..		40,000 00

Securities owned by the company, and held by the Mercantile Trust Co. as trustee, in exchange for collateral trust bonds.

Gold & Stock Telegraph Co.....	11,118	\$1,111,800 00
International Ocean Telegraph Co.	19,615	1,961,500 00
New York Mutual Telegraph Co....	95,508	2,387,700 00
Mutual Union Telegraph Co.....	Bonds	3,043,000 00

Coast Line to fill the vacancy occasioned by the death of F. D. Cudlipp.

Mr. Charles W. Lemont, formerly with the New England Telephone and Telegraph Company, at Boston, Mass., is now located with the American Bell Telephone Company, at Baltimore, Md. Mr. Lemont is an ex-telegrapher, and well known in the New England States.

Obituary.

J. P. Harvey, aged forty-four years, an operator in the employ of the Bessemer and Erie Railroad at Painesville, O., died of consumption September 23. He was at one time a train despatcher on one of the western roads.

W. C. Boyle, aged twenty-nine years, an operator recently employed at St. Louis, Mo., died suddenly at Dallas, Tex., September 29, at which latter point he had just arrived expecting to go to work. The interment was at Minneapolis, Minn., where a sister of the deceased resides.

William Lefevre, a telegraph operator employed at Raven Rock, Pa., while endeavoring to cross the Delaware River during the recent floods to rescue another telegraph operator whose life was in danger, was drowned by the upsetting of his boat. This is the only case reported so far where an operator has lost his life during the recent disastrous floods in this country.

Col. Robert J. Kimball, aged sixty-eight years, a well known New York banker and broker and a former old time telegrapher, died suddenly at his home in Brooklyn, N. Y., on October 3. Mr. Kimball in the early fifties learned telegraphy with Col. A. B. Chandler, Charles A. Tinker and other well known telegraph officials, on the lines connecting Boston and Montreal. Although having severed his connection with the telegraph many years ago, he still retained friendships formed when at the key.

Rev. Dr. Cary Heslett Hansford Pannell, aged seventy years, who died in the pulpit immediately at the conclusion of a sermon delivered in the Presbyterian Church at Chester, N. J., on September 6, began his career as a telegraph operator in the early fifties, and was at one time associated with Prof. Morse. In 1852 Mr. Pannell and George T. Williams, the latter now retired at Cleveland, O., were employed in the Pittsburg, Pa., telegraph office. Mr. Pannell remained in the telegraph business until 1881. For many years prior to that date he held a position in the auditor's office of the Western Union Telegraph Company, New York, while at the same time he was acting as a minister of the gospel.

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 WESTERN UNION TELEGRAPH COMPANY.

Illustration—The following table exhibits the Mileage of Lines Operated, Number of Offices, Number of Messages Sent, Receipts, Expenses, and Average Rate per Mile for the Year ending 1900.

Year.	Mile of Lines Operated.	Number of Offices.	Messages Sent.	Receipts.	Expenses.	Net Receipts.	Average Rate per Mile.	Average Cost per Mile.
1850	100	100	100	100	100	100	100	100
1851	100	100	100	100	100	100	100	100
1852	100	100	100	100	100	100	100	100
1853	100	100	100	100	100	100	100	100
1854	100	100	100	100	100	100	100	100
1855	100	100	100	100	100	100	100	100
1856	100	100	100	100	100	100	100	100
1857	100	100	100	100	100	100	100	100
1858	100	100	100	100	100	100	100	100
1859	100	100	100	100	100	100	100	100
1860	100	100	100	100	100	100	100	100
1861	100	100	100	100	100	100	100	100
1862	100	100	100	100	100	100	100	100
1863	100	100	100	100	100	100	100	100
1864	100	100	100	100	100	100	100	100
1865	100	100	100	100	100	100	100	100
1866	100	100	100	100	100	100	100	100
1867	100	100	100	100	100	100	100	100
1868	100	100	100	100	100	100	100	100
1869	100	100	100	100	100	100	100	100
1870	100	100	100	100	100	100	100	100
1871	100	100	100	100	100	100	100	100
1872	100	100	100	100	100	100	100	100
1873	100	100	100	100	100	100	100	100
1874	100	100	100	100	100	100	100	100
1875	100	100	100	100	100	100	100	100
1876	100	100	100	100	100	100	100	100
1877	100	100	100	100	100	100	100	100
1878	100	100	100	100	100	100	100	100
1879	100	100	100	100	100	100	100	100
1880	100	100	100	100	100	100	100	100
1881	100	100	100	100	100	100	100	100
1882	100	100	100	100	100	100	100	100
1883	100	100	100	100	100	100	100	100
1884	100	100	100	100	100	100	100	100
1885	100	100	100	100	100	100	100	100
1886	100	100	100	100	100	100	100	100
1887	100	100	100	100	100	100	100	100
1888	100	100	100	100	100	100	100	100
1889	100	100	100	100	100	100	100	100
1890	100	100	100	100	100	100	100	100
1891	100	100	100	100	100	100	100	100
1892	100	100	100	100	100	100	100	100
1893	100	100	100	100	100	100	100	100
1894	100	100	100	100	100	100	100	100
1895	100	100	100	100	100	100	100	100
1896	100	100	100	100	100	100	100	100
1897	100	100	100	100	100	100	100	100
1898	100	100	100	100	100	100	100	100
1899	100	100	100	100	100	100	100	100
1900	100	100	100	100	100	100	100	100

Resignation and Appointments.

Mr. Frank T. Viles, assistant chief operator of the Western Union Telegraph Company, Boston, Mass., has resigned.

Mr. R. L. Wadlington, late of Memphis, Tenn., has again resumed charge of the Postal Telegraph-Cable office at Greenville, Miss., a position he previously held for many years.

Mr. J. McRobie, manager of the Western Union Telegraph Company at Union Stock Yards, Ill., has been promoted to be assistant superintendent of the American District Telegraph Company at Chicago, Ill.

Mr. Herman Wenzel, of the Postal Telegraph-Cable Company, Fitchburg, Mass., has accepted a position with the New York, New Haven and Hartford Railroad Company, at Northboro, Mass. He is succeeded by John F. Enright.

Mr. Wm. Taylor, for many years chief operator of the Western Union Telegraph Company, Helena, Mont., has been appointed manager of the same interests at that point vice James Swan promoted to be superintendent.

Mr. L. D. Beall has been appointed chief operator of the Western Union Telegraph Company at Richmond, Va., vice W. P. Cline, resigned, to accept the telegraph superintendency of the Atlantic

The Direct Polar Relay Repeater of the Postal Telegraph-Cable Company.

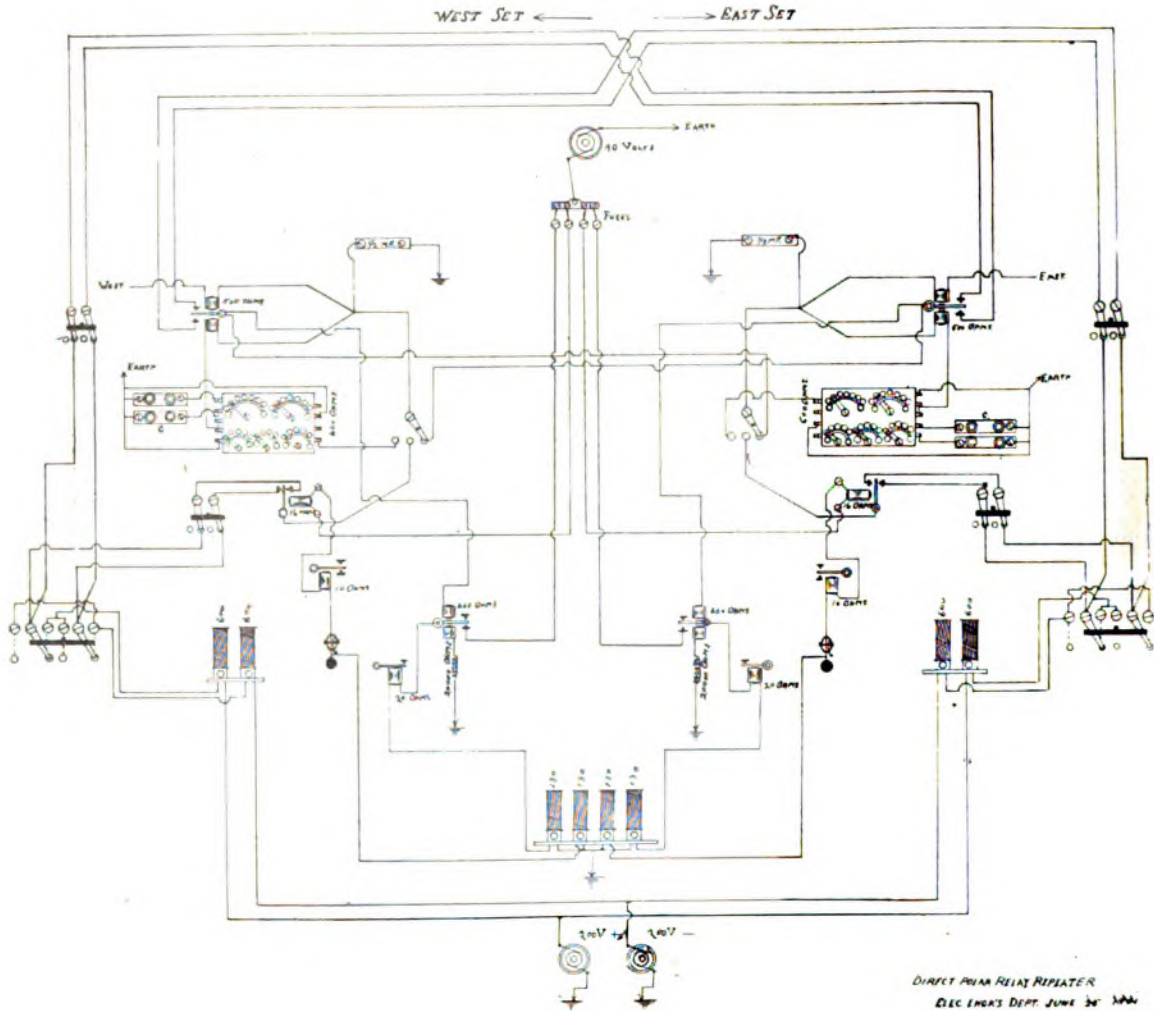
The connections of the Postal Telegraph-Cable Company's direct polar relay repeater, arranged by Mr. F. W. Jones, the electrical engineer of the company, and his assistants, will be readily understood by the diagram.

The eastern wire, arriving at the polarized relay, is brought to the point where the artificial line is connected. This dividing point is connected to the lever of a three point switch, which

the eastern polarized relay in a manner that will be well understood.

The middle point of the three point switch mentioned is attached to a tongue of a reversing transmitter, the electro-magnet of which is in a local circuit which includes a key, the connecting points of which are tapped on to the plus and minus 200 volt dynamos through necessary inductanceless resistance coils.

When the lever of the three point switch has been connected to the middle point, signals may



is shown connected to the tongue of the western polarized relay which, in making contact with its points either on one side or the other, introduces either a positive or negative current for the operation of the eastern circuit, so that, when the western relay is being operated by the distant station on the western side, it causes reversals of main line current to be directly communicated through its tongue to the eastern circuit, which, being properly duplexed, the eastern polarized relay is uninfluenced thereby, and so with the operation of the western circuit by

be sent out from the repeater station by the manipulation of the key. When the lever of the three point switch is at the left the eastern circuit is grounded through resistance which equals the internal resistance of the dynamos and the artificial coils which are included in the dynamo lead wires, for the purpose of preventing short-circuits and sparking, and the same applies to the western set.

Connected also to the tongues of the eastern and western polar relays respectively, are auxiliary artificial circuits grounded at the repeater

station through 20,000 ohms resistance, including polar relays which operate local sounders, for the purpose of enabling the repeater attendant to know what is passing his station, both eastward and westward.

Signals being recorded from the east upon the eastern polar relay, will find their way via the tongue of the relay through this eastern artificial line circuit of 20,000 ohms, and be recorded by the polarized relay included therein, thus giving an indication of the character of the signals which are being passed through the repeater to the western circuit, providing the repeating points and adjustments of the polar relay are kept in proper condition, and similarly when signals are going through from the west to the east, the signals are recorded by the polar relay in the western artificial circuit of 20,000 ohms.

The rheostats and other apparatus in the diagram will be readily understood without further explanation.

General Mention.

The Rowland system of telegraphy, recently installed between Rome and Naples, Italy, appears to be giving satisfaction.

Miss M. A. Flohr, manager of the Western Union office, New Britain, Conn., has returned to her post of duty after an absence of four months.

The United District Messenger Company, M. W. Rayens, general manager, has opened a branch office at 42nd street and 6th avenue, New York, where it is proposed to operate an up-to-date messenger, burglar alarm, night watch service, etc.

The following received from George W. Madley, Verdi, Nev., is a sample of frequent utterances contained in letters reaching us praising the excellence and simplicity of Jones' Pocket Edition of Diagrams as a handbook for all enterprising operators: "The Book of Diagrams which I received from you is more than satisfactory, and it seems wonderful how comparatively simple and easily understood the work is. Mr. Jones certainly has the 'knack' of explaining things."

The Telegraph in Alaska.

In the district of Alaska, since July, 1900, the Government has constructed 1,619 miles of land telegraph and 121 miles of cable. Within a short time work will be started by the cable ship Burnside, on a 1,050-mile cable line between Seattle and Juneau; a 266-mile line from Sitka to Juneau, and a connecting line of about 150 miles joining the Sitka line with the Seattle-Juneau system. All of this work will be completed this fall, when there will be cable and land telegraph lines from the North Pacific coast shore to every important point in Alaska, footing up an aggregate of 3,200 miles.

But at this the work of putting the rich northern district in quick touch with the outside world

is not to be stopped. Another year, it may be almost definitely stated, the Government will begin the construction of a new cable between Valdez and Sitka, which will make the United States' northern territory independent in its telegraphic communication with the world of any of the Canadian lines.

At the present time this is not the case, nor will it be with the completion of the cable now laying, except from the Lynn Canal district. Although the western part of the district is literally webbed with wires in all the important sections, the only outlet is by way of Eagle, on the upper Yukon, at the eastern border of the northern territory of the United States. Here connection must be made with the Canadian lines to Dawson and thence either via Ashcroft to Vancouver, B. C., or over the lines of the White Pass and Yukon wires to Skagway.

From the latter point, after the completion of the cable, messages will be handled by it and a share of the Canadian mileage cut off, which, it is expected, will be the means of greatly reducing the present expensive tolls. At the present time, however, and until the cable is finished, the only exit from the land wires of the North is by way of Vancouver.

Annual Report of the New Zealand Telegraph Department.

This elaborately written publication, indicating, in numerous tables, the details and volume of the business transactions of the post and telegraph department of the colony for the year ended March 31, 1903, fully bears out the opening remark in the Postmaster-General's report—"that the business was highly satisfactory, the receipts exceeding those of any previous year." Although the gross revenue for the previous year (1901) had shown a decrease in comparison with preceding years, owing to the extension of the penny postage domain, it had in the year 1902 more than recovered itself. The balance of revenue over expenditure reached £37,284, (\$186,420). In spite of the great increase of the telegraph revenue, this business is not yet self-supporting. It is remarked that, from a technical point of view, the transmission of messages over the Pacific cable, opened during the business year 1902, is very satisfactory, the time of sending a telegram from London to the colony frequently being within the hour.

The Telegraph in British West Africa.

The telegraph line between Lagos and Forcados (Southern Nigeria) is approaching completion. The line, which is being constructed overland from Lagos, will put the whole of both colonies in West Africa in telegraphic and cable communication with each other and with the outside world. It is ultimately intended to extend the land line to the Old Calabar seat of the Southern Nigerian Government.

The Railroad.

A patent, No. 739,518, for a railway block signaling system, has been granted to Herbert B. Taylor, Newark, N. J.

An article appeared in the October number of "Railway and Locomotive Engineering" from a correspondent in Aberdeen, Scotland, explaining and comparing the similarity of the staff system of train control on the Great North of Scotland Railroad and on a section of the Cincinnati, New Orleans and Texas Pacific Railroad.

Superintendent of telegraph, Andrew Keiser, takes great pride in the new general telegraph office of the Pennsylvania railroad in the Broad street station, Philadelphia, which is, no doubt, the largest railroad telegraph office in the world. There are forty-eight operators employed in the office. The service is carried by a 100-wire switchboard. The office was occupied for the first time on September 27.

The Use of the Telephone in Railroad Work is the title of an interesting, illustrative two page article, appearing in the Western Electrician of October 3. It treats of composite systems of telephony, which the author divides into three classes, namely, simplex, standard and the railroad composite. The telephone is described at considerable length, and the article concludes with a long reference to the French system of telephoning between trains.

The great drawback to space telegraphy encountered in all the different types of apparatus is the interference of messages, and for some kinds of work, notably railway signaling, this absolutely precludes the use of the system. It is obvious that in messages sent out from a train despatcher's office there should be no confusion. Francis J. Green of Detroit, Mich., has devised a method of selective signaling which may, if its theoretical claims be borne out in practice, become a factor in railway operation. This is described quite at length in an illustrated article appearing in the Western Electrician of October 10.

At the annual meeting of the shareholders of the Canadian Pacific Railway Company held at Montreal, Que., on October 7, the following directors were elected: Sir Thomas G. Shaughnessy, Sir William C. Van Horne, K. C. M. G.; Right Hon. Lord Strathcona and Mount Royal; Richard B. Angus, Edmund B. Osler, M. P.; Wilmot D. Matthews, George R. Harris, Sir Sanford Fleming, K. C. M. G.; Thomas Skinner, Hon. George A. Drummond, Hon. Robert Mackay, Charles R. Hosmer, Robert G. Reid, Clarence H. Mackay, David McNicoll. Sir William C. Van Horne was reelected Chairman of the Board and Sir Thomas G. Shaughnessy, president of the company. This board comprises five telegraphers. Resolutions were adopted authorizing the issue of \$7,087,500 4 per cent consolidated debenture stock to provide for the cost of Atlantic steamships, and authorizing capital expenditures of \$5,000,000 for additional

rolling stock, and \$4,500,000 for increased terminal facilities, grade reductions and additions to facilities other than new lines.

The Pennsylvania Railroad has completed the work of replacing the 25,000 or more telegraph poles destroyed several months ago in the raid made by it on the lines of the Western Union Telegraph Company. The new poles are being erected on the main line between Trenton and Pittsburg, Pittsburg to Oil City, Red Bank to Driftwood, Baltimore to Elmira, Philadelphia to Pottsville, Camden to Atlantic City and a temporary pole line from Trenton to Jersey City. The Postal Telegraph-Cable Company is now engaged in stringing its wires on these poles.

In a recent reported conversation had with Mr. Andrew Keiser, superintendent of telegraph of the Pennsylvania lines, he said that the securing of telegraph poles for building the new lines was an onerous task for the Pennsylvania. Conditions have become such that all roads must get poles to replace old ones wherever they can be had, whether this be in the far Northwest or in Canada or Mexico. The Pennsylvania secured the poles from almost every source for the new lines. Mr. Keiser said that the experiments with steel poles had shown that, at the present prices of steel, cedar poles could be secured at less than one-third the cost of steel ones. While steel poles might last longer, the extra cost would hardly make up the difference in this respect.

A system similar in some respects to both the Simplex and the Standard systems of simultaneous telephony and telegraphy, has been placed by E. P. Griffith, of New York, superintendent of telegraph on the Erie lines of railway, in Cleveland Leavittsburg, Akron, Kent and Galion, Ohio. The telephone operates on two Morse telegraph wires without interfering with the telegraph signals. The telephone leads are attached to an impedance coil, which reduces the induction from telegraph wires. This coil is placed between the battery ends of the telephone circuit, and at each relay within the telephone circuit a condenser is placed. The capacity of this condenser is one-fourth microfarad. The "ringing in" of the stations, as in the case of the Railway Composite, is done by a hand generator at present. In this section the copper wires used are of quite small gauge and of unequal capacity, yet the operator can hear as distinctly as over the customary telephone. Notwithstanding the fact that the telegraph instruments are in use, the sound does not affect the telephone enough to muffle the voice of the speaker. The distance between Cleveland and Galion is 170 miles as traversed by this line of wire, and the voice of the station agent at Galion can be distinctly heard over the metallic telegraph circuit.

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- Wm. E. Dechow, 178 Devonshire Street, Boston, Mass.
- Southern Electric Co., 203 Fayette Street, Baltimore, Md.
- H. M. Cross, 211 E. 4th Street, Cincinnati, O.
- Utica Fire-Alarm Telegraph Co., Utica, N. Y.
- Gordon Oddy & Co., Johannesburg, South Africa.

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

E. H. BOWEN, MANAGER ADVERTISING DEPARTMENT

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

CABLE ADDRESS: "Telegraph," New York.
Telephone, 4143—Cortlandt.

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, October 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.

Authority Should Never Be Abused.

The observance of petty methods on the part of a managing head will frequently do more to demoralize an office force than the exercise of any other single adverse influence. While firmness may be necessary and compulsory rules requisite to the proper government of a body of men, especially where extensive interests are involved, at the same time it should never be forgotten that the rank and file are human as well as those who may be placed over them. Many telegraph managers unfortunately, appear to forget this. They seem to think that their elevation over their fellows, with whom but lately they were working on a level, carries with it the right to exercise a domineering spirit. Nothing can be more discouraging to the individual than to be constantly found fault with, frequently regarding matters of a most trivial character, incidents that a manager possessed with tact and a manly generosity would either overlook altogether or refer to in a manner and at a time so as not to give needless offence. More is to be gained by molasses than by vinegar is a common saying. Yet how many forget the truth conveyed in this homely remark. If men placed in authority would only occasionally say a kindly word of praise, of approbation at the really meritorious service performed by those under them, it would go a long way to soften the asperities of business, give encouragement and make life less burdensome. It would arouse a reciprocity of friendly feeling; it would improve the esprit de corps of an office and infinitely better results would be attained.

Every man if he behaves himself, is entitled to be treated with courtesy and fairness by his official superiors. It is an easy matter in all offices to drop into the habit of finding fault, but the best managers are those who at least occasionally have words of praise and encouragement for those who are really striving to maintain the reputation of their offices. There is some good in every one and managers can render the companies they represent no more faithful service than by admitting to those who are doing good work the pleasure felt with the efforts put forth. A manager may perhaps not be able to grant increases in salaries to those deserving, but he can always measure out to each person just dues in praise so that the man at the key, traffic chief on the floor or the wire chief at the board, when off duty and with time for reflection, may have the pleasant remembrance that his hard work and painstaking efforts were at least appreciated by those whom he is striving his best to please.

Western Union Wins Bell Suit.

After a twenty years' fight, the Western Union Telegraph Company et al. win their suit against the American Bell Telephone Company for an accounting from the Bell company for one-fifth of the 35 per cent of the capital stock in a number of subsidiary telephone companies, which the Bell company received as part consideration for licenses is-

sued to such companies to use the telephone. This the plaintiffs claimed was due to them, in addition to 20 per cent. of the money rentals that the Bell company had received from such subsidiary companies, under a contract between the plaintiffs and the National Bell Company, dated Nov. 10, 1879, whereby the Western Union yielded up to the Bell the right to engage in the telephone business and licensed the Bell company under all its telephone patents.

The decision was announced by Judges Putnam, Aldrich and Brown in the United States Circuit Court of Appeals at Boston, on October 7. The decree of Judge Colt in the Circuit Court, which held that the plaintiffs were not entered to an accounting for a share of these stocks under the contract, is reversed, and the case is ordered remanded to the Circuit Court, and a decree entered for the plaintiffs for an accounting.

The amount involved in the suit is large, the plaintiffs claiming that they were entitled to recover their share of the stocks of the companies which the Bell company had received for licenses to use the telephone.

The plaintiffs, in addition to the Western Union company, are the American Speaking Telephone Company, the Gold and Stock Telegraph Company and the Harmonic Telegraph Company, and the decision of the case depended upon the construction the court would give to the contract of November 10, 1879. The exact construction put upon the contract by the court cannot be given because the court's opinion will not be printed until later.

However, under the contract there was effected a consolidation of the Gray, Edison, Phelps, Dolbear and other telephone patents controlled by the Gold and Stock Telegraph Company, with the Bell and Blake and other telephone inventions owned by the National Bell Company, with the result that the plaintiffs surrendered to the Bell company the further right to engage in the telephone business.

Under the contract the plaintiffs were to receive one-fifth, or 20 per cent. of the rentals and royalties received by the Bell company for licences for telephones in the United States. The Bell company had paid to the plaintiffs 20 per cent. of the money rentals which it received from telephone licences, and that feature was entirely out of the case.

The Bell company claimed that was the extent of its liability to the plaintiffs under the contract, and the Circuit Court took that view.

The plaintiffs have been contending to the contrary, however, as they claimed that they were entitled to receive one-fifth, or 20 per cent., of all shares of the capital stocks and securities which the Bell company had received from the licensed companies, upon the ground that the stocks and securities were paid to the Bell company, as a part consideration or rental for the granting to such companies of the exclusive license to use the telephone patents.

Down to 1888 the Bell company had received

from sundry licensee telephone corporations percentages of their capital stock, which was alleged to be of a market value of over \$18,301,000. The plaintiffs have claimed that this method of taking a portion of the capital stock of the licensee corporations inaugurated a new method or system of doing business, different from that which had been contemplated by the parties under the contract. They further claimed that the stocks so received by the Bell company were, in substance and effect, a part of the rental and royalties which it received for the granting of the license to use the telephone, and that it was liable under the contract to the plaintiffs for one-fifth of these shares.

The determination of the case depended largely upon the interpretation which the court would give to the words "rental or royalties," as used in the contract. The defendant had claimed that the contract itself defined the meaning of these words, and that they were limited to the 20 per cent. of the money rentals which it had received from the licensee companies, and which it had paid over to the plaintiffs before they brought this suit.

The Bell company had also claimed that the words "rental or royalties" meant standard annual rentals and nothing more, and that under the contract it had the exclusive right to carry on the telephone exchange business and that the stocks which it had received merely represented the consideration for the transfer of a portion of its monopoly of the exchange business to the licensee corporations.

The opinion when printed will tell the exact extent of the accounting which the defendant is to make to the plaintiffs.

Western Union and Pennsylvania Railroad.

Another step was taken October 3 in the fight between the Pennsylvania Railroad company and the Western Union Telegraph Company when Judge Joseph Buffington in the United States Circuit Court at Pittsburg, Pa., handed down an opinion in an equity case in which the telegraph company was the plaintiff and the Pennsylvania lines the defendant. Under this opinion there will be no pole chopping or other destruction of property.

The opinion is on a demurrer to a bill in equity filed by the telegraph company against the Pennsylvania company, as lessee of the Cleveland and Pittsburg Railroad. The bill is based on an arrangement made in 1856, and the rights of the complainant, considered in the opinion, are based on this contract and on an alleged subsequent modification of it.

Of the points in the demurrer the court deals with the right to give notice to quit and the question of possession of the soil. On these the court sustains the demurrer and says:

"After full consideration we are of the opinion the present agreement conveyed no interest or easement in realty. We are also of opinion the relation between the parties was one of joint own-

ership, but the extent of that ownership or interest is not here involved or determined."

A decree sustaining the demurrer on the two questions considered is ordered drawn. The joint ownership of the personal property will prevent any attempt at cutting out the poles.

The Cleveland and Pittsburg road is one of the Pennsylvania's leased lines. Whether the Western Union Company's agreement with or equities against the Cleveland and Pittsburg are similar to those governing the telegraph company's relations to the Pennsylvania company and its main line does not appear from the decision of Judge Buffington, just rendered.

The Value of Good Ground Wires.

M. Guarini, of France, in the course of a controversy on the efficiency of ground wires for telegraph and telephone circuits, as a factor in eliminating foreign currents, writes to the London Electrician, that disturbances to the telegraphic and telephonic systems can be avoided—only in the case of alternating-power currents, however—by placing their ground wires at a great depth. When continuous-power currents are employed, M. Guarini proposes to use two-power circuits carrying equal currents, the positive side being earthed in one case and the negative in the other; in fact, practically a three-wire system with an earth return instead of a neutral wire—an idea which is hardly novel.

An Echo of the Reunion at Milwaukee.

The following correspondence explains itself:
OLD TIME TELEGRAPHERS' AND HISTORICAL ASSOCIATION.

Office of President,
Milwaukee, Sept. 30, 1903.

Col. R. C. Clowry, President,
Western Union Telegraph Company,
New York.

DEAR SIR:

I feel we owe it to you that we submit a report of the success of the annual meeting and entertainment of the Old Time Telegraphers' and United States Military Telegraph Corps at Milwaukee, last week. We had with us in the neighborhood of 300 members, 248 of whom attended the theatre on Wednesday evening, 242 being present at the banquet, while about 200 remained on the third and last day and took lunch with us at White Fish Bay. The "staying" quality exhibited by the visitors would in part indicate to you that they must have had an enjoyable time. We are pleased to note that no one had any word but praise for yourself, the railway companies, and our able assistants, who put forth every energy to entertain our visitors. The programme went through without a hitch or delay, and everything, in so far as we were able to observe, proved an entire success. Frequent references were made by citizens and others, who were furnished accommodations at the hotels, of the fact that the mem-

bers of the Old Time Telegraphers' Association were as intelligent and well-behaved a set of men as ever convened in Milwaukee; and I am glad to say to you from personal observation, and from common remark, that not a man was present who was not in condition to meet with us at all times, and whose conduct would in the least produce an unfavorable impression.

With reference to this matter, and in connection with all who were interested in the entertainment of our friends, we wish to thank you most heartily for what you have done for us.

Respectfully yours,
(signed) U. J. FRY,
Ex-President.

WESTERN UNION TELEGRAPH COMPANY,
President's Office,
New York, October 6th, 1903.

My dear Mr. Fry:

I received your letter of September 30th in reference to the meeting of the Old Time Telegraphers' and Military Corps at Milwaukee last month, and am very much pleased to know that the meeting was such a great success.

What you say in your letter in regard to the character, intelligence and dignified bearing of the members fully corroborates my own opinion of the rank and file of our operators. I shall always be glad to serve the members of the Association in any way in my power, and hope that they will have very many more delightful reunions in the future.

Yours very truly,
(signed) R. C. CLOWRY,

U. J. Fry, Esq.,
Milwaukee, Wisconsin.

A letter similar to that addressed to Col. Clowry was also sent to Mr. Wm. H. Baker, the vice-president and general manager of the Postal Telegraph-Cable Company, to which the following reply was sent:

POSTAL TELEGRAPH-CABLE COMPANY,
New York, Oct. 5, 1903.

U. J. Fry, Esq.,
President, Old Time Telegraphers' and Historical Association, Milwaukee, Wis.

Dear Sir:

Your favor of the 30th ultimo, reporting the success of the meeting of the Old Time Telegraphers' Association at Milwaukee, is at hand and merely confirms what I have heard from others who enjoyed your hospitality. I desire to congratulate you and your associates of the Executive Committee upon the results of your efforts.

Thanking you for your very kind personal messages, which are heartily reciprocated, I am, with best wishes,

Yours very truly,
(signed) WM. H. BAKER.,
Vice-President and Gen. Manager.

Obedience, submission, discipline, courage are among the characteristics which make a man.—Samuel Smiles.

The Telegraph Tournament.

The American Telegraphers' Tournament which will be held on October 30 and 31, in the Auditorium of the National Export Exposition Building, Philadelphia, Pa., promises to be the finest event of the kind ever held. A vast amount of preparation has been made during the past few months to insure the success of the affair, and a degree of interest has been awakened respecting it throughout the country that portends a most



auspicious outcome. When the Quaker City was determined upon as the point at which the tournament should be held, after repeated disappointment experienced as to time and place otherwise first named, the Philadelphia telegraphers, in a spirit of true Brotherly Love, resolved that the undertaking which had been confided to their care should be pushed through to a successful and brilliant completion. And well have they lived up to this resolve. Indefatigable and enthusiastic work, without thought of personal recompense, has been performed with the utmost loyalty and good will. A true spirit of disinterested effort has prevailed. The single governing idea has been to arrange a tournament along such lines as would develop, bring out and show in competition the best telegraphic skill in the country. And the plan is everywhere having a tonic individual effect. The best men in the service at and near Philadelphia, representing all grades therein, over 700 in number, have given freely of their time, assistance and money to promote the enterprise. The various local committees have labored together in perfect harmony of purpose in advancing the common object. And for them only words of praise should be spoken for the intelligence, activity and good will they have shown. Their coadjutors elsewhere, notably the New York committee, whose sympathy and practical aid has been freely extended to their Philadelphia brethren, should have honorable mention.

While comparatively large sums of money have already been collected in order to provide a necessary fund from which to pay the cash prizes to be awarded in the contests, sufficient has not yet been raised for the purpose named. As the time is growing short before the date of the tournament, it behooves all who have pledged themselves in this respect, as well as those who contemplate making a donation, whether they have been solicited to do so or not, to hasten their payments, so that this all important question of money may be speedily settled. Checks should be drawn to the order of the treasurer, H. W. Hetzel, 1326 Chestnut street, Philadelphia, and sent to him direct without delay.

The admittance to the several events, covering both days, of two sessions each, is only \$2, or fifty cents a session, and it is urged that all who intend being present will purchase their tickets of admission at an early date as possible so that the committee may have use of the money to be derived from this source. Tickets may be obtained from the secretary, C. B. Wood, 10th and Chestnut streets, Philadelphia.

The cash prizes to be awarded aggregate over \$2,100. Including the Yetman Transmitter and Typewriting machines donated, the total value of the prizes exceeds \$3,500, a sum far in advance of any previously offered at any tournament. The famous Carnegie Medal, won by F. M. McClintic last year at Atlanta, Ga., will also be put up again for competition.

Instead of closing entries for the tournament on September 30, the date originally named, the time was extended to next Tuesday, October 20.

The Carnegie Medal will be placed on view in the window of some prominent jeweler for one week each, prior to the tournament, in both Philadelphia and New York. Mr. McClintic, the holder of the Carnegie Medal, has also placed with the tournament committee for exhibition purposes, several other medals which he has won at previous tournaments. In addition to this he has also loaned the committee an autograph letter addressed to him by Mr. Andrew Carnegie; a check bearing the date of 1865, and the signature of Prof. S. F. B. Morse, presented to Mr. McClintic by a nephew of Prof. Morse, and a blue ribbon the gift of the Postal operators, at Dallas, Tex., to Mr. McClintic, in token of their esteem for him both as an operator and as a man.

Mr. D. A. Mahoney, of Philadelphia, representing the American Telegraphers' Tournament Association spent a number of days in New York lately. He had the Carnegie Medal with him, and its inspection by many was vested with much curiosity, especially among the broker and newspaper operators who are manifesting much interest in the tournament.

The contests will be as follows:

FIRST EVENT—2 P. M., FRIDAY, OCTOBER 30.

Railroad Operators; Sending and Receiving Contest.

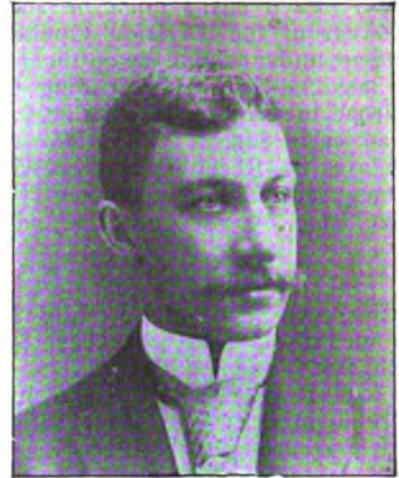
The winner of the sending contest to send for the receivers. Open only to operators who have



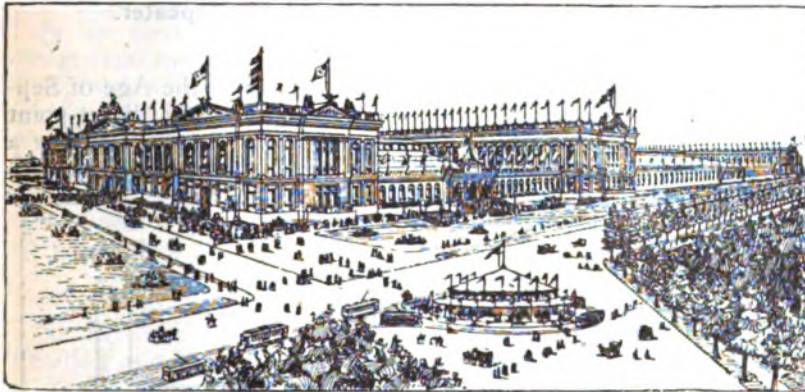
WM. M. GIBSON, OF NEW YORK.
 Winner of many first and second class prizes in various tournaments. One of the best all-round operators in America.



F. M. McCLINTIC, OF DALLAS, TEX.
 Winner of the Carnegie medal and other prizes in various tournaments.



E. H. CURLETTE, OF NEW YORK.
 Winner of the champion receiving class in the 1898 tournament.



NATIONAL EXPORT EXPOSITION BUILDING
 Where the tournament will take place October 30 and 31.



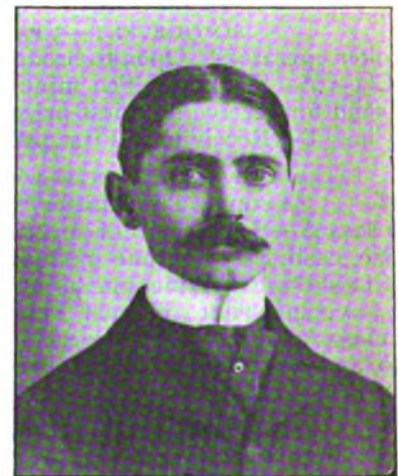
H. V. EMANUEL, OF PHILADELPHIA.
 Winner of the 50 message class in 1898 and 1892.



J. D. HINNANT, OF NEW YORK.
 Winner of the 240 word class tournament of 1898.



FRANK L. CATLIN, OF NEW YORK.
 Winner of many first and second class prizes in various tournaments.



P. J. FAULKNER, OF PHONETON, O.
 Winner of many prizes in various tournaments.

been in actual railroad service for five years or more. Each entry must be accompanied by a letter from the Division Operator or Superintendent under whom the applicant was employed.

Class A—Sending. Sending twenty ordinary railroad messages. First prize, cash, \$50; second prize, cash, \$25.

Class B—Receiving. Receiving twenty ordinary railroad messages on typewriter. First prize, cash, \$50; second prize, cash, \$25.

SECOND EVENT—3 P. M.

Ladies' Contest

Class A—Sending. Sending twenty commercial messages. First prize, cash \$50; second prize, cash, \$25.

Class B—Receiving. Receiving twenty commercial messages on typewriter. First prize, cash, \$50; second prize, \$25. The winner in class A to send for receivers.

THIRD EVENT—4 P. M.

Old-Timers Contest.

Open to all sixty years of age or over.

Class A—Sending ten messages and 300 words of press. First prize, cash, \$50; second prize, cash, \$25.

Class B—Receiving ten messages and 300 words of press on typewriter. First prize, cash, \$50; second prize, cash, \$25.

FOURTH EVENT—7 P. M.

For Best All-Around Operator.

Sending twenty-five messages and 500 words of press. Receiving twenty-five messages and 500 words of press on typewriter. All straight work. The contestant having the highest total average to be declared the winner. First prize, cash, \$300 and the Carnegie medal; second prize, cash, \$150.

FIFTH EVENT—2 P. M., SATURDAY, OCTOBER 31.

Phillips Code.

Class A—Sending. Thirty minutes trial. First prize, cash, \$75.

Class B—Receiving. Thirty minutes trial. First prize, cash, \$75.

SIXTH EVENT—3 P. M.

Broker operators. Open to broker operators only.

Class A—Sending. Ten minutes trial; winner to send for receivers. First prize, cash, \$100.

Class B—Receiving. First prize, cash, \$100.

SEVENTH EVENT—4 P. M.

Yetman Transmitter Special.

Class A—Sending press, fifteen minutes. First prize, cash, \$50, and one Yetman Transmitter.

Class B—Receiving messages, fifteen minutes, on any typewriter. Yetman Transmitter. Winner of class A to send for receivers. First prize, cash, \$50, and one Yetman Transmitter.

EIGHTH EVENT—7.30 P. M.

Championship of America.

Sending two hundred words of straight matter. First prize, cash, \$300; second prize, cash, \$150.

NINTH EVENT—9 P. M.

Receiving commercial messages on typewriter. Automatic transmission, thirty minute trial.

First prize, cash, \$200, and a Fay Sholes, No. 6 typewriter; second prize, cash, \$100.

GENERAL RULES FOR GOVERNMENT OF CONTESTS.

Speed, formation of letters, spacing and adherence to copy will determine the winners in all sending contests.

In all receiving contests, the general appearance of messages, as intended for public delivery, will be left to the choice of the contestants. This refers to the general form of the message, lines, spacing, punctuations, etc., in the date, address and signature.

The month and year must appear on each copy, although not transmitted.

The ordinarily accepted abbreviation for the month will be permitted, but the year must be in full.

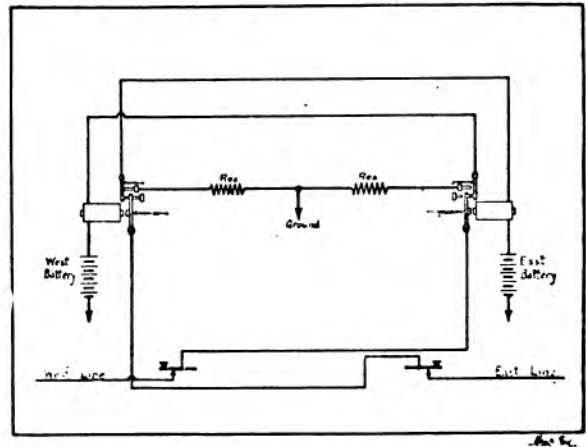
Each message to be timed as near to the actual time as possible, as if intended for immediate delivery. Clocks will be arranged conveniently.

The text of every message must be copied as sent. Each omission, or addition will be counted as an error.

The Lewis-McIntosh Repeater.

Editor TELEGRAPH AGE:

Referring to the description in the Age of September 16, of the Lewis-McIntosh direct-point repeater, would it not be an advantage to use a single wound relay instead of the double coil in-



strument shown? I enclose a sketch showing a possible arrangement, which, as you will observe, is an even closer modification of the original Toyé repeater than is the Lewis-McIntosh.

H. W. DRAKE.

261 Triangle street, Buffalo, N. Y.

October 2, 1903.

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.

Annual Meeting of the Great North Western Telegraph Company.

At the annual meeting of the shareholders of the Great North Western Telegraph Company, held September 30, the statements showed that the year ending June 30, had been the most prosperous in the history of the company, with its lines and general facilities largely extended and improved. Directors and officials elected were as follows: President, H. P. Dwight; vice-president, Adam Brown; general manager, Isaac McMichael; secretary-treasurer, Geo. D. Perry; auditor, A. C. McConnell. Directors—Richard Fuller, A. S. Irving, W. C. Matthews, James Hedley, H. N. Baird, Col. R. C. Clowry and Hon. Wm. McDougall.

The official statement says that the reports which have been actively circulated of late as to the absorption of the Great North Western by the Western Union Telegraph Company, have been without the slightest foundation. There have been no negotiations whatever in this direction. The Great North Western Telegraph Company will remain, as heretofore, a strictly independent Canadian company, under Canadian management.

In the election of Mr. Isaac McMichael to be the general manager of the Great North Western Telegraph Company, Mr. H. P. Dwight after a service of fifty-six years retires from the active management of the company's affairs. Mr. Dwight as president of the company, however, will still participate in directing the company's management. Mr. McMichael will assume office on November 1.

Annual Election.

At the annual meeting of the Philadelphia, Reading and Pottsville Telegraph Company, held at Reading, October 5, the following officers were elected: President, George F. Baer; treasurer, W. A. Church; secretary, W. R. Taylor; directors, Joseph S. Harris, John Lowber Welsh, Theodore Voorhees and A. C. E. Henderson.

Gold and Stock Life Insurance Association.

The report of the auditing committee of the Gold and Stock Life Insurance Association, for the quarter ended September 30, shows the condition of the association to be as follows:

Balance on hand last report	\$18,694.68
Receipts	1,992.23
Total	\$20,686.91
Disbursements	1,074.39

Balance on hand \$19,612.52
 F. H. Nichols and F. J. Nurnberg, auditing committee.

"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.

A New Type Battery Telephone.

J. H. Bunnell and Company, (Inc.) 20 Park Place, New York, have brought out a new type of battery telephone which is designated as the "Bee-ko-Phone." This instrument, which is shown in the cut, is equipped with a solid-back transmitter, double-pole receiver, vibrating bell and call-button, and the apparatus is guaranteed by the



NEW TYPE BATTERY TELEPHONE.

company to give satisfaction on all short lines. The instrument makes a handsome appearance and is well constructed throughout, it being designed with such simplicity that any one can set it up. Copper wire is recommended for the lines.

The instruments are very low in cost, and as they are intended for short-line intercommunication the equipment is very inexpensive.

A National Electrical Engineering Reserve.

The American Institute of Electrical Engineers, through Ralph W. Pope, secretary, has addressed the following letter to the members of a committee made up of Gen. Eugene Griffin, 44 Broad street, New York, chairman; Walter M. MacFarland, Box 911, Pittsburg, Pa., vice-chairman; J. C. Barclay, 195 Broadway, W. S. Barstow, 56 Pine street, J. J. Carty, 18 Cortlandt street, and M. G. Starrett, 621 Broadway, all of New York:

"I have the honor to inform you that you have been appointed by the president and council to serve on a committee for the purpose of bringing to the personal notice of the Secretary of War the advisability of organizing a National Electrical Engineering Reserve as an auxiliary to the regular force, in case of war. Colonel Reber, of the general staff at Washington, will shortly forward to you papers and data which have been collected in connection with this subject.

"Due notice of a meeting at the office of the chairman, 44 Broad street, New York, will be given, when it is intended to discuss a general plan of organization in conjunction with Colonel Reber, preparatory to bringing the whole matter before the Secretary of War, at Washington."

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

Isaac McMichael Becomes General Manager of the Great North Western Telegraph Company.

Mr. Isaac McMichael, superintendent of the Western Union Telegraph Company, at Minneapolis, Minn., has been elected general manager of the Great North Western Telegraph Company, with headquarters at Toronto, Ont. Mr. H. P. Dwight, the president, still remains at the head of the company as heretofore, but the appointment of Mr. McMichael to the position newly-created for him will relieve the president from a large amount of increasing labor to which he is rightfully entitled after so many years of devoted watchfulness and care. At the same it elevates to this responsible post a thoroughly capable telegraph man, a Canadian by birth, although an American by training.



ISAAC McMICHAEL.

General Manager of the Great North Western Telegraph Company.

Mr. McMichael was born at Brantford, Ont., January 7, 1840. His telegraphic career began in 1856, when he entered the service of the Brantford and Goderich Telegraph Company. This initial work was soon over and coming to the United States, where greater opportunities were offered him, we find him at twenty years of age, in 1860, located at Piqua, in Ohio, the nearest State across Lake Erie, from his old home. Going thence to St. Louis, at the first outbreak of the Civil War, he entered the United States Military Telegraph Service. His early duties were in the field as operator for Generals Fremont and Pope in central Missouri, and afterwards in St. Louis, Little Rock and Ft. Smith, Ark.

At the close of the war Mr. McMichael entered the service of the Western Union Telegraph Company, at Kansas City, afterwards going to St. Louis, at which latter post he was, in 1869, appointed chief operator, and in 1870 chief clerk to Superintendent Clowry, who in 1874, appointed him assistant superintendent of the second district of the central division. On the formation of the eighth district, July 1, 1881, Mr. McMichael was appointed superintendent, with headquarters

at Minneapolis. For more than twenty-two years Mr. McMichael has served in this high capacity, corroborative proof of the early estimate formed of his energy and ability, as well as of his prudence and fidelity.

W. P. Cline, Superintendent of Telegraph.

The appointment of Mr. W. P. Cline to be superintendent of telegraph of the Atlantic Coast Line Railroad, while a fine choice, at the same time removes a man of exceptional ability from the commercial service. Mr. Cline became a messenger for the Western Union Telegraph Company in 1876, at Martinsburg, West Virginia, his home. In June, 1877, he accepted employment from the Baltimore and Ohio Railroad Company, as copying operator, serving in that capacity at various points on that system, being stationed most of the time, however, at Grafton, W. Va. In February, 1888, he became the assistant chief operator of the Western Union office at Richmond, Va., from which post, about a year ago, he succeeded to the position of chief operator, when the late Mr. F. D. Cudlipp, resigned the place to become the superintendent of telegraph of the Atlantic Coast Line, to which in turn, after Mr. Cudlipp's death, Mr. Cline was appointed on September 22. Mr. Cline is an accomplished electrician, a man possessed of much energy and force of character, of marked executive ability, and



W. P. CLINE.

Superintendent of Telegraph of the Atlantic Coast Line Railroad.

withal of a calm and equable temperament. During his long connection with the Richmond office he won the cordial esteem of a wide circle of friends who, while regretting his departure, rejoice at his good fortune. His present headquarters are at Wilmington, N. C.

The best portion of a good man's life—his little nameless, unremembered acts of kindness and of love.—Wordsworth.

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.]

CEDAR RAPIDS, IA., WESTERN UNION.

Mr. H. Dehner worked for the Weare Commission Company a week lately, Mr. Kinch filling his place here.

Mr. C. Allen has returned from his vacation spent in Chicago and Des Moines.

Mr. J. Mahoney, day chief, was called to his home at Peoria, Ill., on account of the serious illness of his sister. Manager Davis is filling the chief's place during his absence.

Mr. Kane is working the Chicago quad, nights, now, on account of the resignation of Mr. Prizak.
OKLAHOMA CITY, OKLA., WESTERN UNION.

Mr. E. E. Lash, formerly night chief operator of Denver, Colo., has been appointed chief operator at this point to succeed Mr. W. W. Glaze, who has been assigned to duty as night chief, Mr. C. T. Meigs having resigned that position to accept a position with the poolroom.

Mr. A. C. Hendley, who until recently held a position as relief chief, now occupies a lucrative place with the Choctaw railway in this city in the despatcher's office.

Mr. A. B. Rogers, of Guthrie, now handles the leased wire service of the "Oklahoman" here.

If the claims of E. J. Williams, the poolroom operator, are true, he has broken an Oklahoma record, if not a world's record. Two Sunday's ago he made a "fishing trip" to Stillwater over Sunday. This is the only record of a man buying a diamond ring to "fish" with, in Oklahoma. No formal announcement has been made.

MONTREAL, QUE., GREAT NORTH WESTERN.

Thomas Rodger, circuit manager, has returned from the West whither he went as a delegate to the "Old Timers" convention.

Master Wm. Pollock has resigned as night sorter and has been replaced by Robert Bannerman.

William Sharp is the latest addition to the staff.

CHICAGO, ILL., POSTAL.

Messrs. Pettit and Wilder have just returned from their vacations.

Messrs. Pettit, Potter and F. H. Hans, attended the Old Timers' convention at Milwaukee.

Mr. Will C. Long was a welcome visitor. He called at the Main and Board of Trade offices.

Among the new arrivals are Messrs. Fruin, Munger, Lott and Haensler.

A. I. Miley and H. B. Rawalt left here to accept positions with the Northern Pacific Railroad.

Business continues good and there is overtime for everybody.

PHILADELPHIA, PA.

MY MOTTO—HONORABLE DEALING.

D. A. MAHONEY, WESTERN UNION, PHILADELPHIA.

Operators! If you were all as certain of reaching Heaven as I am that Emanuel will win the "message receiving" contest in the coming tournament, you might well feel happy.

BUT YOU MUST BEAR IN MIND THIS ONE FACT—The great work that he does on the **FAY-SHOLES NUMBER SIX TYPEWRITER** is possible solely on account of its adaptability for the easy handling of "message" and "newspaper" work.

Fewest parts contained in any high-grade typewriter and no useless attachments placed thereon to help the salesman "talk" the machine into favor.

Write or wire me for booklet and easy monthly payments. All makes sold. Rentals, three dollars monthly. To visiting op's: If you "go broke" in Philadelphia, see Carver Reed.

WATCH EMANUEL IN TOURNAMENT CONTEST.

WESTERN UNION.

Some great surprises may be looked for in the coming tournament judging from the secret practice that is being indulged in, and "dark horses" will be numerous. It is also hinted that the "stars" will have to look sharp or else their laurels will rest upon other brows. In the ladies' class will be found the Misses Schotte, Purcell and Gillespie, and possibly Miss Annie Heilman. From out of this fine quartette it is predicted that there will surely come at least one and likely two winners for Philadelphia. As the time draws near great interest and activity is being manifested from every quarter and success is already an assured fact for the tournament.

Mr. D. A. Mahoney, of this office, who has canvassed Philadelphia and vicinity for subscriptions intended for prize money for the tournament, is now in New York in the same interest and meeting with great success.

Secretary C. B. Wood of the Tournament Association is a very busy man these days and deserves a great deal of praise for his faithfulness in discharging the duties of a very trying position.

Mr. John Hannon was in charge of the Western Union office at the "Carriage Exhibition" during a period of ten days lately.

The first Pittsburg may be made a bonus wire, and if so Messrs. McBride and Vandersloot, who work it expect to do some great "stunts" thereon.

Messrs C. and A. W. Kelly have the sympathy of many friends in the death of their father, Mr. Daniel Kelly, which occurred at Horntown, Va., September 23.

A. W. Baldwin is absent on account of illness.

Paul A. Weadon of The Associated Press staff is the happy father of a daughter. The Associated Press operators, as is their custom, presented the baby with a silver spoon.

Mr. John A. Sisk of this office has been elected a school director and bears the honor with becoming modesty and dignity.

PHILADELPHIA, PA., POSTAL.

Tournament gossip holds the boards and enthusiasm is running high, more so as the time for the events draw nearer.

The "Old War Horse," "Bob" McCredy, of the Postal, Commercial Exchange office, has been spurred up and will enter to compete with the younger element.

The Messrs. F. W. Jones and J. F. Skirrow, of the electrical department, and Minor M. Davis, traffic manager of the New York office, were recent visitors.

Mr. Thomas J. Donovan, manager of several New York down-town branch officers, called on us while passing through this city.

A tournament of golfers at Haverford, Pa., necessitated the sending of the Messrs. Albert Weiss and George F. McIntyre to that place to care for the large number of specials.

Mr. E. I. Queen is a new arrival at our branch office on South Front street.

BOSTON, MASS., POSTAL.

D. Carter, quad chief, has resigned to accept the managership of the Boston office of the Broker Wire Service Company. Mr. Carter has been in the Postal service for many years, and was an efficient chief operator, an all-around good man and popular with everybody. Expressions of regret at his departure are heard on all sides, with plenty of good wishes for his future success.

Collector J. C. Smith is wearing a happy smile. The cause is a ten-pound boy.

W. B. Tait, of the "Globe" office, days, has returned from a two weeks' vacation.

L. A. Boone and A. J. Noble have returned from Newport, where they have been located for the summer season.

M. T. Wane is another recent addition to the order of Benedicts.

W. M. Laird of the first New York bonus wire has been assigned to duty on the Rowland Printer. He is succeeded by J. B. Roloson, a recent arrival from New York.

T. R. Donovan has been transferred from the Broad street branch and T. F. Carey from Court Square, to the main office, days.

ASHFORK, ARIZ., POSTAL.

Superintendent C. L. Lewis, of Los Angeles,

Cal., has been here lately with an expert engineer; also Mr. W. Swain, chief electrician of San Francisco.

Mr. H. C. Bunting is the manager here and he is assisted by W. E. Pierce, formerly of Washington, D. C.

L. C. McIntosh has the second trick and George Dennison the third. Mr. McIntosh will return to Los Angeles when the plant at that point is completed.

SOUTH BEND, IND., WESTERN UNION.

The personnel of this office is made up as follows: B. G. Graybill, formerly of Massillon, O., manager; John Edward Fenton, chief operator; R. L. Bush and Samuel Defrees, operators; Homer J. Perkins, operator and delivery clerk; Madge Bush, bookkeeper.

Mr. Fenton will most likely be remembered by some of the old-timers in the business, he having worked in nearly every large office in the country.

NEW YORK CITY.

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

WESTERN UNION.

Mr. R. L. Adams, manager of the office at Gadsden, Ala., was among the recent visitors to this office.

Mr. A. M. Lewis, eastern traffic chief, has returned from a two weeks' vacation.

Mr. C. P. Bruch, assistant general manager of the Postal Telegraph-Cable Company, New York, and Mr. Charles C. Adams, general superintendent of the same interest at Atlanta, Ga., both former operators in this department, were escorted through the operating room by Manager Sink on October 6. Both gentlemen shook hands with many of their old time friends and former companions at the key.

The printing operators are now required to cut the strips of paper containing messages in lengths of from six to eight inches which they paste on message blanks. This is the custom observed in foreign countries on circuits where printing instruments are in use. It is certainly an improvement. It is much easier to transmit from messages in this shape than from a yard or more of paper ribbon.

Mr. M. J. O'Leary, secretary of the Telegraphers' Mutual Benefit Association, has returned to his office in this building, after visiting various western agencies of that Association.

Mr. M. J. Kenna, of the race bureau, who looks after the interests of the company at various southern race tracks, is in the city. His first work for the coming season will be at the race track in Cincinnati, O., about November 1.

Mr. John E. VanBerschot has been appointed storekeeper of the supply department of the new quarters in Franklin street. Mr. VanBerschot has had considerable experience in this line of

business in the company's supply department at Chicago, Ill., of which Mr. S. C. Mason is superintendent.

Mr. V. G. Shearer, chief operator of the Jacksonville, Fla., office, and his son, W. R. Shearer, who is an operator at Jacksonville, were recent visitors and were shown the sights of the operating department by Mr. W. B. Richardson.

Mr. J. H. Masden, chief of the New Jersey wires, is absent on a vacation.

Mr. M. H. Kerner has been reappointed superintendent of lectures for the Board of Education at the Wadleigh High School.

Mr. Henry S. Pearce has returned to the office from Oyster Bay, L. I., where he acted as manager during the sojourn there of President Roosevelt.

Mr. Bryant Grant, for forty years a member of the force in the Commercial News Department, is absent on account of illness, being confined to his home by typhoid fever.

The bonus system which is now in force on the Philadelphia and Boston wires, and which is giving good success, will now be extended to cover the circuits leading to Chicago, Pittsburg, Indianapolis, Cleveland and many other points where the business is heavy enough to warrant the introduction of this system.

The Western way and through circuits have been moved into the old city department, which has been renovated. This change makes needed room for the East and South sections.

The Social and Dramatic Club held its first semi-monthly meeting at the meeting rooms of the club, Verona Hall, No. 168 Atlantic avenue, Brooklyn, N. Y., on the evening of October 15.

Mr. F. A. Stumm, the old timer and member of the United States Military Telegraph Corps, is convalescing after a four month's sickness.

The Misses Fanny and Elsie Meyer of the St. Louis office, escorted by George W. Hickey, were visitors on October 13. The ladies would not concede that the office was superior to that at St. Louis, but admitted that we had a little more space. Chief Operator Boone at St. Louis evidently instills into the members of his force the principles of loyalty to the home office.

POSTAL.

The centralization of the supply department of this company in a building by itself, apart from the main office, was a happy move, for under one roof and with ample room and consequently with closer supervision, the business of this important department is more easily handled, and proceeds with a convenience of operation and orderliness impossible under the old conditions. A visitor at Nos. 12 and 14 Desbrosses street, where Mr. Walter D. Francis, the superintendent of supplies, established himself last spring, is impressed, first, with the size of the building itself; second, with the excellence of arrangement observed in every part as well as the scrupulous neatness everywhere apparent; and, third, with the quiet, business-like atmosphere that prevades the

place. The building is a three-story structure slightly over fifty feet in width and extending two hundred feet through the block to Laight street. All goods are received and delivered at this point. The Postal has a branch office at the Desbrosses street entrance. The spacious business offices, including Mr. Francis' private office, are on the second story front, immediately over this. Across the face of the building large signs, with the regulation blue background, leave no one in doubt as to what interests are served within. The interior has the appearance of a large, well-stocked warehouse, which, in fact, it is. For here, carefully classified and arranged for quick delivery, is material in abundance, valued at nearly two hundred thousand dollars, required for land telegraph and submarine cable purposes. Even stationery for the company's use is stored there. The managing head of the Postal Telegraph-Cable Company's supply department has demonstrated anew his capacity as an organizing and executive head.

Chiefs F. E. McKiernan, E. A. Coney and Night Manager D. F. Mallen, have returned from their annual vacation. Messrs. McKiernan and Mallen made an extended trip, attending the Old Timers' reunion at Milwaukee, visiting the fraternity at Chicago, Detroit and Buffalo and taking in Niagara Falls.

Messrs. D. J. Murphy and John Greene are also back from vacations.

Miss Mattie Lott has resigned.

Arrivals: M. P. Annis, J. P. Rogan, E. F. Wulzen, J. C. Bishop and J. Ingoldsby.

Messrs. R. F. McKune and L. M. Harding did a very remarkable day's work on September 29, on the second Philadelphia bonus wire. They transmitted 601 messages in 8½ hours, each man sending 4½ hours, making an average of 70 2-3 messages per hour. Both gentlemen used the Twentieth Century key during this performance.

The fierce storms of last week created havoc with telegraph wires, the trouble principally being in the subways.

At the annual election of officers of Local No. 16, the Commercial Telegraphers' Union of America, held September 25, at the Grand Opera House, New York, the following were chosen: President, D. L. Russell; vice-president, Walter Campbell; sergeant-at-arms, J. Griswold; secretary-treasurer, W. McMahon; recording secretary, Henry Rady. Executive board: Percy Thomas, Wilbur Eastlake, Mrs. Stetson, J. J. Hope, J. F. Ahearn, C. O'Connor, Joseph Sullivan, L. Dickey and Lee Butterfield.

The leased wire connecting the "Boston Transcript" office with its New York bureau, maintained for many years, has been discontinued.

A portrait of the late John W. Mackay, by Cecile Wentworth, was on view October 13 and 14, at the gallery of William Schauss, 204 Fifth avenue, New York.

A Group of Distinguished Telegraphers.

We are indebted to Mr. Francis W. Jones, the electrical engineer of the Postal Telegraph-Cable Company, New York, for the framed portraits of a number of gentlemen now and formerly prominent in the telegraph service. As so many well-known personages are shown in the group, and believing that our readers would be glad to obtain a copy of the same, possibly with a view

and ether waves, the discovery and development of the coherer, the systems of Marconi, Popoff and others. It is a capital book, and affords just the line of information now in such demand regarding the topic treated. It will be sent on receipt of price, 75 cents, to any point in the United States or Canada, express charges prepaid. Address J. B. Taltavall, Telegraph Age, 253 Broadway, New York.



A GROUP OF DISTINGUISHED TELEGRAPHERS.

of having it framed, we have had made a half-tone reproduction, which is presented herewith.

"Wireless Telegraphy" is the title of a new and popular exposition on this interesting subject by G. W. Tunzelmann, B. Sc., the author of "Electricity in Modern Life." The volume has 104 pages, is fully illustrated, and includes chapters on ether

Spartacus—I note that an Indiana telegraph operator says many a courtship is started by telegraph.

Smartacus—Nothing new about that. It is an established fact that most marriages are brought about by the proper manipulation of the wires, with some sparking and a little dash of sentiment that suits the girl to a dot.

"What was the sermon about, Samantha?" asked old man Meddergrass on his wife's return from church. "Sunthin' about a feller by th' name of Joseph sellin' corn down tew Egypt," answered the good woman. "An' did th' parson say what corn was sellin' fer down thar?" asked the old man, who was interested in the market reports. — Chicago News.

Stella—Who made the finest catch on that fishing trip last week?

Ruth—That Clipper girl. The man we were all after proposed to her.—Baltimore American.

Teller—I cannot cash this check, madam, unless I know who you are.

She (haughtily)—I wouldn't accept the money, anyway, from any one who dosen't know who I am.—Life.

For All the Lives.—"Say," began the determined looking man, "I want a good revolver."

"Yes, sir," said the salesman, "a six-shooter?"

"Why—er—you'd better make it a nine-shooter. I want to use it on a cat next door."—Philadelphia Press.

You find yourself refreshed by the presence of cheerful people. Why not make earnest effort to confer that pleasure on others. —L. M. Child.

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Typewriter Ribbons.
Something new.

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Carbon Paper.
Known everywhere.

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Used once,
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OUR OFFER That every Operator may have and test this wonderful labor-saver, we will for a short time, send **One Prepaid** to any address upon receipt of 50c. M. O., silver or stamps. Regular price, \$1. Send today and receive the Marvel Grip by return mail.
NOVELTY ELECTRIC CO., Florence, Mass.

BIG PAYING BUSINESS For MEN, WOMEN.
Write for names of hundreds of delighted customers. Make \$20 to \$50 weekly. Do business at home or traveling, all or spare time, selling Gray outfits and doing genuine gold, silver, nickel and metal plating on Watches, Jewelry, Tableware, Bicycles, all metal goods. Heavy plate. No experience, quickly learned. Enormous demand. No toys or humbugs. Outfits all sizes. Everything guaranteed. Let us start you. We teach you **FREE**. Write today. **H. GRAY & CO., CINCINNATI, O.**

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YOU need not wear a cheap Watch.

The few dollars that you would pay for an unreliable Watch which needs setting twice daily, would put you in immediate possession of one of the best Watches made. We sell the finest ELGIN, WALTHAM, DUEBER-HAMPDEN, or ILLINOIS movements, in solid 14kt gold cases, or in the finest gold filled cases, guaranteed for 20 and 25 years on **EASY MONTHLY PAYMENTS**.

HOW TO GET ONE: Write to-day for our Catalogue, and from it select the style and make of case and movement that you prefer. Tell us where to send it—to your home, place of business Express office or where you prefer. It will be sent promptly on approval for your inspection before you pay any money. If it is just what you expected, and satisfactory in every way—put it in your pocket and pay one-fifth of the price; then send us the balance monthly, in eight equal payments. You will then have a reliable time-piece as long as you live. We sell only **GENUINE DIAMONDS** and **HIGH GRADE WATCHES** of the best **AMERICAN MAKES**. We do not sell the cheap brass, fire-gilt or gold plated cases with cheap Swiss movements, that have been so extensively advertised and foisted upon the public as premiums, or sold at \$3.75, \$4.95, etc. Such watches are absolutely worthless, for they will not keep time, and their cases will turn black in a few weeks.

THE LOFTIS SYSTEM makes it just as easy for you to get the finest Watch made, as it is for you to get a cheap, trashy affair that you are ashamed to pull out of your pocket. We sell genuine Diamonds on the same easy terms. We pay Express charges whether you buy or not; we require no interest or security; create no publicity; have no disagreeable formalities, in fact, we assume all the risk, trouble and expense of showing our goods on their merits, leaving you to decide for yourself. We are the largest dealers in Diamonds and Watches in the world, and one of the oldest—established in 1858. We refer to any bank in America. For instance, step into your local bank and ask about us. They will refer to their Commercial Agency books, and tell you that we stand very high in the business world, and that our representations may be accepted without question. We ask only one opportunity for adding your name to one of the largest lists of satisfied customers that a Mail Order house was ever honored with. **WRITE TO-DAY FOR ILLUSTRATED CATALOGUE FREE.**

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Absolutely Cure Rheumatism, Diabetes, all Kidney and Bladder Disorders, Liver Complaint and Chronic Constipation. We want to send you a Free Trial Box postpaid. Send today, address
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Absolute Reliability is the first thing. The Remington never balks or fails at a critical moment.

Durability, Ease of Operation and **High Speed** are additional features for which the Remington is famous.

Its wooden key levers give it the lightest touch and make it **the most noiseless of writing machines**. It never interferes with the sounder.

Remington Typewriter Company, 327 Broadway, N. Y.

James Swan Succeeds I. McMichael at Minneapolis.

Mr. James Swan, manager of the Western Union Telegraph Company at Helena, Mont., has been promoted to be superintendent of the same interests with headquarters at Minneapolis, Minn., where he succeeds Mr. I. McMichael.

Mr. Swan was born in Londonderry, Ireland, in 1854, and entered the telegraph service in that place as a messenger. At twenty years of age he came to New York, where he found employment with the Western Union Telegraph Company. He remained in New York for about twelve years, and during that period, by careful application and study, not only became an efficient operator, but laid those foundations of personal character and knowledge of his profession which subsequently



JAMES SWAN.

The New Western Union Manager at Helena, Mont.

gained for him recognition and preferment. In 1887 his appointment as manager of the Helena office came to him. This he has held for sixteen years, and the excellent record he has made at that point, manifest in many ways, has at last met with deserved acknowledgment on the part of his company.

Mr. Swan has always taken active interest in the growth of Helena and its affairs. He was for several years a member of the board of trustees of the Helena schools, a position which he filled ably, always showing himself an enthusiastic friend of education.

An Interesting Old-Time Reminiscence.

James J. Clark, of Washington, D. C., whose name has been placed recently on our record of the living "Forty-niners," writes in reference to incidents relative to the telegraph of nearly sixty years ago. He says:

"In the latter part of the year 1845, Alfred Vail, Henry O'Reilly and James D. Reid came to my father's shop in Philadelphia to have us go into the manufacture of telegraphic instruments. My father was carrying on the business of mathematical instrument making. I immediately took hold

of the telegraph matter and remained in the business until 1869. I was never regularly employed as a telegraph operator, but quickly learned to send and receive on a register, and on two occasions, that I now remember, relieved the operator at the Reading railroad office in Philadelphia on Sundays, which opened about two hours on such mornings, doing all the business, as that office only employed one operator. I invented a self acting repeater and made several other inventions connected with telegraphing. I also acted as an expert in telegraphic lawsuits, and in connection with George Harding, Esq., arranged the plan of placing the exhibits before the Supreme Court, and telegraphed through them before the court with J. B. Tree at the other end of the wire in the trial in which Morse's patent was sustained."

Mr. Tree mentioned this incident in his contribution appearing under the title "The Retirement of Mr. Tree," in the issue of September 1.

Friendship's of the Wire.

It seems absurd that friendships and even enmities can be formed between people thousands of miles apart who have never once seen each other, and yet we are informed, says a correspondent, that it is a common experience among the operators of cable companies. "I do not profess to understand how it is," he writes, "but there are certain operators, thousands of miles away, whom I look on as old and tried friends, others whom I distinctly don't like, and one or two whom I positively detest. I know nothing personally about nine out of ten of them, but there is no doubt about the feelings they excite over the cable. A few of them I have taken such a fancy to (and they to me), that I correspond regularly with them, and we even exchange presents. One of the nicest of them has been spending a fortnight with me in London, and, although I shouldn't have known him a month ago from the man in the moon, I found him even nicer than I had imagined. We took to each other from the first grasp of the hand as if we had known each other all our lives."

Telegraphy by Electric Rays.

Blochmann's book on telegraphy by electric rays is thus referred to in the "Electrical World": A popular, illustrated description of the author's system of telegraphy by the electric rays. He uses lenses formed of a substance with a high dielectric constant, such as rosin, glass or paraffine. The generating and receiving apparatus are enclosed in metallic casings, in the front of which such a lens is arranged, so that the electric rays have to pass through them. The lens concentrate and direct them. The author states that he has succeeded in sending telegrams over a distance of over 1 km., with lenses 80 cm. in diameter and waves 20 cm. length, which required less than 1 kw.

Distribution by Telegraph Messengers.

Within a year the Western Union Telegraph Company has established a delivery service that, in character and cost, is quite different from that furnished by express companies or the Post Office. Its value to advertisers appears to be great, and while it is still in an evolutionary stage, enough progress has been made to show that it must eventually grow into an important branch of the company's business. The service is known as the distribution department. J. A. Rudd, the manager, recently explained its working to a "Printers' Ink reporter at the general office, Western Union Building, 195 Broadway, New York.

"The Western Union Telegraph Company has a complete messenger service for delivering telegrams," he said. "It includes more than 30,000 cities, towns and villages in every part of the United States. Until this new department was established we had never handled anything but telegrams, outside of the general messenger service for people wishing to employ a boy for a few hours. When the Post Office Department began to exclude certain publications from the second-class privilege there was created a demand for an entirely new service. The express companies could not handle mail matter, and many publishers were at a loss for methods of distributing their periodicals. Our day messengers were busy only a few hours daily. They came to the offices at eight in the morning, uniformed and ready for work, but the rush did not begin until eleven o'clock, and at three it was over. This left five or six hours of time during which they were unoccupied. In these hours we began to deliver samples, periodicals, letters, advertising literature, catalogues and any other matter that we could profitable handle. Our service is not based on weight, like that of the Post Office, but on individual deliveries, and we are able to distribute small packages at rates far below those of the express companies. Take, for example, a publication weighing one pound, which is the minimum weight of most monthly magazines and trade journals. The Government carries such a publication for one cent at second-class rates, or eight cents third-class. We deliver it for one cent, and get a signed receipt in each case. The latter is turned in to the publisher. For a publication weighing five pounds we charge four cents, saving a penny on second-class rates, and thirty-five cents on third-class, under which catalogues are mailed. We cannot handle small publications weighing ten or twenty to the pound at a rate that effects a saving to the sender. Nor can we deliver to rural addresses. Our system comprises 30,000 offices, however, and includes villages of as little as 250 population, so the territory covered is great. When the system was begun we aimed to keep messengers busy during the dull hours, but it is growing at such a rate that we are now putting on boys who work wholly at delivering. The nature of the service is best shown by some of the business we have handled recently. A manu-

facturing chemist in New York city wished to deliver two-pound sample bottles of a proprietary remedy to physicians. To send them by express cost from twenty-five to forty cents each. He made a contract with us to deliver these samples in fifty leading cities. To each city he shipped 100 bottles by freight at a low rate. Our managers at these centres stored the samples on their shelves. As fast as the manufacturer received requests from physicians for samples, through advertising or other means, he forwarded names and addresses to our managers. The samples were taken down one by one, addressed and delivered, and receipt sent to manufacturer. This service cost the latter five cents per sample, plus freight charges. A publisher introducing a new periodical was refused the second-class privilege. His periodical weighed a pound. We delivered 50,000 copies monthly at a rate of one and a half cents each, and with each copy went a personal letter, sealed, at no additional cost. In three months we built up for him a paid subscription list of 8,000 copies. We delivered a sample bottle of writing ink to every business office in twenty leading cities at a cost of three cents each. Another contract was for hanging so many thousand patent medicine signs in drug stores at three cents apiece. Our boys fastened these to the chandeliers, leaving no chance for the druggist to forget them, as when they are sent direct. When we take such contract the signs go up. Another customer had a remedy which he was sending by mail, selling it at twenty-five cents. Postage came to twelve cents, eating up his profit. Consignments of this remedy were shipped to our distributing centres, and when the manufacturer received an order a bottle was delivered and twenty-five cents collected from the addressee. This service cost five cents, including return of money and receipt. We handle catalogues, samples of cereal foods, and do a distributing business on advertising literature, putting matter in any specified district of a certain city, as office buildings, high-class residence districts or the homes of the workers. The service we can render depends largely on a customer's needs. We are usually able to render profitable service to any business house, however. When we undertake a campaign instructions are telegraphed from this office to all sub-offices. Thoroughness and low cost are two advantages, and a third is the effect of having samples or advertising delivered by uniformed messengers. There are thousands of people right here in New York who have never received a telegram, and delivery by telegraph messenger is an event. Even when deliveries are made to business houses the effect is great, for a business man is flattered by advertising delivered through special messenger. He does not know that the service costs less than postage. The Western Union has franchises as a common carrier in all States, and as such has legal access to office buildings. The ordinary distributor may be excluded. We have made no attempt to furnish addresses to our customers, but our books contain thousands of

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American Telegraphers' Tournament Association

KEEP your eye on this event, which is to be held in the large Auditorium of the Exposition Building at Philadelphia. The most skillful telegraph operators of the country are entered in the contest. Old records will be smashed and new ones made. The programme includes every form of telegraph work—making a specialty of sending and receiving. Old timers, expert in the use of the hand-sending device known as the Morse Key, will demonstrate the very best work, in speed and legibility, that that instrument can produce.

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Let Me Explain To You

Mine is the largest medical practice in the world—I say this, not boastfully, but to explain.

Where most physicians—other specialists even—treat forty cases I probably treat thousands. I have done that year after year, and experience—more than all else—teaches a physician to cure.

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Now I have patients all about you—your neighbor; your friends perhaps. Few of them care for the guarantee. They know the remedy—Dr. Shoop's Restorative—and its value. But I offer the guarantee cheerfully—gladly, to new patients, that those who are sick may learn without risk.

My past records show that 39 out of 40, who accept my offer, pay for the medicine—and pay gladly.

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cable addresses, and we also have lists of wholesale and retail houses throughout the country. These lists, under certain conditions, are accessible to responsible customers."

The Cause of the Earth's Magnetism.

Many theories have been put forward to explain the earth's magnetism. The one here discussed by Mr. William Sutherland attributes this to electrical charges existing on the earth. There is strong evidence as to the two distributions of electricity throughout the substance of the earth. In Helmholtz's theory of chemical valence of the atoms, each bond between the atoms in a molecule is supposed to consist of two opposite electrons associated with the atoms. Every molecule then involves in its own existence that of at least one or the other charge. The whole earth, therefore, contains two opposite enormous charges of electricity. These are so nearly equally distributed throughout the earth that they produce no external electrical effect. If the two charges were distributed in absolute equality, their magnetic fields would exactly neutralize one another, and we should have no terrestrial magnetism. The author then considers what difference in the distribution of the earth's two charges would be required to account for its magnetic field, and he finds that if the negative and positive electricities in the earth are spread over concentric spheres whose radii differ only by the diameter of a single molecule, they can account for the earth's primary magnetic field. Upon this theory magnetism must be a property of all rotating bodies. It is the comparatively minute outstanding difference between the two opposite magnetic fields generated by the opposite electricities, associated with matter. In this aspect it reminds one of surface-tension, which reveals the play of molecule forces that escape ordinary observation. To carry the present theory of steller magnetism further, the main desiderata are, first, a demonstration of the difference in the attraction of matter for the two sorts of electricity; and, second, a determination of the law of attraction between matter and electricity, to ascertain whether it is such as to cause negative electrons in molecules to take up the position which, on the whole, is farther from the centre of the earth than that taken by positive electrons.—Abstracted from *Terrestrial Magnetism and Atmospheric Electricity* (Baltimore), June, by the *Electrical Review*.

"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. Talta-vall, *Telegraph Age*, 253 Broadway, New York.

The Electric Telegraph Suggested 228 Years Ago.

The Rev. Canon Jackson, of Leigh Delamere, Chippenham, England, writes as follows to the "*Bath Chronicle*": "Joseph Glanvill, sometimes called 'Sadducismus Triumphatus Glanvill,' rector of Bath from 1666 to 1672, was a learned writer upon abstruse and mythical subjects, but in a style of which it is not always easy to catch the meaning. In one of his treatises, called 'The Vanity of Dogmaktising,' printed in 1661, chapter XXI, he is speaking of 'supposed impossibilities, which may not be so.' In the concluding sentence of the following passage he seems to have anticipated the electric telegraph: 'But yet to advance another instance. That men should confer at very distant removes by an extemporary intercourse is a reputed impossibility; but yet, there are some hints in natural operations that give us probability that 'tis feasible, and may be compassed without unwarrantable assistance from daemoniack correspondence. That a couple of needles equally touched by the same magnet, being set in two dials exactly proportioned to each other, and circumscribed by the letters of the alphabet, may effect this magnale (i. e., important result), hath considerable authorities to avouch it. The manner of it is thus represented. Let the friends that would communicate take each a dial; and having appointed a time for their sympathetic conference, let one move his impregnate needle to any letter in the alphabet, and its affected fellow will precisely respect the same. So that would I know what my friend would acquaint me with, 'tis but observing the letters that are pointed at by my needle, and in their order transcribing them from their sympathized index as its motion directs; and I may be assured that my friend described the same with his; and that the words on my paper are his inditing. Now, though there will be some ill contrivance in a circumstance of this invention, in that the thus impregnate needles will not move to, but avert from, each other (as ingenious Dr. Browne hath observed), yet this cannot prejudice the main design of this way of secret conveyance: since it is but reading counter to the magnetic informer, and noting the letter which is most distant in the Abecederian circle, from that which the needle turns to, and the case is not altered. Now, though this desirable effect possibly may not yet answer the expectations of inquisitive experiment, yet 'tis no despicable item, that by some other such way of magnetic efficiency, it may hereafter with success be attempted, when magical history shall be enlarged by riper inspections; and 'tis not unlikely but that present discoveries might be improved to the performance.'"—*Everybody's Scrap Book*.

"Get into partnership with God; but don't try to be the leading member of the firm. He knows more about the business than you do. You may be able for a time to practice deception upon your fellow men; but don't try to fire any blank cartridges at the Author of this universe."

Concerning Management of Employees.

The remarks of Vice-President E. E. Loomis, of the Delaware, Lackawanna and Western Railroad, before the subordinate officials of the mining department recently, would make a good manual of instructions for all those having control of labor, and its application is as pat to the telegraph service as to that of the railroad. Mr. Loomis said, in part:

"All men, whether their complaint be real or fancied, are entitled to, and should receive a courteous hearing. Again, in handling men, much trouble can be avoided by the little things receiving their full measure of attention. If we take care of the details as they arise, the few momentous questions will be comparatively easy to handle. And this especially: We are all liable to error, and the employee may not be wrong all the time, and if one of you is placed in a position of doubt, the man should be given the benefit of it. In other words, put the man before the dollar. If he has, with exaggeration and misconception some element of justice on his side, give him the benefit of it; because you are working for a corporation which appreciates dividends, don't think that it cannot also appreciate justice and fair play.

"On the other hand—for the employees are not always right nor the employers always wrong: You should not construe this as in any way interfering with discipline, which is most necessary for the successful handling of any concern employing a large number of men. You can be fair and impartial, and yet firm. Loyalty on the part of the foreman will induce a loyalty on the part of the employee, and no one, no matter who, can hope for advancement in this or any other company, nor in any line of business, unless he gives to it his unquestioned loyalty. This is another way of emphasizing the immemorial truth that a man cannot serve two masters.

"It should be the endeavor of each foreman to cultivate the best that is in each employee, and aid him to realize that the company has a personal interest in him and desires to be his friend. Hence, I say, in all your dealings, be fair, equitable and impartial, and while to err is human, to forgive is divine.

"Select only such men as will, in your estimation, merit promotion. Look well into the person's qualifications. For instance when an ashman is hired, question yourself as to whether or not he will eventually prove to be such a man as you can trust as a fireman, pumpman or engineer. Merit should always receive recognition and promotion when the opportunity arises, and the man who does not desire promotion, who does not care whether he merits praise or condemnation, is not a good man to have in any position, at any price.

"What we want is to perfect our organization and interest and educate our men in all departments in such a way that in future it will not be necessary to go outside for men to fill any vacancy that may occur in our employ. A man to succeed

to-day must excel in work assigned to him. A man without courage and ambition, or a man satisfied to work as few hours as possible, without the real interest of his employers at heart, need never expect promotion. He is getting all he deserves."—*Railway and Engineering Review*.

Paper-Insulated Cables.

The life of paper-insulated cables is generally considered to be longer than those having rubber insulation. This consideration, however, may be changed by the character of the ingredients composing the rubber compound. It is stated that the dielectric strength to resist high voltages becomes greater with increasing proportions of pure Para or other high-grade rubber, and with lead-covered cables increasing the percentage of high-grade rubber lengthens the life of such cables. The paper for paper-insulated cables must be very carefully selected and impregnated with insulating compound. An oily compound is best, as it permits the cable being handled without injury, and it also has the power of resisting high voltages better. The oily compound, however, gives the cable a low insulation resistance. Specifications, therefore, which aim to secure a good cable by requiring a high insulation resistance miss the mark in excluding the oily compound impregnated paper insulation and securing an inferior style of cable.—*Electrical Review*.

A Device to Prevent Induction.

William Condon and Albert Barrett, of Kansas City, Mo., have patented (No. 737710 and No. 737711) a method for preventing induction on telephone lines. Both of these patents are for the same device, one covering the circuit and the other covering the apparatus. The inventors describe three methods of neutralizing the effects of induction. They have arranged an induction coil so that the two windings of the coil are moveable, one with respect to the other. They then propose to remove one winding so far from the other that a telephone line becomes noiseless from disturbances, and thus to increase the power of the transmitter sufficiently so that the conversation may be readily understood. They also propose to make the induction coil in several parts, and cut out one or more sections until the same result is achieved. Lastly, they propose to provide an iron core in the induction coil that is movable, and adjust this core in and out of the coil until the same result is achieved.

When a man claims to be all goodness, that claim alone does not make his credit any better at the grocery store or at the bank. Each of us owes an honest, manly effort toward the material world's progress. Honest labor is the key that unlocks the door of happiness.

Law is a boundary line, circumscribing the field in which liberty may have her fullest exercise.

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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 dotes 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.

THE PERSONAL CONSIDERATION OF TELEGRAPHERS is earnestly called to this statement, and their subscription and those of their office associates are solicited. Will the reader kindly call the attention of others to this matter. A sample copy will be sent free to any address on application.

Address, remitting by express or post-office money order, draft or check, to

J. B. TALTAVALL,

THE TELEGRAPH AGE,

253 BROADWAY, - NEW YORK, U. S. A.

New York's Police Telephone System.

When M. R. Brennan, an old telegrapher superintendent of police telegraphs in New York City, assumed that position in 1890, the police department had no telephone system of its own. The present extensive plant, which is being supplemented by the installation of patrol boxes throughout the city, is due to the energy of the superintendent who has accomplished much in this branch of his work since his accession to office. In the course of an article by Earl Edmunds in "The American Telephone Journal," the writer refers to the fact that the police department owns its own cable and wire plant, while the instruments and switch-boards are leased. He says: "Every station house in Greater New York is connected by a direct line with the switchboard at police headquarters. In several of the precincts there are sub-private branch exchanges, which connect the various departments in these precincts. At police headquarters there are forty stations connected to the main switchboard. This gives a complete intercommunicating system for the official and routine business of the police department. Besides this, there are direct private lines to all the hospitals in the city. If a patrolman on his beat wishes to call an ambulance he goes to the nearest public or private telephone and calls police headquarters through the exchange of the local telephone company. When the operator at police headquarters answers, the patrolman gets connection with the hospital in the locality from which he is calling.

"Nearly all the banks in the greater city are connected with the switchboard at police headquarters by direct private lines. In case of an attempted burglary, the bank watchmen can thus call police headquarters without the delay incident to first calling an exchange of the telephone company. This feature of bank protection is one of the important functions of the police telephones.

"When general orders are to be sent from police headquarters to the various precincts in the city the precincts are all called through the main switchboard at headquarters, and when they are all on the line the order is then read, each of the operators reading simultaneously the one order so that every precinct in the whole city receives the order at the one reading."

It is interesting to note that the switchboard is manipulated by police sergeants who are detailed especially to do this work. "These operators enjoy the unique distinction of being the highest salaried telephone switchboard operators in the world. Each of them receives \$2,000 a year which is the salary of police sergeants in New York. It is necessary, however, to have men of unusual intelligence and reliability at this police board on account of the numerous messages of a confidential nature which are received. The operators also have to be men who are familiar with the working of the department. Each message received is noted on a pad of paper and

then handed to another member of the force, who enters the message in a large book provided for that purpose. In this way a complete record of every message received or transmitted is kept in this book."

Shall the Office Coat Be Called In?

The Civil Service Magazine, of London, England, has this to say under the heading: "Shall The Office Coat Disappear?"

"A correspondent sends us a letter dealing with the condition of the atmosphere in one of the large postal telegraph buildings, and offers a novel theory for consideration. He complains that in passing through a large room, occupied by males he 'could not fail to notice the general oppressive state of the atmosphere' as contrasted with that experienced in a room of similar size inhabited by women clerks only. He attributes the difference to clothing, for he says: 'That abomination, the office coat—kept solely for official use and worn day after day for several years without being cleansed or brushed is a disgusting institution.' We can quite believe such a venerable relic is a disgusting institution. Our correspondent proceeds, 'in the other room, cotton, muslin, and washable dresses are worn during the summer months which necessitate frequent change and a decidedly cleaner and more hygienic condition is obtained.' The suggestion is made that the men should discard their beloved coats and wear a linen tunic which could be washed periodically, and the writer believes the department would give the article and defray the washing expenses. We do not care to express an opinion upon the subject at present, but it is clear that some folk believe the ancient office coat is a more dangerous foe to sanitation than the trailing skirt, and women are at last provided with fitting retort to the hostile criticism meted out of the latter article of clothing."

Government Telegraphs in Great Britain.

The forty-ninth report of the British Postmaster-General, covering the operations of the Post Office for the year ending March 31, 1903, contains some interesting figures and statements relating to the working of the British telegraphs and telephones. Some of these are so striking that it is a pity to allow them to remain buried in a Government report, says the "Electrical World and Engineer."

The total number of telegrams sent over the Post Office wires during the year was 92,471,000, an increase of 2.3 per cent. over the number sent in the previous year. Ordinary inland telegrams account for 75,883,000, of a total value of \$11,589,170. Curiously enough, while the number of telegrams was 1,161,000 in excess of the number of the previous year, the receipts were over \$15,000 less, showing that the British public has been studying economy in the wording of its telegrams. The average value of an inland telegram fell from 14.9 cents to 14.82 cents. The

rate is one cent a word, irrespective of distance, with a minimum payment of 12 cents, address and signature being charged for, not free, as in this country.

The estimated value of the railway free telegrams, which are sent in payment for right of way privileges, is \$288,080 and of Government free telegrams, \$233,110, making a total of \$521,190.

The British postal telegraphs are, as is well known, operated at an enormous loss, and a large proportion of this loss is due to the extraordinarily cheap rates at which press messages are carried. These brought in only \$718,700, or an average per message for 6,453,000 messages of a trifle over 11 cents. The average weekly number of words in press messages is given in the report as 14,890,712, giving a yearly total of 774,316,024, or an average number of words per press telegram of just over 120. Therefore, press telegrams are sent at the rate of eleven words for a cent, while the general public pays one cent for each word. This results in the Post Office doing for the press an amount of work equivalent to 70 per cent. of what it does for the public at about 6 per cent. of the price. This clearly must entail a very large loss to the Post Office, as one mill per word for telegrams over the length and breadth of Great Britain is a losing figure. If press telegrams were paid for at half rates the 774,316,024 words of press messages would bring in \$3,871,580.12 in place of the \$718,700 they did bring in during the past year, a difference of over \$3,150,000, which would be more than sufficient to wipe out the deficit on the working of the system.

The explanation that has been given of the extremely low rates for press telegrams is as follows: When the Government took over the telegraphs in 1870 a rate for press telegrams was established of 25 cents per 100 words, with 4 cents per 100 words or less for each additional copy of the same messages. The rate for additional copies was intended to apply to extra copies of messages delivered to separate addresses in the same town. But the astute business men of the Fourth Estate gave it a wider meaning and claimed that they were entitled to send the same message to any number of towns paying at the rate of 25 cents per 100 words for one transmission and 4 cents per 100 words for every other transmission. The Liberal Government of the day, wishing, it is said, to stand well with the press, conceded the interpretation of the rate desired by the press. So now we have the spectacle of the Postmaster-General refusing to admit magazines to the post at the newspaper rate of postage and at the same time making a present to the newspaper press of at least a million and a half of dollars annually in telegraphic facilities. No doubt the newspapers are well pleased, but it is not business.

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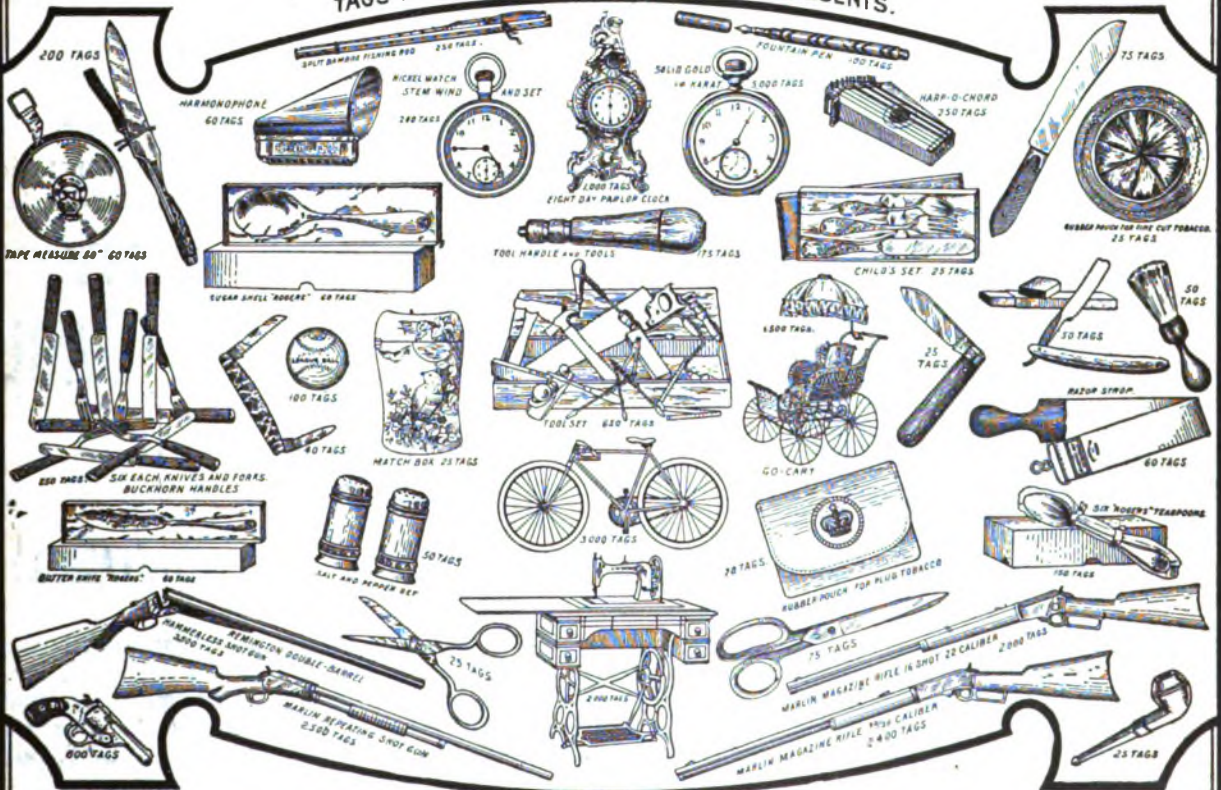
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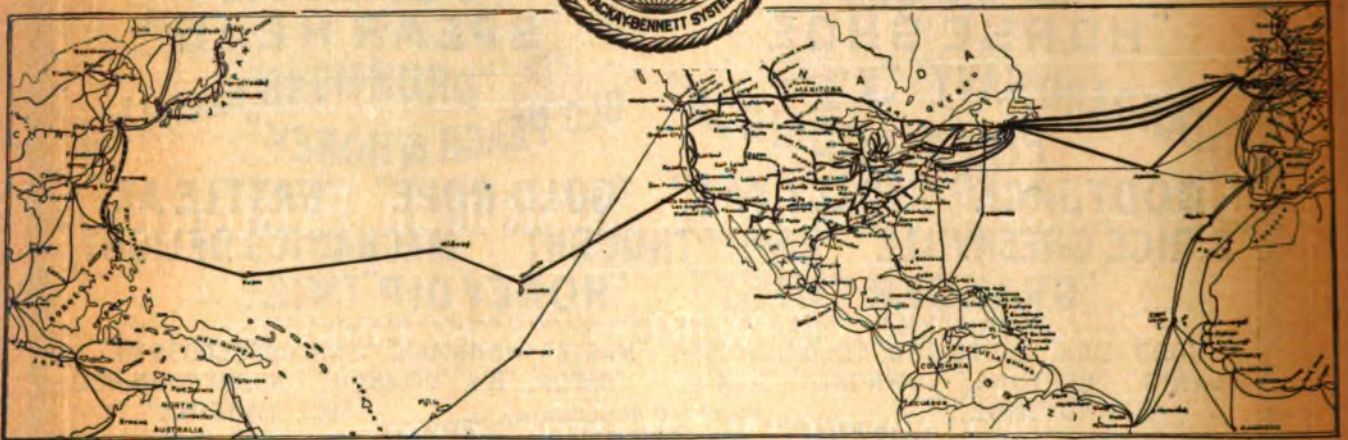
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