

TELEGRAPH AGE.

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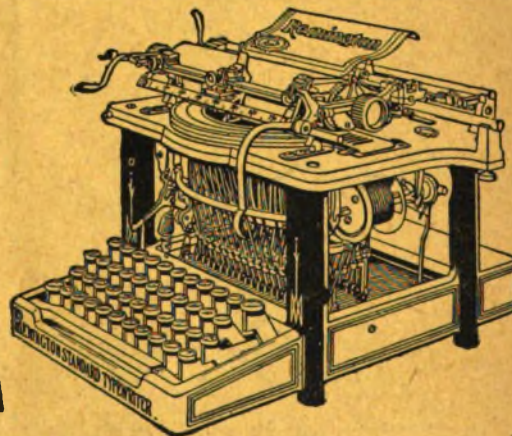
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THE TELEGRAPH AGE

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SOME POINTS ON ELECTRICITY.

The Adjustment and Care of Relays and Sounders.

(Continued.)

BY WILLIS H. JONES.

In the preceding issue of this journal the first principles governing the adjustment of the magnets, lever, and retractile springs of telegraph apparatus were given, together with a few useful hints as to the best methods to pursue under difficult conditions. What is most important to the operator, however, is to be able to quickly determine by the nature of the annoyance the source of the disturbance and then apply the correct remedy.

When signals do not reach the operator in the particular style that suits his fancy he usually attempts to remedy the fault by giving the sounder lever a greater or a lesser play. If the trouble happens to lie in an improper adjustment of that part of the apparatus he may possibly succeed in helping matters, but the fact is that indistinct signals may be due to a great variety of causes, any one of which, in his ignorance, he may never suspect.

For the purpose of illustration let us again take the case of an ordinary single line relay and sounder and assume that despite a careful ad-

justment of the relay and sounder magnets after the manner suggested in the preceding installment of this article, the signals continue to "drop out" at times.

Now, the first thing to determine is whether the fault lies in the relay or the sounder. Such disturbances are usually due to a loose or improper connection somewhere in the local circuit, but not always. Naturally the first move made towards locating the trouble should be to examine all binding posts, and operators in general would save themselves many annoyances if they would acquire the habit of doing this whenever they sit down to a different set of instruments. If the binding post connections prove to be secure, open the key and "dot" or "write" with your finger on the relay armature or lever, using the latter as a key. If the signals then respond firmly and distinct, the local circuit is not to blame, and attention should be directed to the relay.

In many cases the source of the trouble will turn out to be too tight an adjustment of the trunion binding posts, thus preventing the restrained armature from responding readily to the influence of the magnet. This fault is particularly applicable to circuits in which the strength of the current flowing through the relay coils is weak. Where the main line current is strong, the magnet is frequently able to overcome this drawback, but it is evident that even then the working margin of that instrument has been cut down to the extent that the trunion binds. It follows, then, that the trunion binding posts should always be so adjusted that the cross bar or axis upon which the lever and armature rests may move perfectly free in its sockets.

If, however, the signals made in the manner suggested continue to drop out despite this precaution, the fault will possibly be found in a loose connection somewhere in the local circuit. If tightening the binding posts fails to remove the trouble, examine the fine wire wound around the shaft of the relay lever, one end of which is attached to the shaft and the other to a part of that trunion binding post where the local battery makes its exit. If this wire becomes broken the sounder signals will certainly "drop out" at times owing to the loose connection made between the shaft and the post as the former turns in the socket. The purpose of the fine wire is to bridge over this unavoidable break in the local circuit, and the operator will at once see the necessity of keeping that connection intact.

When a sounder stands "open" and it is desired to ascertain if the break in the local circuit lies in some of the relay connections, place the blade of

a knife across both local binding posts (situated just behind the relay spring). If the opening is in that instrument the sounder will then close. If the latter remains open, try the same method with the two posts of the sounder itself. If the coil or wire connections there are broken a spark will be noticed the moment the blade makes and breaks contact with the two posts. The sounder, however, will not close, because the magnet coils are cut out.

The knife blade method, however, should never be resorted to where sounders are connected up in multiple, such as is usually the case in our large modernly equipped offices, because the cutting out of the coil draws so much current through the low resistance route via the blade that it melts the fuse and opens the other four or five companion sounders comprised in that particular group. Operators see this fact demonstrated nearly every day in large telegraph offices when some one thoughtlessly or ignorantly permits a steel penholder or other piece of metal to simultaneously make contact with both binding posts of the sounder or resonator connections. When this occurs the "locals" go off on several adjacent desks and business is suspended until a new fuse is substituted. The blade may be placed across the local posts of the relay, however, because it will not cut out the coils of the magnet, hence the resistance is not lowered. It may also be done where the sounder coils are in series with a loop or lamp resistance, such as the arrangement obtaining on duplex and quadruplex circuits.

It will be seen from what has already been said that the adjustment and understanding of even an ordinary relay and sounder requires considerable skill and a fair degree of electrical knowledge, yet an operator who does not possess ambition enough to interest himself to the extent of understanding the instrument before him, certainly deserves much of the needless provocations which come his way.

(To be continued.)

Western Union Quarterly Statement.

The Western Union Telegraph Company reports for the quarter ended September 30, the figures for this year being partly estimated while those for 1901 are actual, as follows:

	1902.	1901.	Increase.
Net revenues.	\$2,100,000	1,949,716	150,284
Int. on bonds.	252,550	239,040	13,510
Balance	1,847,450	1,710,276	137,174
Dividends	1,217,110	1,217,110	
Surplus	630,340	493,271	137,069
Prev. surplus.	10,751,003	9,319,286	1,431,717
Total surplus.	11,381,343	9,812,557	1,568,786

Recent Telegraph Patent.

A patent for a telegraph or telephone pole, No. 708,277, has been granted to Isaac M. Warner, Union City, Mich.

Business Notice.

The excellencies of Fairbank's glycerine tar soap, while generally acknowledged, are set forth conspicuously in an advertisement on another page. This soap is one of the very best for office use, for it has a way of cleansing the skin, for thoroughly removing all grease and grime from the pores, rarely possessed by other kinds. Of course it is equally desirable for use in the home. Its inherent valuable qualities recommend it, and as the price is but five cents a cake, as cheap as the poorer varieties, its sale should become very general among the most fastidious.

The municipal electricians, who will read elsewhere in this issue the especially full and attractive programme of their convention, which meets at Richmond, Va., on October 7, 8 and 9, should not fail to turn also to the inside back-cover page, and carefully read the advertising announcement of Foote, Pierson and Company, of New York. This well-known firm calls attention at this opportune time to the desirability of equipping fire and police telegraph systems with the Argus Lightning Arrestor and the "W. B. G." fuse protector, a proposition, wherever adopted that has fulfilled all expectations. The merits of these standard goods, as there stated, are positive in character, and city electricians in filing away this, their convention issue of TELEGRAPH AGE, should not fail to make the advertisement referred to for future reference.

General Mention.

Mr. James Furey, Jr., formerly with the Western Union Telegraph Company, and for the past four years in the employ of a prominent broker-age firm in New York, was married on September 9 to Miss May Cosgrove of Brooklyn, N. Y., in which city they will reside.

Mr. Z. A. Emerson, manager of the Postal Telegraph-Cable Company, at Emporia, Kas., in renewing his subscription says: "I hand you herewith the amount of my subscription for TELEGRAPH AGE. I have missed but one number in the past four years and hope I shall not miss one in the next four. I don't know where I could invest \$1.50 and get as much for my money."

What is described as one of the "fiercest" bulls ever made on a telegraph line, is told by J. P. Conway, a Sergeant of the Signal Corps stationed at Manila, P. I., an efficient member, by the way, who has re-enlisted for an additional term of three years. He says that an operator was recently working with San Felipe when he was startled to receive a message which read as follows: "To traffic manager, Manila. All phones O. K. (Sig.) Bacidoper." The dispatch should have read: "To traffic manager, Manila. All phones O. K. (Sig.) Baird."

"Electricity," of London, says that "some amusement has lately been caused in ecclesiastical circles by the receipt of a congratulatory tele-

gram recently despatched to the Pope on the occasion of the celebration of his name-day, August 17th. The message in question consisted of some 20,000 words, and was sent by the Catholics of Catania, Sicily; the joke of the whole affair consists in the fact that, according to an agreement with the Italian Government, all telegrams for the Vatican are accepted and delivered free of charge."

It has been proposed that a memorial to Joseph Henry be established which shall take the form of an endowment for the teaching of the sciences in the Albany (N. Y.) Academy, located in the city of the birth of the great physicist and in which he himself at one time taught, and where, as stated in a committee resolution which has been embodied in a circular recently issued, "he performed the experiment that demonstrated the correctness of his principle of the electric telegraph."

Obituary.

Edward Everitt Linn, manager of the telegraph department of the Buckeye Pipe Line Company, Lima, O., and a well known telegrapher, died September 17, aged forty-five years.

Arthur T. McElhiney, a well known operator, formerly, and for many years, manager of the Western Union Telegraph Company at Bloomington, Ill., and later of the Postal at the same point, died at that place on September 5, in the fifty-eighth year of his age.

Edward Burke, aged forty-five years, a well known Western Union operator, died at his home in St. Louis, Mo., of heart trouble, on September 18. He had been in the employ of the Western Union Telegraph Company for nearly twenty years, most of that time as night manager of the telegraph department of "The Republic" newspaper.

William H. Noden, the news of whose death by being shot in the late South African war, has only lately been received by his friends here in New York, was formerly and for a number of years a Western Union cable operator of expert abilities when the office was located at 16 Broad street, and numbered many friends in the service. Mr. Noden, who was of English birth, was about thirty years of age. Shortly before leaving New York in 1897, a step determined upon by the death of his wife, he became a Mason, joining the Ridgewood Lodge of Brooklyn. When the war broke out he became a field operator with the English army, and it was while acting in this capacity that he was shot by the Boers. On his body, which was captured by the enemy, was discovered a Masonic emblem. The subsequent pathos of the incident is shown in the fact that this little talisman served to demonstrate the fraternal spirit of the great worldwide brotherhood of the order, for instead of a hasty and possibly a mutilated burial, his remains were tenderly cared for and given decent interment.

Resignations and Appointments.

Mr. J. A. Sullivan, of the Postal office, Philadelphia, has been appointed manager of the Camden, N. J., office.

Mr. Gustavas A. Riederich, for many years cashier of the Western Union Telegraph Company at New Haven, has resigned.

Mr. George R. Calvert, of the Western Union Telegraph Company, Richmond, Va., has been appointed manager of the office at Asheville, N. C.

Mr. Joseph A. Elms, manager of the Western Union office at Fall River, Mass., has resigned, and Mr. F. P. Duckett has been appointed to the position.

Mr. C. G. Sholes, assistant superintendent of the Western Union Telegraph Company, Buffalo, N. Y., has resigned, and the office has been abolished.

Miss P. C. Arenstrop, manager of the Western Union Telegraph Company at Cambridge, Mass., has been succeeded by Mr. William Barth from the Cincinnati, O., office.

Mr. W. H. Peacock, of Westhampton, L. I., has been appointed manager of the Western Union Telegraph Company at Meriden, Conn. Mrs. Peacock becomes chief operator.

Mr. W. J. Dodge, chief operator of the Western Union Telegraph Company, at Utica, N. Y., has been transferred to Pittsburg, Pa., as wire chief. Mr. F. J. Dean, formerly traffic chief at Utica, succeeds Mr. Dodge as chief operator.

Mr. Fenton P. Bott, of the Postal Telegraph-Cable Company, Cincinnati, O., has been appointed manager of the Postal office at Dayton, O., where he has been acting manager, vice William C. Weinman, resigned to enter other business.

Mr. J. A. Brenner, superintendent of the Western Union Telegraph Company, at Augusta, Ga., one of the oldest officers in the employ of that company, has resigned, and his district, the third, has been merged with that of the fifth, of which B. F. Dillon of Jacksonville, Fla., is superintendent.

Mr. C. H. Mulford, manager of a Chicago local branch office of the Western Union Telegraph Company, has been promoted to the managership of the New Haven, Conn., office, vice W. A. Harris, resigned. Mr. T. E. Russell, formerly manager of the Meriden, Conn., office, who has been in temporary charge at New Haven, will remain as assistant manager.

Mr. Frank Ross, chief operator of the Western Union Telegraph Company, Memphis, Tenn., has been transferred to a like position in the New Orleans office, taking the place of W. D. West, who, on account of impaired health has been granted an extended leave of absence. Mr. Edward E. Cord succeeds Mr. Ross as chief operator at Memphis, advanced from the position of night chief.

Wireless Telegraphy.

A system of wireless telegraphy was used with satisfactory results in the late army manoeuvres in Germany.

Germany is initiating an international conference, to be held in October, on wireless telegraphy, holding that the practical working of the system being assured, it should be subject to rules similar to those of the international telegraph convention.

The new station of the Marconi Wireless Telegraph Company at Poldhu, Cornwall, England, has been completed. It only has four towers instead of the twenty masts of the original station. The height of the towers is 215 feet; each tower measures 28 feet across at the base, narrowing to 10 feet at the top. The towers stand at the corners of a square whose sides are 210 feet long. The side pieces of each of the four towers are cross braced with steel wire rope and, to render the structure as wind-proof as possible, stout cables are run over the tops of each tower and secured to anchorages in the earth. From each of the four horizontal bridges which connect the tops of the towers are suspended fifty copper cables.

The Marconi Wireless Telegraph Company has, according to a special cablegram, issued a statement from its London office stating that it has received "perfect" messages at Poldhu, Cornwall, from Gibraltar continuously during the passage from there to Spezia, Italy. The messages thus passed over France and Spain, and over the Alps and across the Mediterranean from the warship assigned to Marconi by the Italian Government. These messages were received on a tape-receiver, the distance of transmission varying between 600 and 1,100 miles. It is further stated that Marconi will at once sail for America on the same warship, the "Carlo Alberto," for the purpose of resuming arrangements for the establishing of a commercial wireless telegraph service across the Atlantic. While on the way over he will be in constant communication with the English station. He will first go to Cape Breton, and afterwards to Cape Cod, Mass.

Features of the Mimic War Operations.

One of the most valuable features of the late mimic war operations was the work of the Signal Corps. Gen. A. W. Greely, Chief Signal officer of the army, installed a system of communication connecting Forts Adams, Greble, Wetherill, Rodman, Mansfield, Michie, Terry and Wright.

As late as the first of July all of the forts were destitute of electrical and telegraphic appliances. The lines of communication from the gun batteries to the range towers, where the range to the ships is determined, had not been established, nor had any of the apparatus been purchased. Within seven weeks, however, 275,000 feet of cable and telephone wire were laid and 131 tele-

phones installed. Notwithstanding deficiencies of many kinds, special lines were built, offices established, visual stations opened and supplied with acetylene lanterns, heliographs and wig-wagging outfits. At Fort Terry twenty-four telephones were used in the range-finder system alone, and many more for other purposes. Three wireless systems were used, the Marconi, Fessenden and De Forest.

In the opinion of army officers hardly enough experiments were made with the Marconi and Fessenden sets to enable final judgment to be passed upon them, but there was no doubt about the good work of the De Forest system.

The telautograph proved of great value for work in the batteries. It gives an autographic simultaneous reproduction at one end of the line of a message written at the other, and is used by fire and battery commanders to give firing directions.

The rapidity with which communication was established with all the forts in the line of defence was especially commendable. A line was run from Fort Trumbull to the New London lighthouse, where the cables from the four posts of the New London district come in. Two wires from New London to Newport were leased and extra loops built connecting Fort Rodman with New Bedford, Fort Adams with Newport and Fort Trumbull with New London. A long distance telephone line enabled New London to talk with Montauk Point, and a special wire connected Point Judith with Montauk and Mount Prospect, on Fisher's Island, with New London.

So well pleased with the service are the Signal Corps officers that the station at Fort Mansfield is to be permanently established there, and the set from the scout-boat will be stationed at some army post in the vicinity, probably at Fort Wetherill. This will mean a range of some 50 miles, mostly over land, and will be the first of a number of wireless installations at the various artillery districts of the United States Army.

Underground Telegraph Wires in England.

The English Postmaster-General, in a recent statement, says that the underground telegraph system from London to the North is being extended to Warrington, where it will join the existing underground line between Manchester and Liverpool. Next year the line may be continued, not only northwards towards Scotland, but also eastwards towards Leeds and Bradford.

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.

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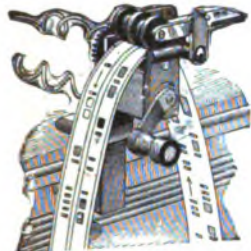
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I will leave the decision to the one who is sick.

I mean just what I say. I am addressing people who can't be reached by deceit. And most of those who read this are honest: I am counting on that.

I will do as I promise, invariably and gladly. I have done so for years. I have furnished my treatment to hundreds of thousands on those terms. My records show that 39 out of each 40 pay because it succeeds. When it fails, not a penny is wanted. Your druggist collects from me.

You may wonder why I do this, and I'll tell you.

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Another is the absolute faith within me; that all that is required in almost any case—no matter how difficult—is a test by the sick one. How could I better secure that test than by saying: "Here are six bottles of my Restorative—use it 30 days. If it cures, pay your druggist \$5.50; if it fails, the loss is mine."

This remedy alone strengthens the *inside* nerves. Those are not the nerves that others doctor—the nerves of feeling and motion. I strengthen the inner nerve system which alone operates the vital organs of the body. I don't treat the organs, for that is an error. But I bring back the nerve power which makes all vital organs act. You will know that I am right, when you read my book, and you will know why common treatments fail.

The final reason for my offer is this:—I want those who need help to have it. I wish to offer that help on conditions so fair that none may neglect it.

Will you—for a friend's sake—tell me somebody whom other remedies don't cure?

Simply state which book you want, and address—
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Book No. 1 on Dyspepsia.
Book No. 2 on the Heart.
Book No. 3 on the Kidneys.
Book No. 4 for Women.
Book No. 5 for Men—sealed.
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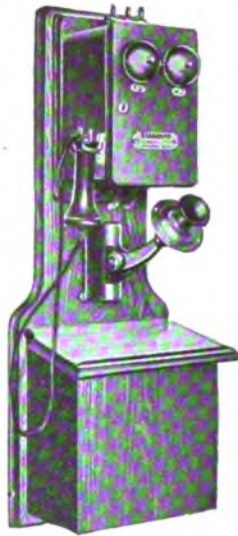
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Line Construction.*

(CONTINUED FROM PAGE 397, SEPT. 16.)

To wrap pole butts in cities the wire should be placed around pole straight and tight and thoroughly conformed to the pole, with each strand of wire three-fourths of an inch apart and securely stapled with three rows of staples an equal distance apart on the circumference of pole. This wrapping should begin at seven feet from surface of ground and stop at twenty inches above ground.

CROSS-ARMS.

Gains for cross-arms should not exceed three-quarters of an inch in depth in sawed redwood poles, nor one and one-quarter inches in depth in round cedar poles that are six inches or less in diameter at the top.

All arms carrying six wires and upwards must be braced.

Where cross-arm braces are used the gains should not exceed one inch in depth.

Where arm braces are used, they should be attached on face of pole and on face of arm. When necessary to brace double arms, brace one set of arms only. Braces will not be used on arms less than eight feet in length.

The distance from the upper side of the top gain to the extreme top of the pole should be eight inches, and the distance between gains from center to center two feet.

When cross-arms are added to any pole carrying two or more arms, the distance between the arms must be made to conform to that which may already exist upon such pole.

Double cross-arms should be used on all office poles and corners, at all railroad or river crossings and on all unusually long sections.

Cross-arms will be fitted with sufficient steel pins to accommodate only the wires already on the line or additional wires that are to be immediately constructed.

Two bolts will be used in all cross-arms which are not braced, except where machine bolts are used, and in these cases the bolt holes not used should be plugged. Arms eight feet and more in length will be bored for one bolt.

When building a line, the cross-arms should be faced alternately, first in one direction and then in the opposite, except when it is necessary to face the cross-arms in a certain direction in order to have the arms pull against the pole, where bridle or line guys are used.

When building a bracket line, cut the gain for arm, then blaze a flat surface on the pole at right angle to the gain, and fasten bracket to the pole with the top nail of the bracket exactly opposite top line of gain, which will allow the putting of arm in that gain without interfering with bracket or wire on same. Place the first bracket on the field side of the pole.

Cross-arm fixtures should be attached to office

buildings with bolts passing through the wall, instead of through the door or window casing, wherever it is practicable to fasten them in this way. Never use screws for this purpose, as they are liable to pull out when subjected to a heavy strain. Irons for such fixtures are furnished by the Supply Department, on approved requisitions.

DOUBLE-ARMS.

The operation of double-arming poles will be as follows: After cutting gains three-quarters of an inch in depth, put machine bolts through the two arms and through the sides of the pole in such a position that the bolts will have at least two inches of bearing in the pole, and draw the bolts up securely; then place a block of wood of proper length between the ends of the two arms in such a position that the machine bolts, which will extend through both the arms and lengthwise through the block, will be just outside of the end pins. The top of the block should be flush with the tops of the arms, with the machine bolts just their thickness above the center of the arms.

At points where iron and copper wires meet, the poles should be double-armed, and double-grooved glass should be used as indicated in the sketch below. The juncture of iron and copper wires should be thoroughly soldered.

The supply department keeps in stock 14, 16 and 18-inch bolts for use in putting double cross-arms on poles. Each bolt is furnished with two 2-inch washers, and the threads on these bolts are three inches in length. A 14-inch bolt can therefore be used as a 11, 12, 13 or 14-inch bolt, as the case may require, and there is the same margin on 16 and 18-inch bolts. When these bolts are too long, the end projecting through the nut can be easily broken off with a monkey wrench, and this should be done in all cases where the end projects more than one-half inch.

WIRE.

Wires must be tied on the side of insulators nearest the pole, except on curves or corners, where it may be necessary to place the wire on the opposite side, so that it will draw against the insulator. The ends of tie wires should be bent in and pointed toward the groove in the insulator.

Full-sized line wires should be carried to the inside of buildings from a cross-arm attached with iron fixtures to the wall, equipped with standard glass-and-pin insulators in such manner that the wires will have an upward direction from the insulators to the point where they enter the building. This will prevent rain and moisture from following them to the wall. Where exposed wires run into the building they should be covered with a sloping roof-board of sufficient width to perfectly protect them from rain and snow, and should be insulated with tubing where they pass through walls and partitions, using tubing of sufficient length to go entirely through the wall from the outside to the inside of the building, the object being to keep dry the outer ends of the tube, to prevent escape.

Where telegraph offices are located in railway

*Reprint from "Instruction for Foremen and Division Lineman of the Western Union Telegraph Company."

depots or similar long buildings, the wires should enter at the window or other opening nearest the switchboard, and should be so strung that they can be plainly seen and easily inspected at all times.

At railroad crossings all the wires must be kept at a height of not less than twenty-five feet above the rails, and at public and private highway crossings not less than eighteen feet above the roadway. State or railroad regulations in the matter of crossings should be followed whenever they conflict with this rule.

In the construction, reconstruction and general repair of lines, all splices must be soldered, except on copper wires, where McIntyre sleeves are used as hereinafter directed.

All connections between copper and iron wires must be soldered.

The wires inside of a building should be insulated on porcelain knobs or wooden cleats, and kept as far apart and as far from the "ground" as possible. The use of staples for attaching office wires is forbidden.

Porcelain insulators and knobs must not be used outside of buildings. Rubber hook insulators must not be used outside of buildings, except in places where they are completely protected from rain, snow or moisture, and where it is impracticable to use the standard glass insulation.

All connections in main battery wires must be soldered and the wires insulated.

Permanent terminal ground wires should be composed of No. 8 copper wire, soldered to the main gas or water pipes.

Tubing for insulating wires through walls, wooden cleats and all other material required, will be furnished on application.

When necessary to make joints in iron wires which have been up a year or more, use a third piece of wire, making a three-ply joint.

To solder joints in old wire, clean the wire at each end of joint, outside of the spiral turns, by use of file (instead of acid). When all rust is removed, bridge the joint with No. 12 iron wire, and solder thoroughly. Copper wire must not be used to bridge joints in iron wire.

Splicing and tying of copper and iron wires must be done by the use of the combination steel splicing and tie wrench.

Any shortage of space in switchboards, or of conductors in office cables, preventing the installation of additional wires in accordance with directions, should be reported at once to your superintendent, giving length of present cable. (To be continued.)

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

Errors like straws upon the surface flow. He who would seek for pearls must dive below.—John Dryden.

Needless Delay.

BY JOHN A. DREAMS.

A matter well worthy official consideration and action is that of universally chronic delay to business in reaching its destined point for which the fury of the elements, atmospheric conditions and ordinary, every-day causes combined are responsible in scarcely greater degree than is wild, indiscriminate routing hither and thither, only having for its object the single purpose of immediate disposal or diminishment of volume which is not the correct idea of expeditiousness—the real object to be attained.

Of course frequent or prolonged interruption to established circuits, or inadequate facilities, necessitates recourse to the practice commonly known as "sending around", but even in this emergency delay might be greatly minimized and ultimate delivery facilitated by the exercise of proper judgment.

Another long-standing source of delay—doubly provoking because of its utter lack of purpose—was failure to have all messages bear the office call of the originating station. This is especially true of messages filed at branch offices in the larger cities and sent direct to distant points. In the event of such messages requiring servicing the parent office would be notified and, of course, having no record thereof the delay occasioned by inquiry would be further increased and frequently extended far into the following day. This evil has, happily, been eradicated, but why it should ever have been permitted to exist at all, or to have devolved upon new management to properly adjust such a seemingly slight but all-important matter passeth all understanding.

Still another medium of delay is the functionary, the burden of whose exasperatingly insistent song is "Take our Business"; oblivious to the truth that it is but in common with all other company traffic, unable to see on the map any place other than his own, blind to the resultant advantages of self-adaption to circumstances and the fact that momentary inability to obtain circuit does not justify misrouting business, the usual ultimate result of which is nullification of the very end desired—a method of reasoning having its parallel in the laws of the mythical Isle of Champagne, where the chief personal requirement is inebriety, sobriety being punishable by death.

Another News Organization.

The National Telegraph News Company, which was organized in August, 1900, has just begun to operate. Its main office is in Chicago. By its charter its business is telegraphing and telephoning, collecting and disseminating news of every description.

The capital stock is \$150,000. The incorporators are L. M. Martin, F. E. Crawford and W. E. Stewart, Jr.

The Second and Third Atlantic Cables.

(Second Article.)

By Francis W. Jones.

On September 1, 1858, the first Atlantic cable was dead. The public mind, which had been greatly excited by the unprecedented demonstrations of joy everywhere expressed upon the completion of the cable, now experienced the most bitter disappointment and many now believed that the whole thing was an imposition on public credulity.

Cyrus Field, who had been chiefly instrumental in securing capital and launching the enterprise, again in 1862, turned his attention to a renewal of the great undertaking of Atlantic cable communication between America and Europe, and was most indefatigable in his efforts to restore the confidence of the English and American Governments and capitalists in its feasibility. The experience gained in 1857 and 1858 at such a tremendous cost was the necessary stepping stone to future success and it securely established the possibility of signaling under the ocean.

At that time a system of electrical standards and units had to be formulated, the laws of retardation discovered and proper apparatus for signaling invented, and the whole subject of submarine telegraphy was submitted for thorough investigation by the British Government to a joint committee of eight eminent scientists and electricians of the day. The report of this committee was made in 1861, assuring all concerned that submarine telegraphy was perfectly practicable if previous mistakes of manufacture and handling were carefully avoided.

It was pointed out by William Thompson (now Lord Kelvin) and Mr. S. A. Varley, that the signaling speed of a cable was limited by its conductive resistance as well as by its electro-static inductive capacity, and that to secure an increase of speed it was necessary to have a decrease of resistance in the copper conductor as well as a minimum of static capacity in the dielectric.

Cyrus Field succeeded in forming a new company called the Anglo-American Telegraph Company to make the third attempt of spanning the Atlantic.

The first attempt at laying an Atlantic cable was in 1857 when 385 miles of deep sea cable (similar in make to that of the first cable laid in 1858) were paid out from the Irish coast by the steamship Niagara and broke on August 11th in 12,300 feet of water, and further attempts were abandoned until 1858 when the first cable was laid as previously described. In 1865 a cable was constructed having a conductor of seven copper strands weighing 260 pounds per mile; the copper to be at least 85 per cent. chemically pure, insulated with four layers of gutta percha laid on alternately with four layers of Chatterton's compound; weight of the entire insulation, 347.22 pounds per mile and protected by an armor of ten solid iron wires of No. 13 gauge, each wire

separately wound with five strands of Manila yarn and saturated with a preservative compound, and the whole laid spirally around the core which was padded with a jute yarn saturated with a preservative mixture. The weight of the cable in air was 30.8 cwt. per mile, breaking strain seven tons, 15 cwt., and diameter of deep sea section a little over one inch. (The 1857 and 1858 cable outside of armor being nearly 7-10 of an inch diameter and the copper core weighing 92.8 pounds per mile and not 123 1-3 as previously stated.) The shore end was to have an additional armor of twelve strands of No. 2 B. W. G. iron wires; its weight to be 17.33 tons per mile.

The point of landing had been changed from Valentia Bay to Foilhommerum Bay at the end of Valentia Island. Thirty-one miles of shore end were paid out and buoyed in 75 fathoms of water.

Two thousand six hundred and fifty-two miles of deep sea cable were coiled on board the Great Eastern which had been fitted up with specially improved cable-laying and cable-picking-up machinery, and on the 23rd of July 1865, she joined up her cable to the shore end and started paying out towards Newfoundland at a speed of about six knots. A fault which developed eighty miles from the shore was found to be a small piece of wire about the size of a needle and driven into the outer part of the cable until it touched the core.

On the 29th the electricians on the Great Eastern discovered that the cable had gone dead to earth. The steamer was stopped, engines reversed and cable pulled in from a depth of over two miles, when the fault, a fine piece of iron wire penetrating the gutta percha core, was discovered and cut out, making the cable O. K.

The Great Eastern again started paying out, and about mid-ocean discovered and removed another similar fault in the cable. When within seven hundred miles of Newfoundland and having paid out 1380 miles of cable, another fault developed and in trying to pull in the cable from a depth of two and one-half miles the cable broke. The steamer started to grapple about twelve miles east. It took the grapple two hours after it was first thrown overboard to reach the bottom. Grappling continued all night, and towards morning hooked the cable and raised it three-quarters of a mile from the bottom, when an iron swivel gave way, losing the cable with nearly two miles of rope.

On a second attempt to grapple, the cable was caught late in the afternoon and work was continued all night in pulling it up, but when a mile and a half from the bottom the swivel again gave way, releasing the cable. The third attempt to grapple was without result.

On the ninth day after the first attempt to grapple, the fourth attempt was made at noon, and the cable hooked by four o'clock and work of hauling in commenced. The cable was brought up nearly 4,800 feet when the rope broke, carrying down nearly two miles of its own length with

the cable. After this failure all further attempts at rescue were abandoned for the year 1865.

It was found that the enormous pressure at the bottom of the ocean greatly improved the insulating quality of the gutta percha, and the low temperature of about 36 degrees Fahr., greatly improved the conductivity of the copper conductor.

Up to this time the experience gained in cable-laying, both electrical and mechanical, though extremely costly, was invaluable in demonstrating improvements in grappling and picking-up gear in the construction, handling and instrumentation of submarine cables.

Settlement of the Estate of Prof. Morse.

It has taken thirty years to bring about a settlement and distribution of the estate of Samuel Finley Breese Morse, inventor of the telegraph, whose death occurred on April 2, 1872. The distribution of the estate was made but recently, pursuant to a decree of the Supreme Court, and less than a half million dollars has been paid out in accordance with the provisions of the will, which was executed but a few months prior to his death.

Surviving Mr. Morse were a widow, Sarah Elizabeth Morse, and Susan Walker Lind, Charles Walker Morse, James Edwards Finley Morse, Samuel A. B. Morse, Cornelia I. Morse, William Goodrich Morse and Edward Lind Morse, children. By the terms of his will he appointed Thomas R. Walker, Henry Day and Arthur B. Proal, executors and trustees, leaving his entire estate to them as trustees to collect the income and pay it over to his widow for life.

Upon her death he directed that the principal be divided into eight parts, seven portions to go to his children and the remaining eighth to be used for educational and other purposes. His gross estate amounted to \$524,000. The widow died on November 14 last in Berlin, Germany.

Messrs. Walker and Proal only took an active interest in the estate for about four years, resigning their trusts in 1876, and Mr. Day continued as sole trustee down to 1886, when the Mercantile Trust Company was appointed trustee, and it has since brought about the final distribution of the estate.

Management of the estate during all these years has cost considerable, and after deducting expenses there was left for final distribution \$346,000, the bulk of which has been turned over to the children and other heirs. All the heirs reached an agreement that the orders and decorations received by Mr. Morse during his lifetime from various governments and institutions, in recognition of his achievements in the field of electrical telegraphy, should be kept intact and turned over to the National Museum at Washington, D. C., which has been done.

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

New Western Union Manager at Cincinnati.

The new manager of the Western Union Telegraph Company, at Cincinnati, Ohio, is Mr. Robert C. Bliss, who has been transferred to this important position from a like post at Springfield, that state, where he succeeds Mr. C. E. Page, who has become a superintendent of the company, with headquarters at Boston, Mass.



ROBERT C. BLISS.

Newly appointed Western Union Manager at Cincinnati.

Mr. Bliss was born at Hamilton, O., on Oct. 21, 1849, and his entire business life has been passed within his native state, mainly at Cincinnati. Learning telegraphy when twenty years of age, in 1871 he first obtained employment as operator with the Louisville Short Line Railroad. Between the years 1873 and 1878 he was with the Western Union Telegraph Company at Cincinnati, where he filled the place of assistant chief operator. He left the telegraph service, however, in September, 1878 to become the secretary and treasurer of the McGowan Pump Company, a position of much responsibility which he continued to hold for nine years, or until 1887, when the concern went out of business. For the four years succeeding he was the city passenger and ticket agent of the Erie Railroad at Cincinnati, subsequently becoming the city passenger agent at the same place for the Big Four Railroad Company, resigning in 1895 to accept the managership of the Postal Telegraph-Cable Company at Cincinnati. He remained with this company until 1900 when he entered the Western Union employ as manager of the office at Springfield, a position he retained until transferred to the office at Cincinnati, as first stated.

Mr. Bliss is a man of engaging personality, and has a large acquaintance in Cincinnati, where he is held in high esteem by business men as well as in social circles.

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NEW YORK, October 1, 1902.

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

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 so 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 head of "Some Points on Electricity," contains more positive instruction concerning the telegraph, than can be found anywhere else, and is 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.

The employment of girls as messengers in the place of boys, a proposition at first looked upon with general disfavor by employing companies,

is being adopted in a number of instances in western cities where, in view of the striking proclivities of the boys, and for other reasons, the plan will be given at least the benefit of a trial.

Promotions in the Telegraph Service.

EDITOR TELEGRAPH AGE:

Your editorials of late in which you enjoin the operator to more earnestness of purpose, to greater painstaking in his work, to habits of studiousness, and much more to the same import, are in the main excellent, and inculcate a lesson to which attention should undoubtedly be paid, but I cannot agree with you in your conclusions that in general those who pursue this course will in the end reach the goal of promotion,—at least not those in the telegraph business. My observation, which now covers a period of many years, is such as to prove to me that the contrary is more often the case, that reward does not necessarily await the man who has earned and deserves it. With no desire to check enthusiasm on the part of the young, or to take away lofty ideals, I am prompted nevertheless to state what I believe to be the truth. With an appreciative sense of your efforts, despite this criticism, I am

Yours Very Truly,

A Telegrapher.

September 19.

[The above note gives the expression of a man who has himself risen from "the ranks," and who now holds a responsible position with one of the great telegraph companies. He has earned the reward which has come to him and is fairly entitled to the promotion achieved with all of its attaching dignity, responsibility and increased emoluments. We think, however, that he takes but a superficial view of the situation when by implication he conveys the idea that fitness for promotion, gained by faithful endeavor on the part of the individual, usually counts for so little in the battle of life. His own career refutes this utterance; in fact his progress may be accepted as an apt illustration of the correctness of the principles TELEGRAPH AGE has advocated. While it may be true that some presumably fit persons are overlooked at times when opportunity for promotion in the telegraph business is open, it is nevertheless a fact that our correspondent, as well as the entire official telegraphic personnel wherever found, would not be in their elevated places to-day if they were not fitted to hold them. And, it is because of this fitness, gained solely by hard work, conscientiously performed, that they have emerged from the lower to the higher places in the service. This principle goes without saying, or should do so. It is a fundamental law of life and he is a wise man who gives it heed. Expert intelligence is never at a discount, and the man who proves himself capable, and has force of character behind it all, need have no fear regarding his business future, provided he has an endowment of physical health. If the telegraph service

don't want him some other will, and it is best to have a mind well stored with practical knowledge in order to meet all emergencies.—Editor.]

The Pocket Edition of Diagrams.

Kind and appreciative words continue to be spoken regarding Willis H. Jones' new book, "Pocket Edition of Diagrams and Complete Information for Telegraph Engineers and Students." The following handsome reference to the work is taken from the September 12 issue of the Railroad Gazette, of New York. It says:

"This is a hand-book of 260 pages, 4 in. x 7 in., containing a large number of diagrams and over 260 pages of information on all kinds of mechanical and electrical work done in an American telegraph office. The full title of the book is 'Pocket Edition of Diagrams and Complete Information for Telegraph Engineers and Students,' and the book is bound in flexible leather. After brief introductory chapters, giving elementary information about magnetism, electricity, the dynamo and electrical measurements, the author takes up the duplex, the quadruplex, repeaters, the Wheatstone instrument, battery and dynamo connections, etc., and describes each apparatus or function in detail. For example, the different arrangements of quadruplex instruments, and the Milliken, the Toye, the Weiny-Phillips, and other repeaters, are shown in two diagrams each, one giving the theoretical connections and the other the actual; or, in other words, one diagram for the student and one to use as a guide in connecting instruments. The practical work of line construction, the arrangement of switch boards, storage batteries, the phonoplex and the telephone are also treated, and even the wireless telegraph is touched upon. The author is one of the editors of TELEGRAPH AGE, and the book contains a large amount of material which he has prepared for that paper during the past five years. He writes with clearness and simplicity, using no unnecessary technicalities. Mr. Barclay, of the Western Union, calls it the best book of the kind that he has seen, and Mr. F. W. Jones, of the Postal Company, praises it in equally strong language."

This volume is now in its second edition and the sale of this is equally rapid with the first. It is by all odds the most successful book on the telegraph ever published, and the reason is simple—it gives just the every day kind of practical information that an every day practical telegrapher requires. Its teachings are comprehensive and clear and include every class of telegraph work, hence it is a direct aid to every operator and executive officer in the telegraph service.

The Associated Press Annual Meeting.

The annual meeting of The Associated Press occurred in New York on September 17, with President Frank B. Noyes in the chair. After some discussions, and the adoption of a resolution that the association give a dinner at the close of

the next annual meeting, the main interest in the assemblage centered in the selection of five directors to take the place of those whose terms had expired. All of the old board were unanimously re-elected with the exception of Charles P. Tait, of the Cincinnati "Times-Star," who was succeeded by W. D. Brickell of the Columbus (O.) "Dispatch". The other directors elected were: Whitelaw Reid, New York "Tribune"; W. L. McLean, Philadelphia "Bulletin"; George Thompson, St. Paul "Dispatch"; Charles H. Grasty, Baltimore "Evening News."

The hold-over directors are: Clark Howell, Atlanta "Constitution"; Frank B. Noyes, Chicago "Record-Herald"; Albert J. Barr, Pittsburg "Post"; Charles W. Knapp, St. Louis "Republic"; M. H. DeYoung, San Francisco "Chronicle"; Stephen O'Meara, Boston "Journal"; Victor F. Lawson, Chicago "News"; Harvey W. Scott, Portland "Oregonian"; Thomas G. Rapier, New Orleans "Picayune"; Herman Ridder, New York "Staats Zeitung."

The advisory boards were elected as follows: Eastern Division.—W. C. Reick, New York "Herald", chairman; W. E. Gardner, Syracuse (N. Y.) "Post Standard"; Barclay H. Warburton, Philadelphia "Telegraph"; Charles H. Taylor, Jr., Boston "Globe"; P. C. Boyle, Oil City (Pa.) "Derrick".

Central Division.—Thomas Rees, Springfield (Ill.) State "Register", chairman; Lafayette Young, Des Moines (Ia.) "Capital", secretary; D. R. Anthony, Leavenworth (Kas.) "Times"; Edgar W. Coleman, Milwaukee "Herold"; Frank T. Lane, Toledo "Blade".

Southern Division.—E. B. Stahlman, Nashville (Tenn.) "Banner", chairman; James R. Gray, Atlanta (Ga.) "Journal", secretary; W. J. Crawford, Memphis (Tenn.) "Commercial-Appeal"; Josephus Daniels, Raleigh (N. C.) "News and Observer"; Alfred H. Belo, Galveston (Tex.) "News"; Frank P. Glass, Montgomery (Ala.) "Advertiser".

Western Division.—R. A. Crothers, San Francisco "Bulletin", chairman; A. J. Blethen, Seattle "Times", secretary; S. A. Perkins, Tacoma "Ledger"; Perry S. Heath, Salt Lake "Tribune"; I. N. Stevens, Colorado Springs (Col.) "Gazette"; A. B. Keith, Butte (Mont.) "Miner."

At a meeting of the new board of directors held on September 18, in the general offices of the association, 195 Broadway, New York, the old officers were all re-elected for the ensuing year. They are: Frank B. Noyes, Chicago "Record-Herald", president; Horace White, New York "Evening Post", first vice-president; William R. Nelson, Kansas City "Star", second vice-president; Melville E. Stone, secretary; Charles S. Diehl, assistant secretary, and V. P. Snyder, treasurer.

Executive committee: Charles W. Knapp, Stephen O'Meara, Victor F. Lawson, Whitelaw Reid and Frank B. Noyes.

Get Out or Get in Line.*

BY ELBERT HUBBARD.

If all the letters, messages and speeches of Lincoln were destroyed, except that one letter to Hooker, we should still have a pretty good index to the heart of the Railsplitter.

In this letter we see that Lincoln ruled his own spirit; and we also behold the fact that he could rule others. The letter shows frankness, kindness, wit, tact, wise diplomacy and infinite patience.

Hooker had harshly and unjustly criticised Lincoln, his commander-in-chief, and he had embarrassed Burnside, his ranking officer. But Lincoln waives all this in deference to the virtues that he believes Hooker possesses, and promotes him to succeed Burnside. In other words, the man who had been wronged promotes the man who had wronged him, over the head of a man whom the promotee had wronged and for whom the promoter had a warm personal friendship.

But all personal considerations were sunk in view of the end desired. Yet it was necessary that the man promoted should know the truth, and Lincoln told it to him in a way that did not humiliate nor fire to foolish anger; but which certainly prevented the attack of cerebral elephantiasis to which Hooker was liable.

Perhaps we had better give the letter entire, and so here it is:

Executive Mansion,
Washington, Jan. 26, 1863.

Major-General Hooker:

General: I have placed you at the head of the Army of the Potomac. Of course I have done this upon what appear to me to be sufficient reasons, and yet I think it best for you to know that there are some things in regard to which I am not quite satisfied with you.

I believe you to be a brave and skilful soldier, which of course I like.

I also believe you do not mix politics with your profession, in which you are right.

You have confidence in yourself, which is a valuable if not an indispensable quality.

You are ambitious, which within reasonable bounds, does good rather than harm; but I think that during General Burnside's command of the army you have taken counsel of your ambition and thwarted him as much as you could, in which you did a great wrong to the country and to a most meritorious and honorable brother officer.

I have heard in such a way as to believe it, of your recently saying that both the army and the government needed a dictator. Of course it was not for this, but in spite of it, that I have given you the command. Only those generals who gain successes can set up dictators. What I now ask of you is military success, and I will risk the dictatorship. The government will support you to the utmost of its ability, which is neither more nor less than it has done and will do for all commanders. I much fear that the spirit which you have aided to infuse into the army, of criticising their commander, and withholding confidence from him, will now turn upon you. I shall assist you as far as I can to put it down. Neither you nor Napoleon, if he were alive again, could get any good out of an army while such a spirit prevails in it. And now beware of rashness: beware of rashness, but with energy and sleepless vigilance go forward and give us victories. Yours very truly,

A. LINCOLN.

One point in this letter is especially worth our consideration, for it suggests a condition that

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springs up like deadly night-shade from a poisonous soil. I refer to the habit of sneering, carping, grumbling at and criticizing those who are above us.

The man who is anybody and who does anything is surely going to be criticised, vilified and misunderstood. This is a part of the penalty for greatness, and every great man understands it; and understands, too, that it is no proof of greatness. The final proof of greatness lies in being able to endure contumely without resentment. Lincoln did not resent criticism; he knew that every life must be its own excuse for being, but look how he calls Hooker's attention to the fact that the dissension Hooker has sown is going to return and plague him! "Neither you, nor Napoleon, were he alive, could get any good out of an army, while such a spirit prevails in it." Hooker's fault falls on Hooker—others suffer, but Hooker suffers most of all.

Not long ago I met a Yale student home on a vacation. I am sure he did not represent the true Yale spirit, for he was full of criticism and bitterness towards the institution. President Hadley came in for his share, and I was supplied items, facts, data, with times and places, for "a peach of a roast."

Very soon I saw the trouble was not with Yale, the trouble was with the young man. He had mentally dwelt on some trivial slights until he had got so out of harmony with the institution that he had lost the power to derive any benefit from it. Yale is not a perfect institution—a fact, I suppose, that President Hadley and most Yale men are quite willing to admit; but Yale does supply certain advantages, and it depends upon the students whether they will avail themselves of these advantages or not.

If you are a student in a college, seize upon the good that is there. You gain by giving—so give sympathy and cheerful loyalty to the institution. Be proud of it. Stand by your teachers—they are doing the best they can. If the place is faulty, make it a better place by an example of cheerfully doing your work every day the best you can. Mind your own business.

If the concern where you are employed is all wrong, and the Old Man a curmudgeon, it may be well for you to go to the Old Man and confidentially, quietly and kindly tell him that he is a curmudgeon. Explain to him that his policy is absurd and preposterous. Then show him how to reform his ways, and you might offer to take charge of the concern and cleanse it of its secret faults.

Do this, or if for any reason you should prefer not, then take your choice of these: Get out or get in line. You have got to do one or the other—now make your choice.

If you work for a man, in heaven's name work for him!

If he pays you wages that supply you your bread and butter, work for him—speak well of

him, think well of him, stand by him and stand by the institution he represents.

I think if I worked for a man I would work for him. I would not work for him a part of the time, and the rest of the time work against him. I would give an undivided service or none.

If put to the pinch, an ounce of loyalty is worth a pound of cleverness.

If you must vilify, condemn and eternally disparage, why, resign your position, and when you are outside, damn to your heart's content. But, I pray you, so long as you are a part of an institution, do not condemn it. Not that you will injure the institution—not that—but when you disparage the concern of which you are a part, you disparage yourself.

More than that, you are loosening the tendrils that hold you to the institution, and the first high wind that comes along, you will be uprooted and blown away in the blizzard's track—and probably you will never know why. The letter only says, "Times are dull and we regret there is not enough work." et cetera.

Everywhere you find these out-of-a-job fellows. Talk with them and you will usually find that they are full of railing bitterness and condemnation. That was the trouble—through a spirit of fault-finding they got themselves swung around so they blocked the channel, and had to be dynamited. They were out of harmony with the concern, and no longer being a help they had to be removed. Every employer is constantly looking for men who can help him; naturally he is on the lookout among his employes for those who do not help, and everything and everybody that is a hindrance has to go. This is the law of trade—do not find fault with it; it is founded on Nature. The reward is only for the man who helps and in order to help you must have sympathy.

You cannot help the Old Man so long as you are explaining in undertone and whisper, by gesture and suggestion, by thought and mental attitude, that he is a curmudgeon and his system dead wrong. You are not necessarily menacing him by stirring up discontent and warming envy into strife, but you are doing this: You are getting yourself upon a well-greased chute that will give you a quick ride down and out.

When you say to other employes that the Old Man is a curmudgeon, you reveal the fact that you are one; and when you tell that the policy of the institution is "rotten," you surely show that yours is.

Hooker got his promotion even in spite of his failings; but the chances are that your employer does not have the love that Lincoln had—the love that suffereth long and is kind. But even Lincoln could not protect Hooker forever. Hooker failed to do the work, and Lincoln had to try some one else. So there came a time when Hooker was superseded by a Silent Man, who criticized no one, railed at nobody—not even the enemy. And this Silent Man, who ruled his own

spirit, took the cities. He minded his own business, and did the work that no man ever can do unless he gives an absolute loyalty, perfect confidence and untiring devotion. Let us mind our own business, and work for self by working for the good of all.

Organization.

A permanent branch of the International Union of Commercial Telegraphers was organized at Seattle, Wash., on August 31, with W. R. Williams as president, and a membership of over thirty.

The International Union of Commercial Telegraphers was formed in Chicago on September 21, by a convention of forty delegates, representing as many cities. Legislation patterned after that of the International Typographical Union was adopted, providing for the issuance of a working card to each member every three months. This is the first time an organization of telegraph operators has been formed on these lines. The convention elected these officers: President, I. J. McDonald, Chicago; First Vice-President, M. J. Reidy, Boston.

Mr. L. W. Quick, the grand secretary and treasurer of the Order of Railroad Telegraphers, and also of the Brotherhood of Commercial Telegraphers, recently addressed a meeting of commercial telegraphers in Kansas City, Mo., and reviewed the situation in the commercial telegraph world, pointing out the necessity for organization among the commercial telegraphers.

Having been a commercial telegrapher for many years himself, the speaker was able not only to recite the conditions prevailing in that immediate territory in the commercial telegraph offices, but also throughout the country. He urged that the commercial telegraphers exercise their right to organize for their own advancement; that they exercise discretion in doing so, and that they refrain from hasty and overt actions that would later prove a detriment to their cause. He also stated his belief that after the commercial telegraphers had become thoroughly organized throughout the country, and had demonstrated by their actions that it was their purpose to conduct their affairs in a business-like manner, and to select for their officers men of high quality, and to demand for themselves only that which is right, that the opposition which now exists in some quarters would entirely disappear, and that the employer would be as willing to deal with them as an organized body as are the employers of other classes of labor to deal with their employes.

In conclusion Mr. Quick explained the connection of the Order of Railroad Telegraphers with the Brotherhood of Commercial Telegraphers, and extended an invitation to the latter to become affiliated with the former organization.

Sample copies of TELEGRAPH AGE will be sent free to all intending subscribers.

AT RICHMOND, VA.

Convention of The International Association of Municipal Electricians.

The seventh annual convention of the International Association of Municipal Electricians will meet at Richmond, Va., on Tuesday, Wednesday and Thursday, October 7, 8, and 9.

On account of the National Encampment of the G. A. R. at Washington, D. C., during the week of the meeting, members can secure very cheap rates to that city, and then go by boat or rail from there to Richmond. The Baltimore and Ohio Railroad will sell tickets from Washington to Richmond and return, October 6 to 14, inclusive, with final return limit of five days, for \$3.50. Parties who desire can go via New York and boat as follows: Round trip tickets by Old Dominion Steamship line, including state room and five meals each way, \$14. The steamer leaves



A. S. HATCH, OF DETROIT.

President of the International Association of Municipal Electricians.

New York from pier 26, North River, foot of Beach street, at 3 P. M. on Saturday, October 4, arriving at Richmond at 7 A. M. on Monday, October 6. Returning, the steamer leaves Richmond daily at 7 P. M. These tickets are good for a stop-over at Norfolk, permitting those who wish to do so to visit "Old Point," "Virginia Beach," Norfolk or Washington. Round trip tickets from Norfolk to Washington are \$5. Those who leave Richmond, on Friday at 7 P. M., October 10, or Norfolk on Saturday, at 6 P. M., October 11, are due to arrive in New York at 3 P. M. on Sunday, October 12.

From present indications there will be a large attendance. A numerous contingent made up of the New York and Eastern delegations are going by the way of the Old Dominion Steamship line, leaving New York on Saturday afternoon, October 4. This party will be headed by Frank C.

Mason, superintendent of police telegraph, Brooklyn, and it may readily be assumed that the programme which that gentleman has arranged for the entertainment of the company while en route will not be lacking in features he knows so well how to provide, conducive to making the trip on occasion of much enjoyment.

The secretary, Frank P. Foster, will be at Murphy's Hotel, the headquarters, on Monday, October 6, where all delegates and visitors are requested to register and where they will receive souvenir badges and the full programme of the entertainment projected during their stay.

There will be a meeting of the executive committee on Monday afternoon at 3 o'clock in order to consider any business that may require attention before the opening of the convention on the following day.

The convention will be called to order in Assembly Hall, located in Murphy's Hotel, on Tuesday morning at 10 o'clock, by A. S. Hatch, of Detroit, the president. A prayer will then be offered by a local clergyman, to be followed by addresses of welcome by Hon. A. J. Montague, the Governor of Virginia, and by Hon. R. M. Taylor, the Mayor of Richmond, to which a suitable response will be made for the association by a speaker not yet named.

The papers prepared for the occasion, the titles and authors of which are given below, have been printed and bound in pamphlet form, and will be distributed for the leisurely perusal of the delegates. The papers will not be read, but will simply be announced by title and fully discussed.

The papers are: "Municipal Inspection and Control of Electrical Matters," by Walter M. Petty, superintendent of fire telegraph, Rutherford, N. J.; "Relation of Electrical Interests to other Branches of the Municipality," by Capt. Wm. Brophy, of Boston, Mass.; "The Telephone Service in Connection with Fire and Police Signal Systems," by Jeremiah Murphy, superintendent of police telegraph, Cleveland, O.; "Electrical Government," by A. S. Hatch, assistant superintendent public lighting commission, Detroit, Mich., and "Joint use of Conduits," by Charles F. Hopewell, city electrician, Cambridge, Mass. Mr. Hopewell will also give his admirable "Illustrated Lecture of Fire and Police Telegraph."

The mornings of the three days of the convention will be devoted to the conduct of the business that properly comes before the delegates. The social functions, many and varied, will be carried out during the hours of the afternoon and evening. On the first day, Tuesday, October 7, at 3 o'clock, the visiting ladies accompanied by a committee of Richmond ladies, will be provided with carriages and the points of interest in the city visited.

What will doubtless be the most enjoyable feature of the reunion will be a trip on Wednesday afternoon, October 8, down the James River on the steamboat Louise, to which the entire delegation is invited. The start will be made at 3 o'clock,

and the steamer will proceed as far as City Point, reaching Richmond on its return at 9 o'clock in the evening. A band of music will be on board as well as a company of negroes who will sing their old-time plantation melodies. A dinner will also be served. The James River is invested with so much of historical interest that to view these spots quietly from the decks of a passing steamer will be a special delight to many.

On the following day, Thursday, October 9, at 3 o'clock in the afternoon, the delegates will be given a trolley ride through the principal streets of the city and out to Lakeside Park, where a lunch will be served. A brass band will accompany the excursionists.

There will be other entertainments provided for the visitors, but the nature of these is not yet disclosed, being held in reserve as a surprise.

Numerous courtesies will be extended to members of the association while in Richmond, among them being the free use of the telephone, the telegraph, by both companies, and free transportation over the street car lines. Recipients of these favors will be recognized by the badges worn.

The officers of the International Association of Municipal Electricians are: President, Austin S. Hatch, Detroit, Mich.; first vice-president, Walter M. Petty, Rutherford, N. J.; second vice-president, A. C. Farrand, Atlantic City, N. J.; third vice-president, William Crane, Erie, Pa.; fourth vice-president, William A. Barnes, Bridgeport, Conn.; secretary Frank P. Foster, Corning, N. Y.; treasurer, Adam Bosch, Newark, N. J.

The executive committee is: W. H. Thompson, chairman, Richmond, Va.; Morris W. Mead, Pittsburg, Pa.; William Brophy, Boston, Mass.; J. W. Aydon, Wilmington, Del.; Frank G. Boyd, Baltimore, Md.; Frank C. Mason, Brooklyn, N. Y.; William Y. Ellett, Elmira, N. Y.; G. F. MacDonald, Ottawa, Ont.; M. G. Canfield, Grand Rapids, Mich.

Space has been set apart for an exhibit by manufacturers and others of such goods as municipal electricians are expected to be interested in. It is believed that an attractive general display will be made. Opportunity will be given for exhibitors to explain the merits of their goods at a session of the convention.

The Cable.

A new cable steamer named the "Iris," built for the Pacific Cable Board, first class in all her appointments, and in which provision is made for four cable tanks, has recently been launched in Scotland. The vessel has a length of 285 feet, is forty feet six inches wide and is of about 2,300 tons.

At last accounts the cable ship *Colonia* had laid about 1,600 miles of the British Pacific cable of the section between Vancouver Island, B. C. and Fanning Island. The *Colonia* will have paid out all her cable when she arrives within about one hundred miles or more of Fanning Island, and when this point is reached she will anchor

the end of the cable to a buoy. This end will then be picked up and spliced by the cables ship *Anglia* and the further laying of the cable completed by that vessel.

The submarine telegraph cable which is to join the United States and Hawaii, as the first link in the system to the Philippines, has been completed and is now on board the cable steamer *Silvertown*, which is on its way to San Francisco, sailing from London September 20. The *Silvertown* is expected to reach San Francisco early in December.

The cable is wound around three enormous spools, each thirty feet in diameter. Its total length is 2,413 miles. The strands are one to three inches thick. The total weight of the cable is ten thousand tons.

Vice President Ward, of the Commercial Pacific Cable Company, who has just arrived at New York from London, says:

"The shipment of the cable gives the assurance that the United States may look forward to being in telegraphic communication with Honolulu by the end of this year. The manufacture of the remaining three sections to the Philippines is proceeding at the rate of fifty miles a day, and I am confident they will be finished by March and laid during next summer. Two cable steamers, the *Colonia* and the *Anglia*, will lay the line beyond Hawaii. I would like to see the entire project consummated by July 4, next. Pending the arrival of the *Silvertown*, work will be pushed on the underground cable approaches at San Francisco and Honolulu, each seven miles long. It will take the *Silvertown* two weeks to unwind her spools between San Francisco and Honolulu. The service will begin immediately thereafter."

In the case of the Western Union Telegraph Company vs. the schooner *Guide*, United States District Court, Judge De Haven lately dismissed the libel upon the ground that the court had no jurisdiction, the ground being that a cable was a mere projection of the land, and that a suit involving injury to a cable could not properly come before an admiralty court. The suit was for \$8,000 damages for injury done by the anchors of the schooner to the cable between San Francisco and Oakland.

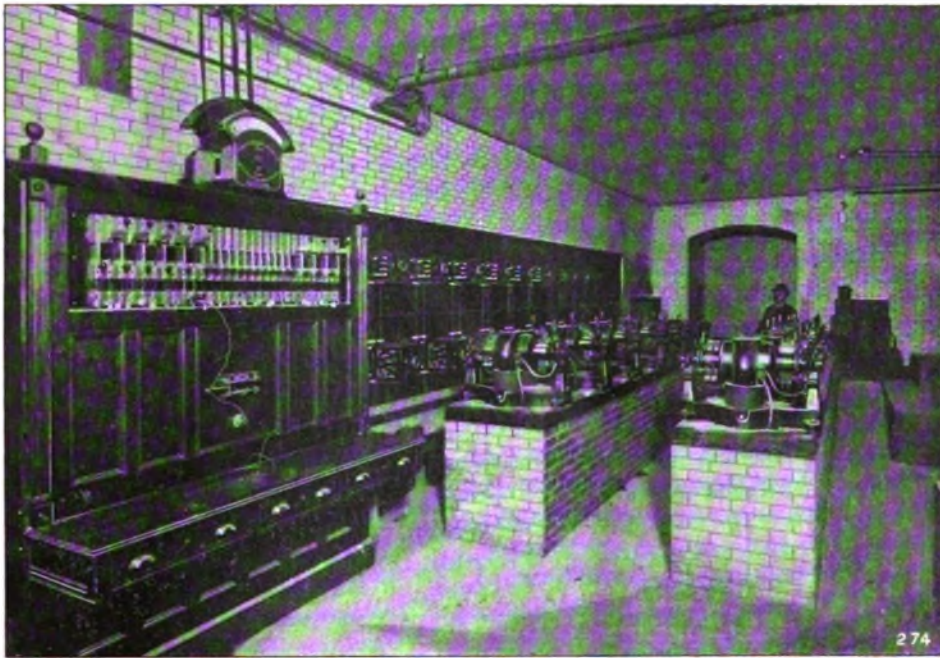
"Wireless Telegraphy" is the title of a new and popular exposition on this interesting subject by G. W. Tunzelmann, B. Sc., the author of "Electricity in Modern Life." The volume has 104 pages, is fully illustrated, and includes chapters on ether and ether waves, the discovery and development of the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

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Low Resistance Relays.

EDITOR TELEGRAPH AGE:

I have read with interest the communication from Mr. F. W. Jones in your issue of September 1, and regret that he did not extend the discussion to cover some of the conditions that are found in so many localities in this country; I refer particularly to cases where the only available source of current is the gravity battery, and then with several lines tapping the same battery.

I find it hard to get much more than a very general statement from the average telegraph man upon the merits of the low-resistance relay on heavy lines; these statements as a rule hardly fit the case mentioned.

I have heard the champions of the low-resistance relay argue from the standpoints of both economy and efficiency, but in the case of gravity battery it is difficult to see how either argument will hold when the figures are considered. For instance: The transfer of a large percentage of the drop from the relays to the line wire hardly appeals to me as an economical measure; again, there can be no argument as to the fact that with a given magnet a certain number of ampere-turns is necessary to accomplish a certain result; if the turns are decreased the current must be increased proportionally. When this is done, it is questionable if any particular efficiency has been added to the working of lines working from one battery when the wide fluctuations of the terminal e. m. f. are considered.

It seems to me there might be a chance for misunderstanding from Mr. Jones' statement of the well known rule for maximum effect, taken in consideration with his argument for the low resistance relay, inasmuch as the rule for quick action can hardly be said to be identical with that for maximum magnetic effect. With the same resistance outside the relays, the signals will unquestionably travel over the line faster with the low resistance relays, "if the battery is increased sufficiently to restore the magnetic effect of the relays to what it was before," but cannot this be easily turned into an argument that the original e. m. f. was inadequate to the work?

With a line equipped and adjusted on a scientific basis, with instruments built with some little regard to the use for which they are intended, I am inclined to think there will be no great difficulty in getting the signals over the line as fast as the average railroad telegrapher can put them down, using relays of sufficiently high resistance to make the line a respectable example of an economical transformer of electrical into mechanical energy, a rather desirable feature in any electrical apparatus.

D. A. Starkweather.

Greensboro, N. C. September 20.

EDITOR TELEGRAPH AGE:

In the TELEGRAPH AGE of September 1 there was printed a communication from Mr. Francis W. Jones on low resistance relays. From what

he says it appears that the Postal Telegraph-Cable Company has adopted a 75-ohm relay as their low resistance standard for heavily loaded circuits.

Mr. Jones does not give any definite reason for the adoption of the 75-ohm relay. In the eighth paragraph he admits very plainly that 37.5-ohm relays, when supplied with proper current, will give satisfactory results. In the ninth paragraph he gives his opinion as follows: "It has been my opinion that it is going to extremes to cut the resistance of the relay from 150-ohms down to 37.5-ohms by the multiple process; that it is too great a sacrifice of the effective working value of the relay." Instead of explaining definitely how the efficiency of the relay is sacrificed by reducing it to 37.5-ohms, he merely gives a description of his 75-ohm relay with certain magnetic and mechanical refinements all of which are foreign to the low resistance relay problem. The 37.5-ohm relay with the same refinements would have a still lower time constant than the 75-ohm relay.

The subject of low resistance relays has been treated by me in a very lengthy manner in the TELEGRAPH AGE of August 1, August 16 and September 1, 1898; also in the January 1, 1899, issue, and I feel that I can now say very little more that is new.

If the 37.5-ohm relay is supplied with twice the current that was supplied to the 150-ohm relay there will be no sacrifice to its effective working value. In fact it will have a higher effective working value than the 150-ohm relay. Its time constant will be lower and its wet weather efficiency will be higher.

The adoption of the 37.5-ohm relay as the low resistance standard in railway service was, of course, due to the force of circumstances. Nothing else was available at the beginning of the low resistance movement in the West, and in this way it soon became an accepted standard. It has given general satisfaction wherever used even under the most crucial conditions of bad lines and wet weather. With a few exceptions I have never heard of any complaint against it. In a few cases the attempt has been made to work with a current entirely too small to sustain the full magnetizing force, and in such cases the working of the circuit could not be entirely satisfactory. These defects are, however, easily remedied by giving the battery the proper voltage and capability to maintain the necessary current under all conditions of weather.

The fact that the 37.5-ohm relay is giving general satisfaction wherever used is a very practical proof that there is no great sacrifice of its effective working value. The sacrifice all comes out of the battery which must supply twice the current used by the 150-ohm relay equipment.

R. J. Hewitt.

St. Louis, Mo., September 19.

If we encourage ourselves to speak falsely in jest we shall run the chance of acquiring the habit of speaking falsely in serious matters.—Sohn.

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.]

BIRMINGHAM, ALA., WESTERN UNION.

On September 16 Messrs. B. Brooks, general superintendent; J. C. Barclay, electrical engineer; C. H. Bristol, general superintendent of construction, and C. H. Sherman, general foreman of construction, of New York; J. M. Stephens, superintendent, Atlanta, Ga., and S. R. Crowder, electrician, Richmond, Va., paid this office a visit. Its purpose was to ascertain the needs of the various offices throughout the southern division, and make such changes as they may deem necessary for the improvement of the service of the company. They expressed themselves as most favorably impressed with the wonderful progress of this city, and the volume of business handled in this office, to facilitate which some needed improvements are now expected.

Arrivals: S. R. Stewart, E. A. Maaske, and D. S. Cregg.

J. R. Reed has resigned on account of impaired health.

BOSTON, MASS.

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

PHILADELPHIA, PA., WESTERN UNION.

Our sympathy is hereby extended to Manager Wilson of the Bellefonte, Pa., who is ill with typhoid fever. Mr. Josephson of this office is the manager pro tem.

Owing to the recent illness of Miss Colkett, manager at Bridgeton, N. J., Mr. Bell of this office was acting manager there for a week.

Charles Saunders, of the Stock Exchange office, recently took a short vacation.

O. C. Crist is now located at Williamsport, Pa., with Manager Barto.

All night chief Dos Santos has been away on a week's vacation.

Miss Sadie Arthur has been absent for several weeks on account of illness.

Miss L. B. Good has resumed duty after six weeks of rest.

Miss C. Dennis and Miss Fannie Shott are absent on a vacation covering an entire month.

Harry Hehl spent ten days visiting relatives in Delaware.

R. Rowles of Denver, Colo., is a late arrival.

D. A. Creary, late transfer clerk at this office, was recently appointed cashier at Pittsburg, Pa., by Superintendent E. B. Saylor. The many friends of Mr. Creary hereby extend their congratulations.

Edgar Saylor has resigned and will locate with the Denver, Colo., office.

George Brenckman was sent to Bellefonte, Pa., to help out during the recent political meeting at that place.

D. E. McBride looked after this company's interests at the horse show at Bryn Mawr, Pa.

Miss Lou Salger a popular operator for the past ten years in this office has resigned and will soon be married.

Chief Operator T. A. McCammon is an enthusiastic admirer of the national game of baseball and a keen judge of the fine points of play. Night manager MacLorraine is another enthusiast and they both rooted for the Athletics recently.

Manager Slawter, of Easton, Pa., who succeeded C. B. Sharp, resigned, is very popular and full of progressive ideas.

Manager Meloney, of Atlantic City, N. J., was a recent visitor.

PHILADELPHIA, PA., POSTAL.

Under the capable and efficient care of Mr. W. Branch Wainwright, of Seaford, Del., the office in the waiting room of the Pennsylvania Railroad at the Broad street terminal will have all its varied and exacting requirements fully met.

A young son, the first of the family, has gladdened the heart of Mr. Charles Babb, assistant to Mr. Moffett at the Third and Arch streets office.

Among the returned vacationists none show more decided and pronounced evidences of benefit than Miss Jennie Melville, whose European trip has left on her its unmistakable marks of improvement. Others who have had pleasant trips nearer home are Miss Lillian Greiner and Mrs. E. J. Mathews.

If conclusions can be reached from the evidence furnished by photographs, we are all satisfied that Mr. and Mrs. C. A. Stimpson enjoyed a novel experience while on their trip to Salt Lake with the Old Timers.

Recent departures are the Messrs. H. E. Henderson, Wm. Cornell, Henry G. Stewart, Desilva and Abram.

Mr. William E. Todd, wire chief at New York, and a former Philadelphian, has been appointed to



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Two months after I took up the I. C. S. training, I received an increase in salary. Aside from this, the satisfaction I am getting from my Course is worth a hundredfold what it cost me. I firmly believe that any one who can read will be benefited by I. C. S. training, as my early education was limited to common schools, and still I have mastered studies that I have never seen before.

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What the I. C. S. Will Do for You

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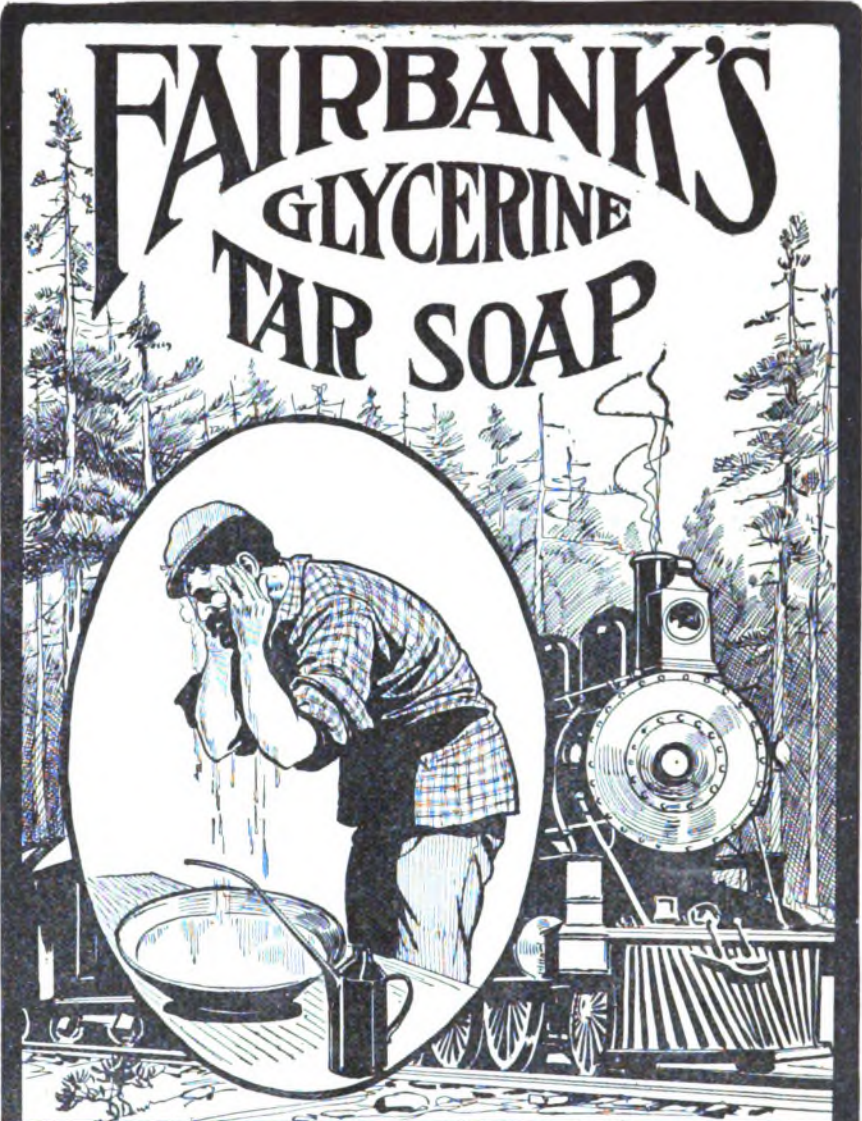
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Means a close association with grease, grime and grit. It's more than a case of "plain dirt," the smoke and dust working into the pores of the skin.

Good ordinary Soap won't do for the "clean up." There's one soap which will cleanse thoroughly, cut grease and grime like magic, and keep the skin free from roughness—Fairbank's Glycerine Tar Soap. It is made from pure glycerine and pine tar and its odor reminds one of "a breath from the pines."

The best soap for railroad men.

If your grocer cannot supply you, send name and address for free sample.

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no matter where it is. Send description, state price and learn how. Est. '96. Highest references. Offices in 14 cities. W. M. Ostrander, 1751 N. A. Bldg., Philadelphia

Lockwood's Electricity, Magnetism and Electric Telegraphy. A practical guide for operators. 376 pages, 152 illustrations. Price, \$2.50, expressage prepaid. Address J. B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York

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WARM ENDORSEMENT
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No man in America is better known among railroad men, or more highly regarded than L. S. Coffin, whose portrait appears above. His unequalled endorsement of Dr. Bartlett after a thorough investigation of his methods will carry absolute conviction.

In a letter published in the "Railway Conductor," Mr. Coffin says:

"For two years I have been investigating and testing a simple and cheap cure for the drink crave. I wanted to know for a dead certainty if it was effective before I said a word in favor of it.

"All doubt is now removed. I have seen it proved in scores of cases. Not in a single case has it failed.

A man need not leave his business. When I know that this cure can do the work at about one-eighth of the expense (time being considered), can I lay claim to real, genuine good will to railroad men unless I make every reasonable effort to make this fact known to them?

I will pledge my word of honor that if the treatment does not eradicate the drink crave, when taken according to directions, I will myself, stand the cost."

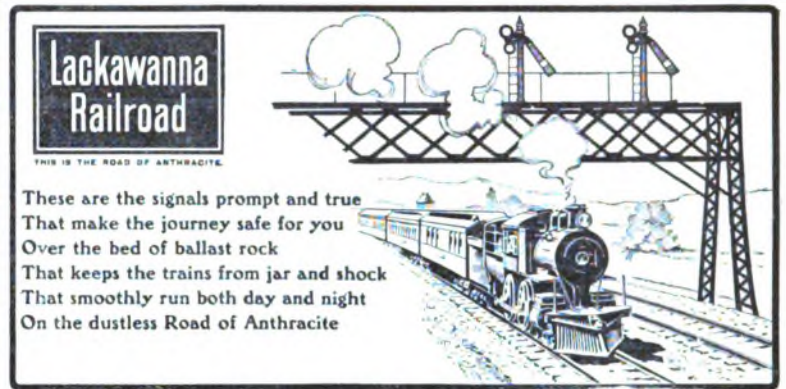
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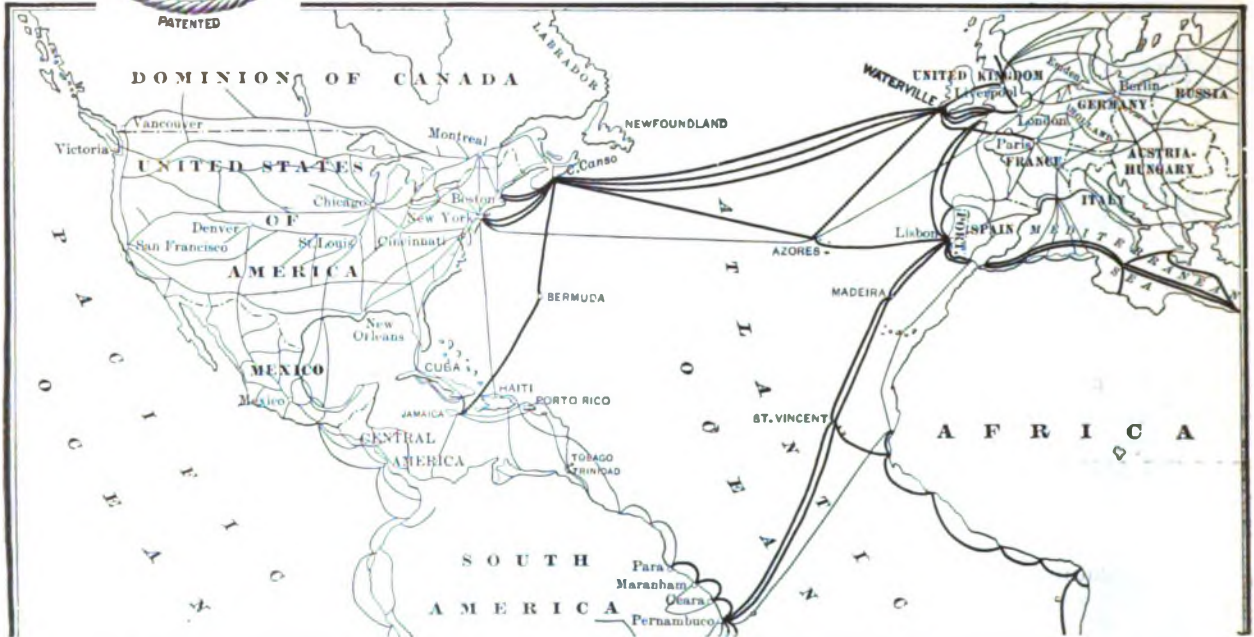
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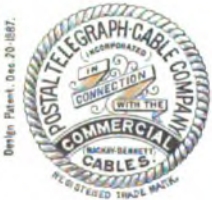
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Its proprietors and management determined from the first to establish a permanent business based on sound principles and business-like methods, and have steadfastly adhered to that policy.

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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 (now being constructed), the Direct West Indies cable, the Bermuda cable, etc.

to the great task of installing quad sets in the offices of the Pennsylvania Railroad along the main line.

While on a vacation trip to his home at Lambertville, N. J., Mr. J. J. Pickering, manager at Lebanon, Pa., paid us a cordial visit.

KANSAS CITY, MO., WESTERN UNION.

This office has recently received calls from quite a number of visitors, among which we note the following:

Messrs. N. J. Petrich, and T. H. Farmer, of New Orleans, La.; John Fleming, of Nashville, Tenn., and Mike Tulley, of St. Louis, Mo., who were homeward bound, from the Old Timers' convention at Salt Lake City, Utah. Also John Kearns and wife on their return from a pleasure trip to the above city, called upon friends here. They did not remain to attend the convention.

Joseph T. Heyden, of the all night trick, has been enjoying a two weeks' vacation.

J. P. Pippitt, another of our boys, has launched in the railroad business and is stationed at Palo Alto, Cal.

Wm. O. Ferguson has resigned and returned to his home in St. Louis.

Wm. Norman, and Mrs. Ida Phillips, are away on vacations.

POTTSVILLE, PA. NOTES.

William S. Brobst, night operator of the Philadelphia, Reading and Pottsville Telegraph Company, who was suspended on account of the anthracite coal strike, and who had secured a position in the same company at the Reading Terminal, Philadelphia, was called back to accept a position here again, and his old associates are glad to see him once more.

Raymond S. Brobst, night operator, who was affected in the same manner as his brother, has obtained a position at the Reading Terminal, Philadelphia, with the same company. His fellow workmen will be glad to see him back in his old place here as soon as the strike is ended.

Thomas B. Weaver, who worked for the Philadelphia, Reading and Pottsville Telegraph Company, and the Western Union for many years, has resigned on account of poor health. He has the sympathy of all his fellow workmen.

Harold Percy Hemingway, night operator for the Western Union Telegraph Company, has resigned to accept a better position as a broker operator in this city. The best wishes of his associates accompany him in his new field. Harry Shafstal, clerk in the same office, will succeed Mr. Hemingway and Mr. James Hopkins, messenger boy, will succeed Mr. Shafstal.

INDIANAPOLIS, IND., WESTERN UNION.

The Union Station Company, having established a bureau of information and taken the branch office at that point, Mr. S. H. Spooner, who was the manager there for several years has been transferred to the main office.

Miss Nellie Moore, is enjoying a two weeks' vacation.

Mr. L. McKissick, chief electrician, spent a few days here recently.

Evansville, Terre Haute and Anderson have been given direct Chicago locals. Heretofore Indianapolis relayed for these points.

Ralph E. Scolah, has accepted the manager-ship at Bedford, Ind., taking charge September 14.

Other departures: A. S. Longnecker, D. N. Martin, Alfred Harrison.

Arrivals: H. B. Walker, J. A. Riley and T. P. Johnson.

On account of a recent death in the family, the parents of James Ahern, an operator, are anxious to learn of his whereabouts, and any information will be gladly received.

CINCINNATI, O., POSTAL.

Arrivals: Arthur Glenn Tebbs, from the Hamilton, O., office; E. J. Herrman, from the Western Union, this city.

Superintendent E. W. Collins paid us a brief visit recently.

Miss Corrs has returned from her vacation and has been promoted to the main office force from a city branch.

Miss Geneva Enoch has resigned as a branch relief operator to work the private lines of the Pittsburg Plate Glass Co.

Mr. Cliff Haustetter has been away on a two weeks' vacation.

NEW YORK CITY.

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

WESTERN UNION.

Mr. B. Brooks, general superintendent; Mr. J. C. Barclay, electrical engineer, and Mr. C. H. Bristol, general superintendent of construction, returned September 26 from an extended tour of three weeks, of the southern division which has lately been added to Mr. Brooks' jurisdiction. The party, which also included S. R. Crowder, electrical engineer, and C. D. Sherman, general foreman, of Atlanta, and C. E. Rafford, stenographer, of New York, traveled in the company's private car "Electric" and covered a distance of several thousand miles, visiting many of the chief

points in the South. The object of the trip was to examine carefully into the conditions of the company in that section and to map out such improvements as should be deemed necessary in order to meet growing industrial requirements, which are said to be large. This will involve the opening of many new circuits, and the stringing of thousands of miles of new wire.

This office is enjoying an unprecedented rush of business, and all available men are being pressed into service to handle the daily avalanche of messages, and additional tables are being set up wherever room can be found for them.

By special request of Mr. Cortelyou, private secretary to Mr. Roosevelt, Mr. E. P. Griffith, was detailed to accompany the President's party on the Western trip.

Mr. W. A. McAllister for many years wire chief on the Southern switch nights, and the gilt edged manfolder in the Race Bureau days, has finally deserted the night force and succeeds Mr. Russell Riley on the Western switch days.

Mr. G. F. Stanton, division chief on the West is enjoying a well earned vacation.

Senator Wm. L. Ives was the first of the Old Timers to return from Salt Lake City. He reports having had a fine trip and a delightful experience.

The receiving and delivery department in the basement is being painted and already gives promise of better light and general improvement.

During the rush incident to the Spanish War a clergyman was pressed into service, and now in these piping times of peace another gentleman of the cloth may be found holding his end up with the best of them on the East.

Mr. Herbert A. Smith, the son of Assistant Superintendent Herbert Smith, will be married on October 1 to Miss Viola Sargood of Water-vliet, N. Y.

Mr. T. F. Elliott has been elected a delegate in Kings County (Brooklyn) to the third Congressional convention.

POSTAL.

Messrs. Joseph Ahearn, Thomas Kehoe, Harry Linder, William Sterling, and H. S. Rady, from this office, handled in fine shape the large amount of specials transmitted from the Republican convention at Saratoga, N. Y.

Messrs. W. T. Rudd and P. W. Kenefick have been transferred from the waiting to the regular night force.

Mr. L. M. Harding has been assigned to the second Philadelphia bonus wire with R. F. McKune, and C. O. Smith to the first Philadelphia bonus wire with Fred Bauman. Messrs. E. J. Liston, J. G. Pierce and T. L. Flynn cover the other sides of the Philadelphia quads.

Mr. W. H. Rhodes has been assigned to the Mail and Express Postal staff.

F. E. McKiernan is back from Salt Lake City, where he spent his vacation, and attended the Old Timers' convention held in that city.

Mr. Irving Roloson has returned to duty after a ten weeks' sojourn at Red Bank, N. J.

General traffic chief S. B. Haig and chief S. A. Coleman are away on their vacations.

Returned from vacations; Night manager J. J. Whalen, A. E. Price, S. C. Dodd, city chief, who went to the Adirondacks; C. P. West, from Richmond, Va., where he spent the summer, and the Misses Holmes, Dore, Bryant, Hutchinson, Clary, Murphy, Heckel, Tyrell, McEntee, Jarman, Sammon, Spear, Laura and Lucy Hoffheimer, Mrs. Gleason, Mrs. Hovey.

Arrivals: D. Warner, C. Berg, A. L. Gallagher, E. Meyers, H. H. Sylvas, H. M. Van Horn and E. A. Walker.

CHICAGO, ILL., POSTAL.

Mr. Miller formerly chief of the metropolitan division has been appointed Western wire chief, vice E. Zimmerman, resigned.

J. Bohrer has been appointed chief of metropolitan division, with P. Pinckney as assistant.

Jeremiah Murphy has returned to a wire.

Richard Raabe and Mr. Johnson, the latter formerly chief operator at Memphis, are now working on the late night trick, business growing so heavy as to render the services of two additional men necessary.

Mr. Paxton is now night assistant division chief, New York division.

W. E. Miller has resigned to accept a position with the Western Union at Danville, Ill.

Personal Mention.

Mr. Clarence H. Mackay, who recently made a hurried trip to the Pacific Coast, has returned once again to New York.

Mr. George G. Ward, vice-president and general manager of the Commercial Cable Company, arrived in New York on September 28, after an extended absence in England.

Mr. Charles P. Bruch, the assistant general manager of the Postal Telegraph-Cable Company, New York, accompanied by his wife and son, is spending two weeks in Maine.

Mr. F. W. Beevan, chairman of the Board of Directors of the Anglo-American Telegraph Company, London, is making an extended tour through Canada and the United States.

The Railroad.

Mr. A. E. Roome, assistant superintendent of telegraph of the Southern Pacific Railway, located at New Orleans, has been promoted to the superintendency of that system vice J. B. Donner, deceased, with headquarters at San Francisco, Cal.

New York Visitors.

Mr. H. C. Hope, superintendent of telegraph of the Chicago, St. Paul, Minneapolis and Omaha Railway, St. Paul, Minn.

Echoes From the Old Timers' Reunion.

After the adjournment of the Old Time Telegraphers' and Historical Association, whose convention took place at Salt Lake City, Utah, September 10, 11, 12, which was described in our previous issue, a California party was made up consisting of Frank J. Richardson and wife, D. S. Anderson and wife, Chicago; D. G. McIntosh and wife, Minneapolis, Minn.; John Brant and wife, J. B. Taltavall and wife, Frederick Pearce and wife, C. A. Hicks and wife, M. J. O'Leary and wife and M. W. Rayens, New York; J. E. Dunning and wife, Paterson, N. J.; L. M. Monroe, Jr., New Canaan, Conn., and F. H. Waycott and wife, Montreal, Que.

On arrival at San Francisco, the visitors were met at the station by J. L. Morris, and W. T. Mobley, who escorted them to their hotels. During their stay at the metropolis of the Pacific, they were entertained by J. L. Morris and daughter, W. T. Mobley and wife, H. S. Converse, Charles Willoughby and wife, John Egan and J. V. O'Brien, who did their utmost to make the tourists enjoy their visit in that charming city. After a sojourn of three days at San Francisco, the traveling party divided, some of them returning home, others going South to Del Monte, Santa Barbara and Los Angeles, while others journeyed to Portland, Oregon. The nine delegates who visited Southern California were royally entertained at Los Angeles by Callaghan Byrne, who, among other forms of entertainment, provided a tally-ho ride of thirty miles. This included a drive through the streets of the city, over the beautiful avenues to Pasadena, through numerous orange groves, vineyards, and a visit to the famous ostrich farm located at South Pasadena.

President G. H. Corse devoted his entire time during the three days of the convention to the entertainment of those present, and every visitor left Salt Lake City and Ogden with the impression that Mr. Corse had proved to be an ideal president, and a prince of entertainers. Mr. Corse was ably assisted in his efforts by G. C. Fenton, S. F. Fenton, J. B. Twiford, L. L. Downing and J. W. Booth, of Salt Lake City, and L. P. Kiernan and Mr. McGuinness of Ogden.

The pleasure of all was materially advanced by the untiring efforts of Mr. Park H. Cook, of Ogden, the traveling agent of the Union Pacific Railroad.

Mr. W. E. Peirce of Washington, D. C., again demonstrated his usefulness in providing for the wants of each individual and looking to the comfort of all. He personally saw that every visitor was properly registered and provided with an Old Timer badge.

After the organ recital at the Mormon tabernacle, Mr. W. C. Burton of New York, pleased the visitors as well as the local committees by his appropriate acknowledgement of the courtesies extended by organist McLellan, and his assistants.

Hon. James Cochrane, Mayor of Montreal, was

much delighted to meet several old time telegraph acquaintances whom he had not seen in upwards of thirty years, one or two of them now being wealthy mine owners. Probably no man who attended the convention derived a greater amount of pleasure than "His Worship", who continually made new, and renewed old friendships.

The secretary of the association was several times questioned as to the right of Mr. L. S. Wild, the genial manager of the Western Union at Butte, Montana, to membership in the association. Time deals so gently with Mr. Wild that it was difficult to persuade the interrogators that that gentleman barely escaped being a "Forty-Niner."

Mr. J. E. Dunning of Paterson, N. J., had many good Old Time stories to relate, some dating back to the early fifties when train despatching by telegraph was first introduced on the Erie Railroad, of which corporation he was then a trusted employee.

P. J. McKeever of Pittsburg, Pa.; H. F. Farmer and N. J. Petrich of New Orleans; J. P. McClure of St. Louis; I. McMichael and J. P. Cassidy of Minneapolis; J. A. Crittenton, E. S. Hughen and Fred Randolph of Chicago; W. A. Manning of Cleveland; D. C. Sims of Montgomery, Ala.; John Wintrup and C. A. Stimpson of Philadelphia; J. K. Butler of Burlington, Vt.; P. J. Feeney of Bangor, Me.; J. H. Connors, H. W. Gillespie and G. H. Yetman of Boston; F. D. Murphy, A. E. Price, F. E. McKiernan of New York, and L. M. Monroe, Jr., of New Canaan, Conn., were conspicuous figures and were the recipients of many newspaper paragraphs covering their interesting telegraphic careers.

Frederick Pearce of New York, is one of the pioneer telegraph instrument manufacturers of the country. In fact his father made telegraph apparatus in England for Elliot Brothers, the leading concern of the kind sixty years ago. Mr. Pearce began making instruments in 1863 for C. T. & J. N. Chester, of New York, one of the first establishments to make telegraph apparatus in this country. An Old Timers reunion without the genial Pearce, would be like the play of Hamlet with Hamlet left out.

Mr. F. H. Lamb of San Francisco, was also a prominent figure. At the very beginning of his telegraphic career, he was captured while serving his country, and was one of the first to be confined in Libby Prison. Mr. Lamb has been actively engaged in the telegraph service ever since.

Henry W. Pope of Buffalo, N. Y., one of the three famous Pope brothers, and like Ralph W., and the late Franklin L., began his telegraphic career in the early sixties. Telegraphic history, is incomplete without this well known name appearing in its pages.

Senator W. L. Ives of the New York party, was instrumental in creating much amusement by the rendition of his famous political peroration, which he readily delivered whenever called

upon to do so. This peroration was pronounced to be one of the leading features of the banquet.

The New York party who occupied a special car issued daily bulletins, many of the contributions to which, were declared to be master-pieces of telegraphic literature. Each member of the party contributed in story or verse to its pages.

Quite a party remained over night at Ogden and left on Saturday morning, September 13, for San Francisco, the leavetaking by those who were returning East was very warm and friendly.

About fifteen, mostly of the New York party, stopped over Sunday, September 14, at Colorado Springs, and a few went on to Denver, returning to the springs Sunday afternoon. A visit to the Garden of the Gods, the entire party riding burros, was a unique and delightful experience. The cavalcade was designated by one of the party as "Coxey's Army." A very stout and jovial gentleman from New York on a very weak little burro was promptly christened General Shafter. A few of the party visited Pike's Peak.

Many of those who attended the Reunion, occupied their spare moments in seeking information on the Mormon question, and no doubt think better of the Mormons in consequence.

Some of the New Yorkers' were surprised to find upon asking for broiled lobster in a Salt Lake restaurant that they could get it just as nice as they could in New York.

One of the most interesting sights in Salt Lake is a district messenger mounted on a bicycle and carrying upon his head a large tray from a restaurant. The messenger answers the call, receives the order, takes it to the restaurant, delivers it, and calls for and returns the dishes, the charge for the entire service being five cents.

An Important Business Change.

The announcement is made of the early consummation of a merger of the two well-known incorporations of J. H. Bunnell & Co., of 20 Park Place, and of the Bunnell Telegraphic and Electric Company, of 110 Beekman street, New York. Mr. A. J. Wise, of the latter company, has purchased a controlling share of stock from Mr. Charles McLaughlin, of the former, and as soon as the affairs of both concerns can be adjusted the consolidation will go into effect. Mr. McLaughlin will retire from active business after a long and honorable career. The new company will probably be conducted under the name of J. H. Bunnell & Co., thus perpetuating the name of the founder of the house of Bunnell. Mr. Albert J. Wise has become the president, and Mr. J. J. Ghegan, so long associated with the older house, will continue as heretofore as manager.

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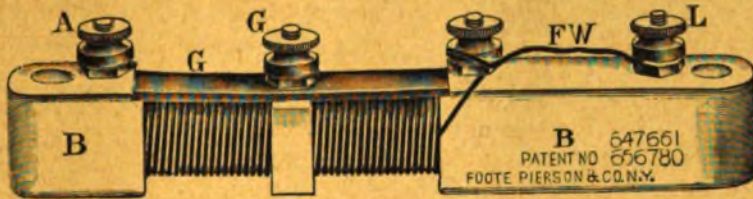
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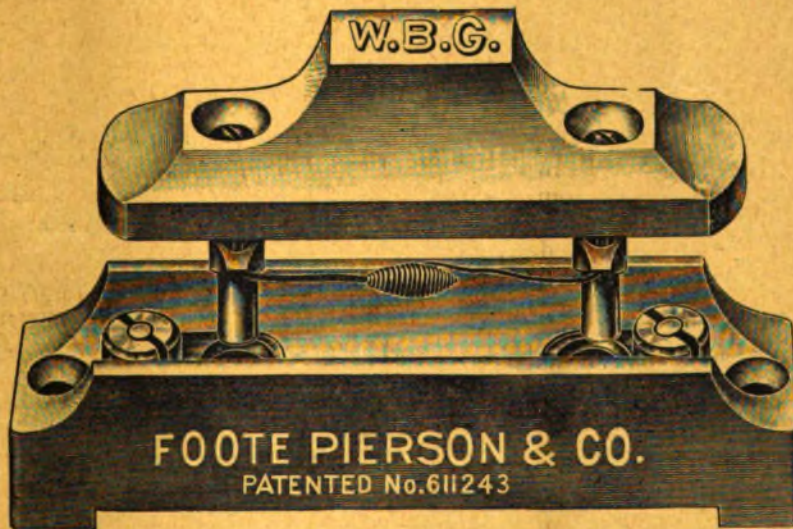


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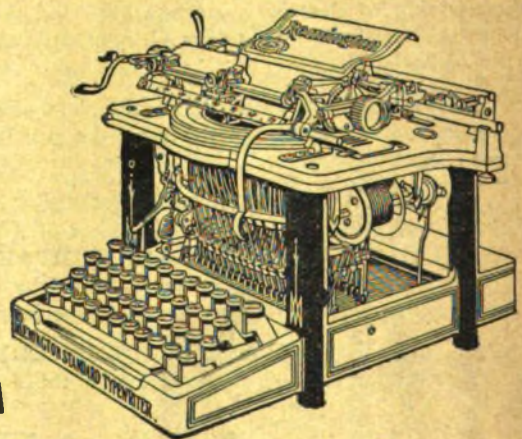
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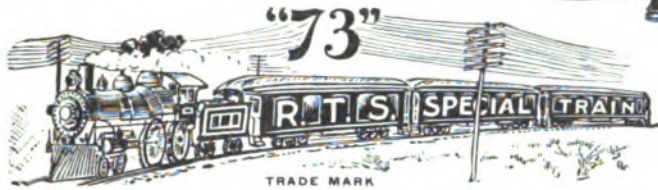
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THE TELEGRAPH AGE

No. 20.

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VOL. XIX.

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SOME POINTS ON ELECTRICITY.

A Few Hints Regarding the Adjustment of Telegraph Apparatus.

(Continued.)

BY WILLIS H. JONES.

Up to this point the suggestions concerning various methods of adjusting telegraph apparatus have been confined to the receiving instruments. The sending apparatus, however, demands quite as much attention and skill on the part of the operator as the receiving instruments do.

Operators, as a rule, hardly realize the fact that with but a very little study on their part it lies within their power to not only make their own work much easier, but that also of the man at the distant end of the circuit.

One of the most common mistakes the operator makes is to find fault with the key frequently because of his inability to send fast, or to make the Morse alphabet easily. It may surprise many readers to learn that, as a matter of fact, the key is seldom to blame. It is really a matter of what is called the electrical and the mechanical inertia of the instruments that cause the trouble.

For example: In a telegraph wire where there are a great many offices close together, such as we find on some railroad circuits, there are necessarily many relays, the highly wound coils of which compose the greater part of the total resistance. Where such a condition exists the

counter electromotive force developed within and by the coils is so great that it checks the quick action of the current in its operation of building up the magnetism in the iron cores of the relays, and thus demands a slower rate of speed on the part of the sending operator in order to fully form his characters. Unless he complies with this law the second impulse in the formation of a character will be begun before the preceding one has been fully "built up," with the result that the key will "stick," as he erroneously believes, and the key gets the blame.

With sounders, as usually arranged, the case is different, but the effect is just the same. If you give the lever of a sounder an abnormally great degree of play, and then make "dots" exceedingly rapid the lever will probably remain in an "open" position during the experiment. Decrease the speed somewhat and it will respond indifferently. If, however, you open and close the key very slowly the lever will follow the movement faithfully. Finally, if you adjust the lever armature close to the magnet and give it but very little play, every "dot" will be heard no matter how fast you make them.

The lesson to be learned from these experiments is that where speed is required the lever must be given as little play as practicable in order to reduce the mechanical inertia to a minimum. Where an operator ignores this rule in order to get a greater volume of sound to receive by, he will experience the same difficulty in forming the alphabet as his friend with the choked relay did, and probably vie with him in condemning the greatly abused key.

The application of these lessons is directed principally to those in charge of duplex and quadruplex apparatus, and cautionary, to operators in branch offices working sounders on legs or loop extensions. On account of the tongue and the retractile spring on transmitters and the accuracy with which polechangers must be manipulated, those instruments demand very careful adjustment to the speed of the transmitting operator. Sounders, on the other hand, once properly adjusted respond so clearly (on the transmitting side) that operators in branch offices working on duplex loops finding that the sending side works, apparently, as well on a poor wire as a good one. The result is that in bad weather the fact is frequently overlooked that the polechanger or transmitter, as the case may be, cannot perform their functions properly at a dry weather speed, and thus by maintaining their usual speed cause no end of trouble both to themselves and the quadruplex chief at the main office.

These remarks apply also to operators working on legs or "office loops" in the main office.

The superiority of a sounder to a polechanger or a transmitter, as a working device, thus points strongly to the fact that the latter are capable of great improvement and suggests a direction of progress in line with Mr. Barclay's idea of direct repeating apparatus, such as obtains in his new multiplex relays recently installed in several repeating stations. Sounders could be placed in series with the device, where necessary, merely for the purpose of permitting the sending operator to hear his own signals.

Branch office operators sending through a multiplex set thus equipped would then be less likely to send "out of step" with the transmitting apparatus at the main office. So far, this method has been introduced at repeating stations only, but in the near future the principle is to be tried at terminal stations, when greatly improved service is expected.

PROPER ADJUSTMENT OF REPEATING SOUNDERS.

The manner in which the contact points of a repeating sounder should be adjusted depends upon the kind of work the instrument is expected to do. In the Atkinson repeater the play of the lever should be reduced to a minimum in order to act quickly. On a quadruplex, in the capacity of an Edison's "bug catcher" the play should be considerable, a point too generally overlooked.

The idea is that the distance between the front and the back stop must be so great that the lever will not have sufficient time to move all the way across the air gap, at the moment of "no magnetism," before the normal condition of the circuit is restored. If the play is exceedingly small you might just as well have no repeating sounder at all.

(To be Continued.)

Business Notice.

After the turmoil of the long summer one instinctively casts about for a winter's abode. A place remote from the whirl of the city where quietness reigns and where the advantages of the metropolis may be had is invariably chosen. The busy man of course wishes to be within hailing distance of New York and just far enough away that the train ride is not tedious. That fashionable winter resort, Lakewood, N. J., meets every demand. A ninety minute journey lands you in Lakewood where your most particular whims are catered to and the conveniences afforded are palatial in every respect. The public schools are model educational institutions and there are also several private schools of reputation. The climate at Lakewood is at least ten degrees warmer than New York or Philadelphia. The roads for those who enjoy driving or the auto are exceptional. The pine belt in which this charming resort is located is healthful in the extreme, and for social environs Lakewood has no equal. The hotels are marvelously kept hostleries and every contrivance is at hand for the convenience and

comfort of the guests. Out-door life is the thing at Lakewood, and Golf, Polo, Cross Country Riding and Coaching are of course the favorite recreations. If you want to know more of Lakewood, send a postal to C. M. Burt, General Passenger Agent of the New Jersey Central, New York Department, 314, for booklet and time table.

Personal Mention.

Mr. Albert Beck, secretary of the Commercial Cable Company, New York, has arrived from Europe, where he has been on a business trip since last May.

Mr. Ralph W. Pope of Elizabeth, N. J., secretary of the American Institute of Electrical Engineers, was married to Mrs. Katherine A. Durant of Great Barrington, Mass., on Oct. 8, at the bride's summer cottage in Ocean Grove, N. J.

The Railroad.

Mr. F. G. Sherman has been appointed superintendent of telegraph of the Central Railroad of New Jersey, vice C. P. Adams, resigned, the same taking effect on October 8.

Mr. F. D. Cudlipp, chief operator of the Western Union Telegraph Company, Richmond, Va., has been appointed superintendent of telegraph of the Atlantic Coast Line Railroad.

Mr. C. P. Adams has resigned his position as superintendent of telegraph of the Central Railroad of New Jersey, to accept a similar office with the Chicago, Rock Island and Pacific Railroad, vice A. R. Swift, resigned.

Mr. Percy Hewitt of Houston, Tex., has been appointed assistant superintendent of telegraph of the Southern Pacific Railway, vice A. E. Roome promoted to be superintendent, with headquarters at New Orleans, La.

Committees on train rules and standard cipher code of the American Railway Association will make their reports at the next meeting of the association which will be held at the Hotel Cadillac, Detroit, Mich., on October 22.

Apropos of the paragraph published in our issue of September 16, to the effect that the Seaboard Air Line telegraph operators in transmitting messages always send the time the message handled was filed, a practice that has been found to add greatly to the value of the telegraph service of that railroad, elicits a commendation from Mr. U. J. Fry, of Milwaukee, the superintendent of telegraph of the Chicago, Milwaukee and St. Paul Railway, who writes: "It is a good thing. We still handle messages in the same way. All railroads should do so," and who encloses in his communication several old telegrams as examples in the way of verification, one being dated as long ago as January 20, 1887.

No up-to-date telegrapher can afford to be without TELEGRAPH AGE. Send for a sample copy.

Resignations and Appointments.

Mr. W. H. Maize is back again at the Western Union office, Pittsburg, as a repeater chief.

Mr. J. H. Crothers has been appointed manager of the Western Union Telegraph Company at Chillicothe, O., vice J. H. Miller, resigned.

Mr. George Getches has been appointed manager of the Western Union office at Springfield, O., vice R. C. Bliss, transferred to Cincinnati.

Mr. J. C. Langley of the Postal office at Dallas, Tex., has been appointed to a clerkship in Superintendent G. J. Frankel's office at St. Louis, Mo.

Mr. William Walker of the Buffalo, N. Y. office, has been appointed a repeater chief of the Western Union Telegraph Company at Pittsburg, Pa.

Miss Corinne Piersall, formerly an assistant operator at Wolcott, N. Y., has been placed in charge of a newly established Postal office at Ontario, N. Y.

Mr. F. D. Nash, formerly manager of the Postal at Fort Scott, Kas., has been given a clerkship in the office of Superintendent G. J. Frankel, at St. Louis, Mo.

Mr. D. I. Compton, formerly a branch office manager of the Postal at Kansas City, Mo., has been appointed manager of the same interests at Texarkana, Ark.

Mr. Frederick L. Wyman, of the main office of the Postal Telegraph-Cable Company, New York, has been appointed manager at Binghamton, N. Y., vice M. E. Dikeman, resigned.

Mr. Rudolph Drehner has been appointed manager of the Postal Telegraph-Cable Company at Pittston, Pa., vice L. R. Tiffany, who goes to Corry, Pa., as manager, relieving A. H. McWilliams, resigned.

Mr. W. E. Peirce, who recently went from the Western Union office at Washington, D. C., to Lynchburg, Va., as temporary quad man, has been promoted to the position of repeater chief at Pittsburg, Pa.

Mr. B. H. King has been transferred from the managership of the Postal at Ithaca, N. Y., to a similar position at Elmira, N. Y., vice Charles L. Jones, resigned. Mr. King's place at Ithaca has been filled by George K. Parr, promoted.

Mr. A. T. Gould, chief operator of the Western Union Telegraph Company, Pittsburg, Pa., has resigned, and the vacancy has been filled by the reappointment of Mr. F. L. Bender, who relinquished the duties of this office on June 1, last.

Mr. W. P. Cline of the Western Union Telegraph Company, Richmond, Va., has succeeded to the position of chief operator made vacant by the retirement of F. D. Cudlipp, the oldest man in point of service in that office, who has been appointed superintendent of telegraph of the Atlantic Coast Line Railroad.

Mr. C. F. Patterson, the well-known expert in American District matters, of Chicago, Ill., has been appointed general superintendent of the American District Telegraph Companies of the entire country. His headquarters will be at 195 Broadway, New York.

New York Visitors.

Mr. W. Y. Ellett, superintendent of Fire Alarm Telegraph, Elmira, N. Y.

Mr. F. P. Foster, superintendent of fire telegraph, Corning, New York.

Mr. E. C. Stockwell, of the Western Union Telegraph Company, Cleveland, Ohio.

Mr. Leon Shaw, an old telegrapher, now of the Record, newspaper, Helena, Mont.

Mr. I. T. Dyer, superintendent of telegraph of the Burlington railroad, St. Joseph, Mo.

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

Mr. J. D. Flynn, ex-superintendent of the Western Union Telegraph Company, Pittsburg, Pa.

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

Mr. August Braun, council for the Imperial German Post Office and Telegraphs, Berlin, Germany.

Mr. Ernest Feyerabend, telegraph engineer of the Imperial German Telegraph, Berlin, Germany.

Mr. N. E. Church, who, up to July 1 was cashier of the Western Union Telegraph Company, Pittsburg, Pa.

General Mention.

The main office of the Postal Telegraph-Cable Company at Buffalo, N. Y., was successfully moved on Sunday, October 12.

Mr. Nicholas Burke, the well-known telegrapher, has been for some time past circuit manager of the Canadian Pacific at Donald, B. C.

Major Flood Page, managing director of the Marconi Maritime Communication Company, Limited, arrived in New York from England on October 4.

A dynamo plant has recently been installed in the Postal Telegraph office at Wilkesbarre, Pa., replacing several hundred cells of gravity batteries and greatly improving the service thereby.

It is said that the Western Union Company at Baltimore, Md., may soon take possession of the northwestern portion of the mezzanine floor of the Equitable Building, that city. Negotiations along that line are now in progress. If the floor is secured the company will remove thereto the

operating rooms. The present offices of the company in the basement of the building will then be remodeled and devoted to executive and general offices.

Mr. Landon Downing, of Salt Lake City, a member of the executive committee of the Old Time Telegraphers' and Historical Association, has been promoted to a more responsible position in the railroad service. His old time telegraph friends extend hearty congratulations.

In renewing his subscription to TELEGRAPH AGE for another year Mr. A. M. Livingston, chief operator of the Western Union Telegraph Company, Birmingham, Ala., writes: "I would be a subscriber if it cost three dollars per year, as I could not afford to labor in the dark."

The message should have read, "Please send us a carload of coal." The receiving operator received it, "Please send me a carload of cow." The lady operator who relayed the message to destination brought it back and said, Mr. — should not this read "Coal?" You have it "Cow", but I am sure it's a "Bull".

Mr. R. Robinson, of Lancaster, Pa., in remitting the amount of his subscription for another year, writes: "As I have a prospective pay-day, thought it advisable to pay for TELEGRAPH AGE which I have managed to do for at least fifteen years. While not now directly connected with the telegraph business I like to keep myself posted as to the doings of my old friends."

Henry A. Bogardus, better known as "Bogy," has renewed his subscription to TELEGRAPH AGE, as the following letter, written from within the confines of the Indian Territory, will show: "The Lord only knows how long I'll be here but you can send me TELEGRAPH AGE, a dollar's worth, (a one dollar bill enclosed) and if I'm not here let the other fellows read it. Will write again after a while I see how the cat jumps."

In the October 1 issue two typographical errors occurred in the page advertisement of Foote, Pierson & Co., the well known manufacturers of telegraphic and other electrical apparatus, of 82-84 Fulton street, New York. The first consisted in the description of the W. B. G. fuse protector, the omission of the word "most" in the sentence "for small fractions of current it is the *most* accurate fuse ever made"; and the dropping of the letter "k" in the word "ink" in referring to "F. P. Co's. celebrated *ink* writing registers."

Wireless Telegraphy.

The wireless telegraph operators employed in Hawaii recently went out on a sympathetic strike.

The Western Union Telegraph company are now transmitting through messages to Catalina Island, California, via the wireless system of the Pacific Wireless Telegraph company.

A list of the vessels entering New York at present equipped with the Marconi apparatus

and carrying telegraph operators, are as follows: Cunard Line.—Lucania, Campania, Etruria, Umbria. American Line.—Philadelphia. French Line.—La Savoie. North German Lloyd.—Kaiser Wilhelm der Gross, Kronprinz Wilhelm. Atlantic Transport Line.—Minnehaha, Minneapolis, Minnetonka.

Our Book Table.

A publication of interest to telegraphers is promised in "Tales of the Telegraph," which will shortly be put on the market. The author is said to be a well-known Canadian journalist and former telegrapher who uses the pen name "Alexander Brenton." Something of the character of the stories may be gleaned from the author's "foreword": "The predominance of tragedy in these Tales of the Telegraph calls for a foreword—not of apology, but dealing with matters of fact. The materials from which the stories are compiled were furnished to the writer by an old time telegrapher, whose interest in the marvellous features of the narratives had rendered him oblivious to all else. And when the tragic aspects of his recitals were pointed out he replied: 'You of the younger generation demand tales of love and sentiment. But my desire is this, to put on record some mysterious and strange occurrences in connection with our calling never before recorded; regarding all else as incidental thereto.'"

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

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.

Line Construction.*

(Continued from page 412, October 1.)

HANDLING HARD DRAWN COPPER WIRE.

While hard drawn copper wire possesses hardness and strength for all practical purposes, it will not stand without injury the rough handling to which iron wire is ordinarily subjected. Every coil should be examined before the outside cover is removed. In case the covering is torn, the wire itself should be carefully inspected to see that it has not been cut or bruised from the cause that injured the covering. In case the wire is found to have sustained injury, the injured portion should be cut out before using.

Copper wire should never be thrown from a moving train. While unreeling, great care must be taken to avoid twists and kinks; wherever either is found, it must be cut out, and a good splice made. This should apply to splits, bruises or indentations of any kind.

In tying the wire, care must be used not to tie it so tight as to cramp or kink it between the tie wire and the glass. Hard drawn copper wire must never be tied or repaired with any wire other than copper. When once hard drawn copper wire is carefully put in place without kinks, indentations or bruises, it will bear all the tests incident to change of temperature, sleet storms, etc., practically as well as iron or steel wire of a much lower conductivity.

JOINTS IN COPPER WIRE.

Joints in copper wire should be made by using McIntyre sleeves. To make these joints pass each end of wire through the sleeve until it extends one-eighth of an inch beyond each end of sleeve (in order to bring ends of wire about flush with ends of sleeve when joint is completed). Then place steel tie wrench properly on each end of sleeve, hold left hand rigid and make three complete turns with right hand, which will complete the joint. The wire on each side of the man making the joint should be kept tight, so that an even spiral will be formed, and the joint not become humped or out of shape.

To tie copper wire to insulators use soft tie wires eighteen inches in length for 210-pound wire and twenty inches in length for 300-pound wire. Pass the tie wire around the glass and across it in front or on line side, with each end of tie wire projecting an equal distance on each side of the glass in the direction of the main line wire. Place the line wire above the cross formed by the tie wire, and then turn each end of tie up as far as can be done by use of a steel tie wrench, forming a close spiral on main line each way from glass. This applies to level country and to poles situated on ground higher than the balance of the line. If a pole is in a low place and the main line wire bears upward each way from that pole, place the main line wire under the tie wire instead of above it.

*Reprint from "Instruction for Foremen and Division Linemen of the Western Union Telegraph Company."

GUARD WIRES.

Where guard wires are necessary to protect our wires from wires of other companies crossing above, they will be put up as described herewith:

Poles should be framed so as to leave one foot of the pole above the top arm. Poles should also be framed in the regular way, with pin in ends of arms. The guard wires should be of No. 8 gauge where the crossing is under low-tension wires. Where the crossing is under electric light, power or other high-tension wires, standard guy wire or No. 4 wire should be used as guards. For guard wires terminating on the top of poles heavy porcelain knobs or other circuit breaks should be used when the crossing is under high-tension wires. Where crossing under heavy lead, and heavy guard wires are used, guy wires should be run from the top of poles to a point eight or more feet from the butt of the next pole, to hold the strain of the guard wires.

CABLES.

Underground, sub-marine and aerial cables must in all cases be connected by tracer wire, and the joints made as follows: Facing from the office, begin with the outside tracer as No. 1, and work to the right. From the outside or distant end face the office and work to the left. The man on the pole should look towards office and put No. 1 wire on the end pin at the left of the top arm, and continue across that arm to the end. When the top arm is filled begin on end pin at the left of second arm and continue as before, and so on until the necessary number of cable strands are in use.

Aerial cable in lengths of five hundred feet and upwards must be provided with lightning arresters and fuses. To insure uniformity in connecting up cables to fuses or arresters, No. 1 strand should begin at top left hand, looking into box, and number thence downward.

Where more than one cable is used the numbering should be consecutive from first to last, with no duplicates. Supposing the number of conductors in each case to be nineteen, the numbering would be as follows: First cable, 1 to 19; second cable, 20 to 38; third cable, 39 to 57, etc. The outside tracer in the first cable would be no 1; in the second cable, No. 20; in the third cable, No. 39, etc.

Cables should be tagged at each end, and a list of wires and numbers should be left with the manager of the local office, and also with the local lineman. The ends of cables in boxes should be left in a condition of accessibility, to facilitate counting, etc.

Before clamps are attached to aerial cable the cable should be painted at the spot where the clamp is to be attached, and at least three covers of two-inch tape applied, each cover being painted as it is put on.

Pipe straps must not be used to hold aerial cable in position on poles. Short lag bolts should be used, fastened in the pole at the point where cable leaves the pole to enter the box, and

also where it leaves the pole to go to the building, and the cable should be anchored with marine to the lag bolts. This will clear the cable from the pole and prevent damage to the cable by the rusting of pipe straps.

In hanging one-arm aerial cable boxes, they should be placed on the arm in such a manner that the wires will have the same distance and upward slant to tubing holes, as they would on a longer box. The bottom of a one-arm box will extend below the arm about four inches, and it will be held in position by hanger irons and by a small wood block of proper thickness fastened to the pole with wire nails. The bottom of the box should be fastened to the wood block by a screw through the back of the box. Where temporary cables are used at points where blasting is going on, etc., standard cable boxes should be used to protect and insulate the ends. Any section of lead-covered cable injured by clamps in the process of pulling in or removal from conduit, must be sawed off and ends sealed with solder. All cable should be carefully reeled for shipment and the reels properly boarded without injury to the cable from nails. Care should always be taken to avoid breaking or crumpling the cable in any way.

Combination stringing reels shipped to the supply department by foremen frequently reach destination without the iron pins which belong in the spools to hold the wire. Foremen must see that the irons are properly tied to the reel frame before shipment; or if left in the spool, that the nuts holding them are properly tightened so that the irons will not drop out.

(To be continued.)

The Second and Third Atlantic Cables.

(Third Article.)

BY FRANCIS W. JONES.

The promoters of the Atlantic cable enterprise were so greatly encouraged that they arranged to lay a new cable over the same route between Ireland and Newfoundland in 1866, using up what cable was left over from the 1865 expedition and adding thereto enough new cable of similar construction, not only to complete the new cable but also to pick up and finish the portion of the 1865 cable which had been abandoned.

The core of the new cable was the same as that of the 1865 cable, but the external protection consisted of ten solid wires No. 13-gauge galvanized; each wire surrounded separately by five strands of Manila yarn, which in this case were left untarred, and the whole laid spirally around the core which was padded with jute yarn saturated with preservative mixture. The weight in air of this cable was 26.82 cwt. per mile.

The shore end of the new cable had only one sheathing of twelve iron wires with an outside covering of tarred hemp and compound. The armor being in three different weights, which starting from the coast of Ireland was laid as

follows: 9.2 miles of the heaviest, 9.2 miles of the intermediate and 16 miles of the lightest, connecting at that point with the deep sea section. Two and one-third miles in all of the three types of cable were used to connect the deep sea section with the shore at Heart's Content, Newfoundland.

The Great Eastern commenced paying out in Ireland on Friday, July 13th, 1866, and arrived at Heart's Content fourteen days later.

The distance between Foilhommerum cable hut and the cable hut at Heart's Content, by the shortest route, was about 1,945 miles. The distance run by the Great Eastern was 1,909 miles; cable paid out during the fourteen days, 2113 miles, or an excess of 204 miles paid out as slack, being an average of ten per cent.; total cable length, including shore ends, being nearly 2,150 miles.

On account of the short cable between Newfoundland and Nova Scotia being broken, the news was not received in New York until two days later and Sunday morning the following message, dated Heart's Content, July 28th, was received in New York from Cyrus W. Field: "We arrived here at 9 o'clock this morning. All well. Thank God the cable is laid and in perfect working order."

The first telegram from America to pass through the cable, reaching London on the 31st of July, was as follows: "New York, July 29th (A. M.) The representative of Tennessee has been admitted to Congress. Congress adjourned yesterday."

The Great Eastern had been in constant communication through the cable with Valentia from the time of starting, consequently England and Europe were informed of the great event of the laying of the cable two days in advance of America, outside of Newfoundland, on account of the failure of the cable which was laid several years previously between the latter place and Sydney, Nova Scotia, a distance of over 300 miles.

Within a few days the Great Eastern put to sea heading eastward and arrived at a point about 700 miles from Newfoundland to pick up the end of the cable lost on August 2d, 1865, in a depth of about 12,000 feet of water and commenced the operation. An attending vessel, the steamship Albany, had hooked the cable and attached a buoy to the rope but a chain broke and the cable was again lost with 2,000 fathoms of wire rope beside.

On August 13th, 1866, the Great Eastern caught the cable and lifted it about 7,800 feet from the bottom but through some mistake lost the cable with the grappling rope. A new attempt was made with 14,400 feet of wire rope and the cable was successfully brought to the surface, but when the effort was made to secure the cable by a strong rope aboard the Great Eastern, the grapnel canted allowing the cable to disappear like an eel into the ocean. After about thirty disheartening failures at grappling, the cable was

again hooked, and on September 2d was raised on board the Great Eastern and found to be in good condition and signals were exchanged with Ireland.

The good news was immediately sent to London and also to New York via the cable lately laid. The splice was quickly made to the new cable on board and the Great Eastern started westward, paying out, and the cable was spliced to the shore end at Heart's Content in the evening of September 8th, 1866, thus completing the 1865 cable. Its total length was 2,184 miles laid at the average depth of 11,400 feet, being 239 miles of cable in excess of the direct surface distance of 1,945 miles between the cable huts, or a slack of eleven per cent.

The signaling upon each cable was started at the rate of about six words per minute, but an improvement in the apparatus and skill of the staff shortly increased the speed to about seventeen words per minute.

The cable put down in 1865, was broken on March 11th, 1873, and finally abandoned February 1st, 1878. The one laid in 1866 was broken January 13th, 1877, and abandoned July 27th, 1878. The shore ends of the latter cable were used in the construction of a new cable now called the cable of 1880, constituting one of the fourteen cables at present connecting North America with Europe.

ENGLISH TRADE UNION CONGRESS.

Postal and Telegraph Grievances.

The work of the Congress is now largely dealt with by committees, and the bulk much reduced. The committee appointed to deal with postal matters drew up the following report, after lengthy discussion:

"That this Congress calls upon the Government to appoint an independent Parliamentary Committee of Inquiry into the grievances of the postal and telegraph service; renews its protest against the inadequacy of pay and absence of promotion in the various grades of the service; calls upon the Postmaster-General to yield full right of representation of officers of the various service unions on behalf of their members; condemns his action in restricting this right, and protests against the special leave of absence of union officials being limited to 10 days per annum.

"That this Congress instructs the Parliamentary Committee to circularize all Parliamentary candidates to enlist their support, if elected, in behalf of the bill they are promoting to secure the unrestricted civil rights of civil servants, and also to take steps to bring all premises in which the postal and telegraph servants are employed under the inspection and jurisdiction of the local sanitary authorities."

Mr. E. J. Burt (Postal Telegraph Operators' Association), in submitting this report to the Congress, among other things, said:

"Our Post Office system was defective, arrogant, and unsuited to the times. They wanted the

calm, thoughtful consideration of the members of the House of Commons and would abide by their decision. They had nothing to fear from a full and searching examination; on the contrary, it would disclose and make very apparent the fact that it should have been held long, long ago."

Mr. G. A. Stuart (Postmen's Federation) among other things said:

"The position of the auxiliary and unestablished postman was deplorable, and, further, the post office was the only great trading business which had increased its profit, and at the same time was reducing the wages of the men who earned the profit; and he also desired to bring before them the fact that the sanitary conditions of many post offices were deplorable, and constituted a menace not only to postal employes but to the general public."

Mr. C. H. Garland also spoke as follows:

"The Government had been described as a 'sweater,' and he wished to bring before the Congress an instance in support of the charge. The telephone girls now being recruited were employed under conditions which were a disgrace to the nation. They entered on a salary of eleven shillings (\$2.75) a week at 17 years of age, and only after five years' service could obtain a maximum of £1 per week. The women clerks of the post office last year sent to Lord Londonderry a balance sheet, showing how insufficient £1 per week was for the sustenance of life, in London for a post office girl. That balance-sheet was as follows:

	Expenditure.	
"Income . £1	Rent, light and firing . £0	7 6
	Board at residence . .	0 5 6
	Board at office	0 4 6
	Travelling	0 1 6
	Washing	0 1 0
		— — —
		£1 0 0

"This left nothing for clothing or recreation. But the telephone girls could not get a £1 a week under five years, and in the meantime what were they doing? The only item of expenditure capable of reduction was 'board,' and he had no hesitation in affirming from his own knowledge that some of the four millions of profit was piled up as the result of the starvation of the girl clerks."

The Congress unanimously adopted the report.

—London Electrical Review of September 12.

Election of Officers.

The annual election of the Philadelphia, Reading and Pottsville Telegraph Company, was held at Reading, Pa., October 7. The old list of officers were re-elected and are as follows: George F. Baer, president; W. A. Church, treasurer; W. R. Taylor, secretary; Directors: Joseph S. Harris, I. Lowber Welsh, Theodore Voorhees and C. E. Henderson.

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

What is "Back Reading?"

(By a Western Operator).

It is amusing, if not disgusting, to a telegraph operator to see reputable metropolitan dailies print such driveling rot as the article entitled "Telegraph Back Reading," to be read by the credulous and gullible public. It was first perpetrated in New York and it was so good that the exchange editor of a Kansas City daily snapped it up, and there's no telling how many others did likewise, throughout the country.

Baron Munchausen's yarns are not in it with these stories of "back reading." What is back reading, anyway? How many practical telegraphers ever heard the expression? I have been in nearly every branch of the telegraph service for more than twenty years and must confess that I never heard the term until this bright young reporter tells of it. What on earth is there that these "bright (?) young newspaper men" don't know all about? If you want your boy to be "dead next" to everything known and unknown to all arts professions and sciences, just make a newspaper reporter out of him.

This wonderful "back reading" operator who wrote out the hundred word message verbatim from memory ought to have been made to do more. That little feat was easy (for a "rising young newspaper man") to tell about. No doubt this message was a packing house cipher, or, possibly, a South American cable. Nothing easier than to copy 100 to 200 words behind on this class of business. I mean "back read." I want to be up-to-date. Of course almost any operator can remember three or four one hundred word messages containing easy words like "ijxpnizketmw," "bzclxngpyqdl." And it's the easiest matter in the world to "back read" two or three addresses and street numbers like: "Alexandronvitchie Prynziskilinskowski, 3975½ Dago St., Room 939½, to the left of stairs, under the alley leading to the river, New York." No doubt, though, one of these "back reader" fellows could do that, and, at the same moment send a message to Hoboken or Jersey City with the other hand, flirt with the telephone girl across the way, write a note to the stenographer on the next floor, fish out his short, black pipe, or borrow tobacco from a man at the other end of the room and roll a cigarette, then catch a match with his teeth, thrown from the 'steenth story window around the block, and never lose a word. We have all seen these fellows with the "stubby" faces, old greasy, black shirts and old shoes exposing their toes, but the most notable feat I ever saw one of these fellows perform was to stow away fifteen or twenty glasses of beer and all the free lunch in sight. The day for this kind of operators has passed, if it ever existed. True, some of the old timers were phenomenal in their ability to copy almost anything sent, when spelled out, and turn out a fine copy. But this silly rot about listening to the "fast sender" for five minutes while he "reeled her off"

and he of the stubby face then hunted up his "stick," dug out his "snipe" and soon caught up, won't go. Why doesn't the "bright young newspaper man" make it strong and tell of one of these Dusty Rhoads boys who sat down to the report wire, after being employed by the "head operator," listened to the report until midnight without copying a word, went out and had a few beers with the printers and then went to a case and "set up" three columns of markets, stock and bond lists and foreign cables, and at the same time wrote out all of Buffalo's reds, which Patsy Hoopemup had been pouring in on another wire. The big dailies should not allow themselves to get scooped this way. When their young men go up and down the highways and byways searching out the news they should get fresh stuff, something out of the ordinary. The wise and discriminating public wants sensational, out-of-the-ordinary news, not little every day doings like our "back reading" friends mentioned in this article, performed.

Any operator who knows anything at all knows that no man living or dead ever did or ever will copy one hundred words, or fifty words, behind and copy it verbatim, and at the same time keep on copying from a sender who doesn't stop. There are few men who can copy twenty-five, or even fifteen words behind for any length of time, and get it right. The average operator doesn't copy five words behind. In these days when two-thirds of the messages are ciphers, it would be money to the company and less work for the service clerks if no operator attempted to "back read" at all.

But laying all jokes aside, our young newspaper friend produced a fine "story." Just so the "story" reads, a semblance of probability isn't required, especially if the article doesn't fall under the eye of a man who knows something about what it treats of. And still newspaper men say operators are ignorant!

The Pension Fund Proposition.

To whom it may concern:

The committee appointed to prepare a prospectus for a pension system, reports that the subject has been pursued as far as it is possible to do, and a report of progress with recommendations has been adopted, which it desires to place before the telegraphers by whom the committee was appointed, and to either be discharged or instructed further in the premises.

Therefore it becomes my duty under the resolution adopted at the meeting in the parlors of the New York Press Club, 116 Nassau street, on March 21st, to summon you to a similar meeting at the same place at six o'clock, p. m. on November 18th, for the purpose hereinbefore set forth.

(Signed.)

P. J. TIERNEY,
Chairman of Meeting.

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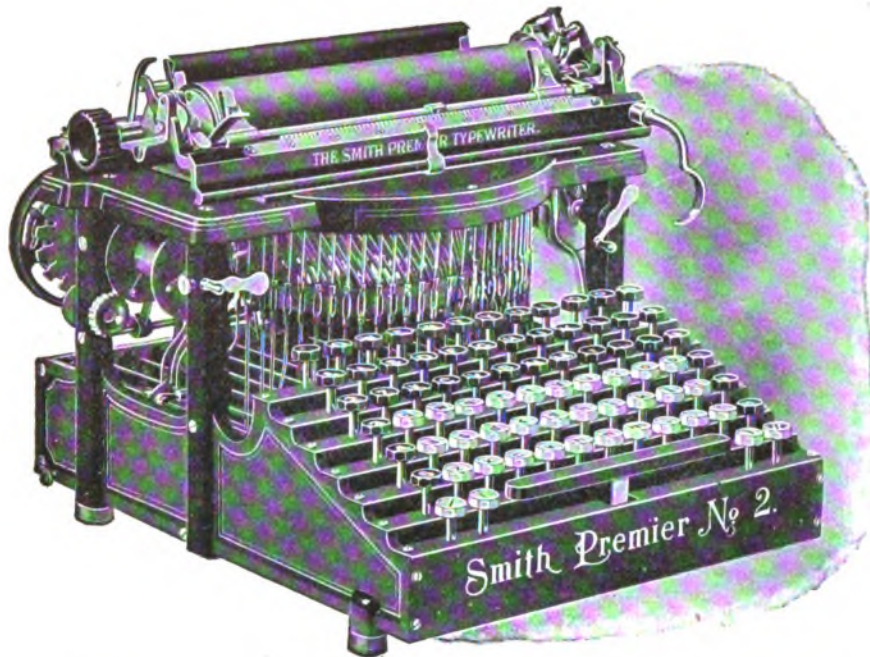
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NEW YORK, October 16, 1902.

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

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.

A Move in the Right Direction.

At Cleveland, O., recently, as described elsewhere in the department of "Letters from our

Agents," the employees of the Postal Telegraph-Cable Company organized what they have termed the "Postal Telegraph Literary Association," which has for its object the general intellectual and literary development of its members, and to provide at its semi-monthly meetings, lectures, debates and various forms of amusement. In connection with this movement the nucleus of a library has been established, its initial volumes being the gift of members, to which worthy beginning the City Public Library has loaned an additional number of selected books. At the meeting called to effect the organization, Superintendent E. W. Collins presided as temporary chairman, thus conferring upon the enterprise the stamp of approval by the highest local executive officer of the company whose name it bears.

An undertaking of this kind is full of promise and is to be commended from every point of view; it is a step in the right direction, conducive alike to the mental and moral betterment of those engaged therein.

TELEGRAPH AGE tenders its hearty congratulations over this project and extends good wishes for its abundant success. And the telegraph company, under whose countenance the movement has had its beginning, is also to be congratulated for the practical encouragement it has extended to those in its employ who seek self-improvement. It is an example following that first established by Mr. E. J. Nally at Chicago, and it is one that may well be emulated elsewhere.

Governing Preferment.

In the telegraph profession, as in all others, proficiency and willingness are the elements in individual character that count. Telegraph operators showing a disposition to acquire a mastery of their business, are the ones who are going to get ahead. Those who are content, simply, with the limited knowledge, that practically restricts their usefulness to but the sending and receiving of a message, are those who are going to remain behind in the race. This fact, based on the fundamental law of ethics, deep and firm as bed rock, should be patent to every individual of even average intelligence, yet many will but glance carelessly over this article, indifferent to the lesson it seeks to inculcate, or pass it by altogether with a sniff of disapproval. And these very men are usually those who, unwilling to take the trouble necessary for self-education in the line of their business, are apt to be the loudest in adverse criticism of the system which, as they allege, keeps them back and down, thus permitting "favoritism," as it is sometimes called, to manifest itself in the selection of others for promotion, often over the heads of older and less fortunate employees.

The general subject upon which we are now writing, and regarding which we have had of late considerable to say, is one of momentous import. It goes deep down into the life of every operator and should appeal to the best instincts of man-

hood, for, apart from its reflex moral aspect, on its material side it involves the vital question affecting self preservation. And self preservation, as we all know, is the first law of nature.

Now, the telegraph business with its constant expansion and wide ramifications, offers an attractive field of employment. A superficial knowledge of telegraphing is not difficult to acquire; and to the young and inexperienced the pay of a beginner seems large and many are attracted to the key thereby. But a good operator must be made out of good stuff. He should know his business in every shade of its requirements. The routine work—the sending and receiving of messages, merely—does not necessarily constitute all the requisites demanded in a competent operator; and the pay, which at first, easily earned, seemed abundant, to the unprogressive man of maturer years, fails to measure up to his needs, and disappointment and dissatisfaction in consequence frequently fill his mind.

Yet the telegraph service holds out manifold inducements to bright, intelligent and forceful men. It has constant need of capable men to fill the positions higher up, positions that in the inevitable changes incident to such vast organizations as those of the telegraph, are constantly offering. These places, of course, require the services of men qualified by special training and broad intelligence, and the logical source of supply is from within the ranks of the operators themselves.

It is a lamentable fact, however, that these higher offices are as a rule hard to fill. It seems strange that this should be so, yet it is true. We are informed by high executive officers of both of the telegraph companies, who have themselves came up to their present positions through the various grades from that of messenger boy, and who are familiar with every department of the service, and very largely with the personnel itself, that the difficulties of finding the right men for the higher places within the gift of their respective companies is frequently exceedingly embarrassing. This is a severe arraignment and one that it should not be possible truthfully to make.

The remedy lies within the power of the operators themselves. It calls for a closer study of the technical side of telegraphy. The day has gone by for the promotion of mediocre men, and the quicker this fact is recognized the better it will be for the great operating forces of the telegraph, among whom there are vast numbers of men today, bright and naturally competent, who, if they would but apply themselves, would find the path to future preferment opening gradually before them in unexpected and gratifying measure.

It should not be forgotten that those in control of the telegraphs have risen from the lower to the higher places. It has not been accident that has placed them there. It has been accomplished by hard work, faithfully performed. They have mastered their subjects. This is what others should do if they, too, would share a like reward.

Indifferentism.

EDITOR TELEGRAPH AGE:

Referring to your editorial in the issue of September 1, I would like to make a few comments thereon. You say scarcely an American operator has ever attempted to master the operation of the siphon recorder. How can they master it, when they never have an opportunity to even look at one? If you mean that scarcely an American operator has learned to read the tape as it comes from a siphon recorder, the same question applies. I should think it would take long practice to be able to transcribe messages from the tape to type-written copy and do not see how any operator is to become proficient in reading tape unless he quits work and goes into a cable office to learn the business. How many operators can afford to resign their positions and enter a cable office as students with little or no salary? There may be isolated cases where operators have the opportunity to learn the cable business, but the vast majority never were in a cable office.

In reference to wire chiefs: The telegraph companies are as much to blame as the operators because there is not more available material for these positions. If there is any class of men who deserve good pay, it is the wire chiefs. They have nothing but grief, and their work should be done with intelligence. There is, however, little incentive to become a wire chief, when operators working at a wire can make as much money, and by working extra, many operators make much more than any chief or even managers.

Yours very truly,

A CHIEF OPERATOR.

[Our correspondent appears to have missed the point we desired to make, and thought we had made clear in the editorial on "indifferentism" which he quotes. The reference to the advisability of mastering the use of the siphon recorder, the instrument that is used on all Atlantic cables, the operation of which is confined almost exclusively to foreign telegraphers, was cited simply as an illustration of the indifferentism too frequently shown by the operator in not taking advantage of the opportunities afforded him. Obviously, it was not to be expected that an operator so situated as to be deprived of the opportunity to inspect even, much less to acquire a knowledge of the working of the siphon recorder, should be deemed at fault: our remarks applied exactly as stated: "While American operators are employed to some extent by the cable companies, but few of them have seen fit to study the operation of the recorder."

As a rule any operator, wherever situated, can increase in some degree, according to the opportunities of his environment, his practical knowledge of telegraphy if he has the disposition to do so. It rests with the individual wholly whether he shall remain an ill informed or a well informed man. If the former, the chances are altogether in his favor that his stock of information, if of a practical nature, will be the propelling force that

will start him along the upward march of advancement.—Editor.]

Cable Rules in War Time.

The action of the Venezuelans in cutting telegraphic cables as a war measure has raised again the question, which was also discussed during our Spanish war, of the lawful status of such means of communication in time of war. It is obviously a new question, with which the old authorities on international law did not deal, since cables are themselves of comparatively recent date. In fact, our Spanish war, says the New York Tribune, was the first serious conflict in which that question was raised, former wars since the invention of cables having been either inland or in places where cable communication was of little importance.

This subject was opportunely taken up by the Institute of International Law at Brussels last month, and was discussed in detail by expert jurists. There was much variety of opinion upon it and the debates were protracted and animated. Finally, however, a code of five rules was adopted, substantially to this effect: (1) A submarine cable between two neutral territories is inviolable; (2) a cable uniting belligerent territories may be cut anywhere excepting where it may pass through neutral waters; (3) a cable between a neutral and a belligerent must not be cut in the neutral waters, nor on the high seas save in case of an effective blockade, and then subject to an obligation to re-establish the connection at the end of the war; but it may be cut anywhere in the waters of the belligerent; (4) a neutral must not use a cable or permit it to be used for the purpose of aiding a belligerent, and (5) in the application of these rules no distinction is to be made between cables owned by governments and those owned by individuals or between those owned by neutrals and those owned by belligerents.

These rules, adopted by the institute, are as yet of only academic authority. They indicate, however, the trend of thought upon a matter of great and increasing importance, and may serve as the basis of international action which will give them, or some such rules, the effect of law. To whatever extent civilization may or may not get forward upon a powder cart, that vehicle is required to adapt itself to the load it carries. The resources of civilization are used as weapons of warfare, but civilization decrees how they shall be used.

The Cable.

The French cable connecting with Venezuela has been cut by the authorities of that country, and the operating force at Carapano, has been arrested. These outrages have grown out of the rebellious conditions of Venezuela.

Mr. C. Lee, manager of the Direct Cable Company, New York, has resumed duty after a three months' vacation, spent in Europe.

Mr. J. E. Dicketts, for some years connected

with the Direct Cable Company, at Halifax, N. S., has been appointed chief operator at the Fanning island station of the all-British Pacific cable, now being laid.

The cable steamer *Colonia*, which sailed from Bamfield Creek, on the west coast of Vancouver Island, the terminus of the Pacific cable, at half-past two o'clock in the afternoon of September 18, arrived at Fanning Island at eleven o'clock on the morning of October 6, and buoyed the cable end one mile off shore. The total distance covered proved to be 3,455 miles, about eighty-five miles shorter than was estimated. The *Anglia* will lay the remaining mile of cable with its heavy shore end on her arrival and will complete the last section from Fanning Island to Suva, in the Fiji Islands. It is understood the *Colonia* has established a record in cable laying, having made an average of eight miles an hour and completed the entire journey in seventeen days and twenty-one and one-half hours, several days less than was expected.

A dispatch from St. Thomas, Danish West Indies, says that repairs to the St. Lucia-Grenada cable were completed Oct. 11. The cable was lifted from about 2,000 fathoms of water, and, owing to the fact that it was buried in volcanic mud, the strain was very great. The cable used in the repair work is valued at between \$25,000 and \$30,000.

The Lord Mayor of London, Sir Marcus Samuel, has donated \$3,750 from the Mansion House Relief Fund to aid the families of the crew of the cable repair steamer *Grappler*, which was lost with all on board last May as a result of the eruption of Mont Pelee.

Annual Meeting of the G. N. W. Telegraph Company.

The Great North Western Telegraph Company held its annual meeting at Toronto, Ont., on September 25, at which directors and officials were elected as follows: H. P. Dwight, president and general manager; Adam Brown, vice-president; H. N. Baird, Col. R. C. Clowry, Richard Fuller, James Hedley, A. S. Irving, W. C. Matthews, Hon. William McDougall, directors; Geo. D. Perry, secretary-treasurer and superintendent of supplies; A. C. McConnell, auditor.

Organization.

The Brotherhood of Commercial Telegraphers will institute an open local division in Chicago, Ill. within the next few days.

At Omaha, Neb., September 20, the commercial telegraphers organized a local division of the International Union of Commercial Telegraphers, and elected officers. The organization has been effected on the lines of the International Typographical union.

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

Low Resistance Relays.

BY FRANCIS W. JONES.

[The recent article by Mr. F. W. Jones, the well-known electrical engineer of the Postal Telegraph-Cable Company, New York, on "Low Resistance Relays," to which Mr. R. J. Hewitt, of St. Louis, as well as another, made reply in the October 1 number of this paper, is, as will be observed, supplemented by a further reference to the subject in this issue by Mr. Jones. As an additional contribution to the subject, of renewed interest in this connection, we reprint herewith an article, one of two, written by Mr. Hewitt and published in TELEGRAPH AGE as long ago as on August 1, 1898. The other, which appeared on August 16, 1898, will be published on November 1.—Editor.]

Mr. R. J. Hewitt, who is a pioneer in the field as an improver of instrumentation on telegraph circuits, states in TELEGRAPH AGE of October 1st, that I did not give any definite reason for the adoption of the 75 ohm relays in Postal Telegraph-Cable Company's service. I think a careful reading of my statement referred to by Mr. Hewitt, will show that it was done to prevent confusion which would arise by the attempted use of relays of a great variety of resistances on the wires of the Postal company. I stated plainly that the adoption of the 150 ohm and 75 ohm standards had nothing to do with their being the best adapted to develop the greatest magnetic pull from a given current.

So far as electro magnetic effect in the relays is concerned the maximum from a given battery is secured, other things being equal, when the added resistance of all the relays in a circuit equals the resistance in all the rest of the circuit. It is found, however, that in a circuit containing many 150 ohm relays that the inductance of the electro magnets greatly retards the signals. This inductance is reduced by a decrease of the number of convolutions and by a slotting and shortening of the cores. Therefore the Postal company adopted a seventy-five ohm relay upon circuits where signals were unduly retarded by the inductance of many relays. There are no doubt some circuits having a low resistance line wire and an unusually large number of relays where the use of the 150 ohm relays connected in multiple (giving $37\frac{1}{2}$ ohms each) would give better working electro magnetic margin than relays of higher resistance, and on all such circuits the Postal Company has the opportunity of so connecting its 150 ohm relays, according to patent No. 106,418 of W. W. Smith, Cincinnati, August 16, 1870.

As a rough illustration suppose line wire resistance = 3,000 ohms, a 150 ohm relay has 1,456 feet of No. 30 wire, a 75 ohm relay = 1,092 feet of about No. 28 wire, a $37\frac{1}{2}$ ohm relay = 728 feet of double No. 30 wire (or single No. 27 wire), and the battery used has 200 volts, and 20 relays are included in the circuit.

A line wire of 3,000 ohms with 20 relays of 150 ohms each will = 6,000 ohms and have a working current of .0333 ampere; with 20 relays of 75 ohms each .0444 ampere, and with 20 relays of $37\frac{1}{2}$ ohms each .0533 ampere.

The ampere feet of wire around the magnets in each case with the same battery and line wire will be in the 150 ohm relays 48.48, in the 75 ohm relays 48.48, and in the $37\frac{1}{2}$ ohm relays 38.80.

A line wire of 1,500 ohms having 20 relays 150 ohms each will = 4,500 ohms and working current = .0444 ampere; and with 75 ohm relays will = 3,000 ohms; and working current = .0666 ampere, and with $37\frac{1}{2}$ ohm relays will = 2,250 ohms and a working current of .0888 ampere. The 150 ohm relays will have 64.64 ampere feet of wire; the 75 ohm relays 72.72 ampere feet of wire, and the $37\frac{1}{2}$ ohm relay 64.64 feet of wire.

The inductance is lowest in the $37\frac{1}{2}$ ohm relays but is quite low enough in the 75 ohm relays adopted by the Postal Company for all way-circuits at present equipped with them.

In the case of the 3,000 ohm line circuit, the electro-magnetic effect would be the same with the 150 ohm and 75 ohm relays but about 20 per cent. less in the $37\frac{1}{2}$ ohm relay.

With a 1,500 ohm line wire the electro-magnetic effect is the same with the 150 ohm and $37\frac{1}{2}$ ohm relays but about 11 per cent. greater in the 75 ohm relay.

ON THE REDUCTION OF RELAY RESISTANCE AND THE LAWS GOVERNING THE CASE.

BY R. J. HEWITT, OF ST. LOUIS.

In the several articles on the subject of reducing relay resistance, which have appeared from time to time in TELEGRAPH AGE, during the past two years, the law pertaining to maximum magnetic force has been brought to an issue. The practical demonstrations of the committee of the Association of Railway Telegraph Superintendents on Low Resistance Relay Experiments have shown quite conclusively that the law is not correct. Aside from this there is another proof. This proof is disclosed when we compare this law with another law pertaining to maximum insulation resistance. The law pertaining to maximum magnetic force is as follows: "With a given resistance of conducting wire and battery the maximum magnetic force is developed when the total resistance of the coils of all the electro-magnets is equal to the other parts of the circuit."

The law pertaining to maximum insulation is as follows: "The practical working value of a telegraph line is the margin between the joint resistance of conductor and insulation, and that of the insulation alone." Obviously from this law we should make the resistance of the line and instruments as low as possible and the resistance of the insulation as high as possible, so as to leave a wide margin between them. The law pertaining to maximum magnetic force says we must make the total relay resistance equal to the line resistance, which obviously gives the joint resistance of the line and insulators a maximum value, and

leaves the working margin a maximum. The first law is therefore in direct conflict with the second.

Aside from all this there is another fact which has been overlooked, and this is that this so-called law pertaining to maximum magnetic force does not appear in the last edition of "Pope's Modern Practice." The second law, however, remains, and has been restated, and is as follows: "The working efficiency of a telegraph circuit is determined by the ratio between the resistance of the conductor and the resistance of the insulation." This means to keep the resistance of the line and instruments as low as possible, and the insulation resistance as high as possible.

This we can do in two ways; by increasing the resistance of the insulators, or by reducing the resistance of the line and instruments. As the insulation resistance in any given case is practically beyond control in wet weather, we can not follow the first method except by cleaning or renewing the insulators. Under the second method, the line resistance being practically constant for a given case, the instrument resistance is the only thing we can change, and this is readily done by connecting the relay coils in multiple, or by rewinding in series to any suitable lower resistance.

To prove the matter, take any one of the six cases reported by the committee in their report at the June meeting, 1897. As No. 6 was the worst case we will take it for analysis. The following is the data of this wire taken from the table of the committee's report:

No. 6.	Before.	After.
Line resistance.....	3.451	3.451
Instrument resistance.....	5.627	1.406
Total resistance.....	9.078	4.857

One hundred and sixty miles, thirty-six offices.

While this case has the heaviest overload of relays, its resistance per mile of line is lower than any of the other five, its line resistance being twenty-one ohms per mile, while the other five vary from twenty-eight to fifty-one ohms per mile.

With the 150-ohm relay equipment the total resistance of the line was 9.078 ohms, and the normal current thirty milliamperes. Assuming that the number of turns is 8,640, the total magnetizing force will be 259 ampere turns, and the voltage necessary to maintain thirty milliamperes through the circuit will be by ohms law, $V = C \times R = .030 \times 9,078 = 272$ volts. This data is tabulated in table No. 2 herewith.

No. 6.	Resist- ance.	Cur- rent.	Turns.	A. T.	Volts.
150 ohm relays.	9.078	.030	8,640	259	272
37.5 ohm relays.	4.857	.060	4,320*	259	291

The multiple connection of the relay coils reduces its resistance to one-fourth, and doubles its carrying capacity. The two coils being in multiple are able to carry twice the current they carried when connected in series. This is precisely what we want in order to get the same magnetiz-

ing force that we had with the series connection. Taking the average current for a series-connected relay circuit as thirty milliamperes, and the average number of turns as 8,640, gives a magnetizing force of 259 ampere turns. Obviously as the multiple connected relay has the same magnetic dimensions as before, it should have the same magnetizing force, or 259 ampere turns. As the multiple-connected relay is composed of two coils in multiple, each coil has only one-half the total number of turns, or 4,320. As each coil may carry a current of thirty milliamperes, each will have one-half the magnetizing force, or $4,320 \times .030 = 129.6$ ampere turns; and as the two coils are connected in multiple, the total magnetizing force acting on both cores is $129.6 + 129.6 = 259.2$ ampere turns, which is the same as we had with the series-connected relay. So we see that in order to get the same magnetizing force we must have double the current, or sixty milliamperes—that is, thirty milliamperes for each coil.

To ascertain approximately the voltage necessary to maintain sixty milliamperes in such a circuit we apply ohms law, $V = C R$. The total resistance of the circuit, with the multiple-connected relays (omitting the resistance of the battery itself), is 4.857 and the voltage required is $V = 4,857 \times .060 = 291$ volts. This data is shown in the second line in table No. 2.

Multiple-connected relays have, therefore, reduced the resistance of the relay load to one-fourth, doubled the carrying capacity of the relays, and with slightly more voltage gives the same magnetizing force as the series-connected relay circuit.

The total instrument resistance is 1.406 ohms. According to the law for maximum magnetic force, the resistance should be equal to the line, or 4.857 ohms. Our reduced relay resistance 1.406 ohms is only a little more than one-fourth of what the old law allowed, and still we have the same magnetizing force as before.

Of course, the battery is now called on for double duty; it must supply each wire with sixty milliamperes of current instead of thirty, as with the series-connected relay circuits. Only about half the usual number of wires can be supplied from a given battery. The battery expense, both for installation and maintenance, is approximately doubled.

The total resistance of the circuit has been reduced from 9.098 ohms to 4.857, that is 4,221 ohms, or nearly one-half, have been removed from the circuit without impairing the magnetizing force. Obviously this will increase the working efficiency of the line in working over the heaviest escapes.

"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.

* Two coils in multiple.

Annual Meeting of the Western Union.

At the annual meeting of the Western Union Telegraph Company, for the year ended June 30, 1902, held in New York, October 8, the Board of Directors was re-elected with the exception of Stuyvesant Fish, who resigned, and whose place was filled by the election of John J. Mitchell of Chicago. Howard Gould was elected to fill the vacancy created by the death of E. H. Perkins.

The meeting was exceptionally interesting, inasmuch as it was the first held since the advent of the present administration. President R. C. Clowry made his report, showing an entire reorganization of the service of the company in the eastern and southern divisions since he took charge in April.

By rearrangement of the operating force and through the substitution of direct working circuits for repeating or relay offices, a reduction of \$388,746 a year in operating expenses has been effected and the service greatly improved. A total of 57,218 miles of wire has been added to the system during the year; 2,526 miles of poles, and 329 offices. The average tolls for the messages transmitted by the company were 31 cents, and the average cost was 25.7 cents. There was expended for construction during the year \$2,188,101.03.

The business of the year is shown in the following table:

	Year ending June 30, 1901.	Year ending June 30, 1902.	Increase.
Revenues.....	\$26,354,150.85	\$28,073,095.10	\$1,718,944.25
Expenses, see statem't below	19,668,902.68	20,780,766.21	1,111,863.53
Net revenue.....	\$6,685,248.17	\$7,292,328.89	\$607,080.72
Interest on bonds.....	956,160.00	992,580.35	36,420.35
Profits.....	\$5,729,088.17	\$6,299,748.54	\$570,660.37
Appropriated for dividends...	4,868,007.50	4,868,031.25	23.75
Surplus.....	\$861,080.67	\$1,431,717.29	\$570,636.62
Surplus July 1st, 1901.....		\$6,319,285.53	
Carried to surplus as above.....		1,431,717.29	
Surplus June 30th, 1902.....		\$10,751,002.82	

Statement of expenses for the year:

Operating and general expenses.....	\$14,727,406.92
Rentals of leased lines.....	1,598,534.40
Maintenance and reconstruction of lines.....	3,591,065.17
Taxes.....	575,331.84
Equipment of offices and wires.....	318,427.88
Total expenses as above.....	\$20,780,766.21

Since President Clowry's accession in April contracts have been closed with railroad companies covering over 16,800 miles.

The number of messages transmitted by the company was 69,374,883, being 3,717,834 more than for the previous year. These figures do not include the messages sent by brokers, press associations and others over the wires leased from the company, nor the messages of railroad companies that are sent between local stations.

T. M. B. ASSOCIATION:—Assessment No. 399 has been levied by the Telegraphers' Mutual Benefit Association to meet the claims arising from the deaths of George T. Pyron at Walden, Ga.; William G. Robertson at St. John, N. B.; William Carley, at Philadelphia, Pa.; Charles H. Sawyer, at Boston, Mass.; Anthony Young, at New York, and Lee Morgan, at Blackstone, Va.

New Western Union Chief Operator at Boston.

Mr. J. J. Welch, the chief operator at Boston, Mass., of the Western Union Telegraph Company, who was called to the Eastern city from Chicago in June last, is still a young man, having been born in 1871, at Pella, Ia. He began his telegraphic career in his native place at the early age of fourteen years, becoming a night operator for the Rock Island road, a position, which jointly with that of station agent, he held for several years. From Pella he went to Davenport, Ia., in the employ of the Western Union, serving



J. J. WELCH,

Lately Appointed Chief Operator of the Western Union Telegraph Company, at Boston, Mass.

under Manager M. W. Hamblin, now manager of the main office in New York. He subsequently became manager of the Western Union office at Rock Island, Ill., and chief operator at Des Moines, later doing stenographic work for different lines of railroad, serving as cashier for an export lumber company and then spending several years in the employ of the Western Union at Chicago, afterward being associated with the Illinois Trust and Savings Bank in that city, a position he relinquished to go to Boston.

The Philippine Telegraph System.

The War Department has arranged for the transfer of the telegraph system of the Philippines from the military to the civil authorities. First Lieutenant Charles S. Wallace of the Signal Corps has been detailed to organize a civil telegraph bureau there. This change will, it is said, be of mutual advantage to both the army and the civil authorities in the islands. It is in line with the policy of the War Department for a gradual and complete transfer of affairs to the civil authorities.

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.]

CLEVELAND, O., POSTAL.

Monday evening, September 22nd, the employees of the Postal Company met in the superintendent's office and organized "The Postal Telegraph Literary Association," the object being not only merely to have "literary" but to meet twice each month for lectures, discussions and amusements. The meeting room is on the same floor with the operating rooms and adjoining the superintendent's office.

Mr. E. W. Collins presided as temporary chairman and before adjourning the association prepared and adopted its by laws, elected a board of trustees, officers and two standing committees. Fifty-one members were enrolled and as many books given. The library has also been loaned two hundred selected books from the City Public Library. Other similar libraries in the city are controlled by the Lake Shore Railway, the Sherwin-Williams Company and The Cleveland Twist Drill Company.

The following named were elected officers: A. A. Briggs, president; B. J. Ross, vice-president; E. W. Carman, secretary; B. D. Seymour, treasurer, and R. S. Ingle, librarian.

Committee on books: C. S. Rindfleisch, G. W. Mitchell and B. J. Ross.

Committee on rules: A. R. McGrath, M. E. Aspell and G. L. Rawdon.

INDIANAPOLIS IND., WESTERN UNION.

Indianapolis was the important point of President Roosevelt's recent Western trip. The special train arrived at this city about noon with thirty reporters on board representing most every prominent newspaper in the United States. The sudden change of the President's programme, the cancellation of his further journey, due to the injury he received at Pittsfield, Mass., and which necessitated the performing of an operation at this point, made business lively for the reporters. The special left in the evening for Washington.

The newspaper men unable to prepare their specials in time to file at Indianapolis made it necessary to send with the train a sufficient force of operators to handle the business, at whatever point it was dispatched. The Western Union interest was in charge of Mr. E. P. Griffith, inspector of New York, and associated with him were the assistant manager of the Indianapolis office, Joseph Harter, and Operators H. A. Godfrey, P. J. Barrett, and M. Finan. At Richmond, Ind., some twenty thousand words were disposed of; at Bradford-Junction, O., quite a number of messages and several three or four thousand word specials, were sent. Columbus, O., also received quite a bunch. The reporters complimented Mr. Griffith very highly for the excellent service he gave them on the trip, and also the Indianapolis management for the superior facilities furnished them, for such a rush as was wholly unexpected.

Fred Kurz and P. J. Barrett were detailed on September 23 to Noblesville, Ind., to take care of the heavy file of specials incident to President Roosevelt's speech delivered at that place before reaching this city.

The Chicago "American" representative on board the Presidential special was Mr. J. A. Boyle, who is an ex-telegrapher.

INDIANAPOLIS, IND., POSTAL.

The sudden change in President Roosevelt's tour, coming to a stop at this point, boomed telegraph business in this city for a short time. With the Presidential party were Mr. J. P. Gooch, night manager of the Washington, D. C. office, who distinguished himself as being equal to the emergency. He was assisted by Manager F. W. Samuels, who accompanied the special to Richmond, Ind., taking with him two additional operators to assure the prompt movement of the heavy file they received at that point.

We could stand a monthly hustle of this kind, so as to get out of the old rut.

Business is very heavy, there seemingly being no dull summer times.

BOSTON, MASS.

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

CLEVELAND, O., WESTERN UNION.

Mr. Chas. W. Douglas, who for many years has been chief clerk in the district superintendent's office of the Western Union Telegraph Company, Cleveland, O., has resigned the same to take effect November 1, to enable him to give his personal attention to manufacturing interests at Troy, O., with which he has recently become identified. While this change seems radical it is the fulfillment of a long contemplated purpose. Mr. Douglass is an old timer in the full sense of

the word, his career extending over a period of forty-two years, and in his retirement he takes with him the good wishes of a host of friends won by his genial personality and faithful service. He entered the service in 1860 as manager of the Waterloo, N. Y., office of the New York, Albany and Buffalo Telegraph Company under superintendency of the late J. D. Reid. Later he was transferred to Cayuga, N. Y., as manager and operator. In 1865 he accepted a position in the Western Union office at Cleveland as operator, under Superintendent E. P. Wright; in 1866 he was appointed superintendent's clerk and served in the capacity of chief clerk continuously to the present time, since 1892 under Superintendent C. Corbett.

No one has yet been appointed to fill the vacancy, but H. D. Jones, who has served in various capacities in the superintendent's office under both Mr. Wright and Mr. Corbett, seems to be the logical successor.

MINNEAPOLIS, MINN., NORTH AMERICAN TELEGRAPH COMPANY.

D. G. McIntosh, manager, and wife have recently returned from visiting points of interest in Colorado, Utah and on the Pacific Coast.

T. V. Coleman and R. L. Nichols, who have been working the Chicago local, have been attracted to the other end of the quad and now make the Lake City their home.

M. F. Stehle, a former employee and of recent years with The Associated Press, has accepted a position in the main office.

J. C. Lauber, day chief, passed the most of his vacation in Kansas on a farm during the latter part of August.

"Pete" Reiter, our all night chief, has been on a vacation in Wisconsin.

MONTREAL, QUE., GREAT NORTH WESTERN.

Arrivals: Miss M. Patterson; Miss K. Beck, Mr. J. W. Ross, Mr. David Barclay, Mr. Wm. Storey.

Resigned: Miss Peeples, Messrs. Gilbert, Marcotte and Robert Kane.

On vacation: Thomas Dewitt of the "Star" office, and Leslie Hall.

Fred Jacobson is a new checker.

Returned from vacations: Charles Noble, night manager; Miss A. Coyle and chief operator W. Graham.

Two new quad sets and one new duplex have been erected. The new wire between Montreal and Quebec via south shore works well.

James Clendenning, night chief operator, Canadian Pacific Railroad, Toronto, was a recent visitor.

LIMA, O., NOTES.

Mr. S. B. Kauffman has been appointed manager of the telegraph department, Buckeye Pipe Line Company, at this point, to fill the vacancy caused by the death of E. E. Linn; Mr. H. C. Seebers succeeds Mr. Kauffman as assistant manager and chief operator, and Mr. Glenn S. Rohn, late

with the Western Union, has been added to the regular force.

Mr. A. E. Whitaker, late of New York, is working a leased wire at the "Gazette" office.
CHICAGO, ILL., WESTERN UNION.

Frank Donaldson has returned from a short vacation, which was spent at his home in Indiana.

James Cummins left for a short sojourn in Canada.

Division Chief A. J. McGrath, has some really beautiful photographic views of the St. Mary river, obtained while on a short trip through the lakes.

Messrs. George Downie and J. A. Heffman, genial of nature, who recently came here from St. Paul, have made many friends. Both are ardent admirers of TELEGRAPH AGE, and Mr. Downie has graced the roll with a years' subscription. Mr. Heffernan has lately accepted a position with the Weare Commission Company, of Burlington, Ia.

Miss Dot McCracken, who has just returned from several months' absence, during which time she has been employed by the Illinois Steel Company, has taken up her old wire, the Cedar Rapids local.

Miss Lizzie Heppie, formerly at Chicago, was a recent visitor here.

Through some oversight a mention has not been made of the safe return of Messrs. R. S. Gill, W. F. Otto and M. J. Mahon, who served with honor in the signal corps three years in the Philippines.

Mrs. Pierce has returned from a trip to New York, looking much refreshed. Her place was filled by J. A. Bird of the night force.

Arthur Galey, who has been ill with typhoid fever is convalescent.

October 7th, at 8 A. M. the day force were greeted by a pile of eight thousand messages, filed during the night by a Chicago daily, destined to the rural districts within a radius of 500 miles. For a few hours every wire was piled to the groaning point, every available day and extra man was brought into use and the way that business disappeared was wonderful. It was neatly handled by Chiefs Whitcomb, Finley and Richardson.

Jones' Pocket Diagrams are having a wonderful sale in Chicago, and it is beginning to be recognized that the book is the only work ever published that meets all the requirements of a beginner as well as the experienced wire man. Don't fail to order one.

Manager F. C. Rowley of Elkhart, Ind., is a new subscriber to TELEGRAPH AGE, the value of which to telegraphers he fully recognizes.
PHILADELPHIA, PA., WESTERN UNION.

J. A. Hiestand, who has been with Swift & Co. for the past year, resigned that position and is with us once again.

Frank DeSilva of a branch office was suddenly taken ill recently and Mr. J. Campbell of this office has been assigned to the position.

Recent resignations: J. E. Shivers, George Brackman, T. E. Ryan and J. H. Daily; E. J. Mullen to locate with the Western Union at Pittsburg, Pa.

Miss Ada Hussey has returned to duty after a beneficial vacation of two weeks.

An independent Western Union office has been opened at Shippensburg, Pa., with Mr. M. L. Wolf in charge.

C. B. Wood is absent for a week combining business with pleasure at Portland, Me.

G. O. Gregg and J. M. Smith, both veterans of the Civil War, attended the reunion held at Washington, D. C. recently where they fraternized with "Rebs" as well as "Yanks".

W. J. McIntyre is a late arrival.

George Jack, who spent the summer at Atlantic City, N. J., for the company is back again.

Miss Annie Heileman, who did such good work for the Ticker Company at Atlantic City for the past year, has also returned to duty here.

NEW YORK CITY.

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

WESTERN UNION.

Mr. Charles L. Chase, chief operator of the Commercial News Department, is absent on his annual vacation.

Mr. W. J. Brown, assistant to Superintendent Dunham, of the Western Union Cable Station, at Canso, N. S., who has been in New York for the past two weeks, has returned to his Nova Scotia home.

Mr. E. B. Newbury, of Springfield, Mo., has been added to the force of Mr. C. H. Murphy, manager of the time service.

Moses Ritter, who has been confined to his home since August 13 last, due to injuries caused by the falling of a scaffold as he was stepping off a Pennsylvania Railroad ferry boat at Jersey City, will, it is expected, resume duty in a day or so.

Chief operators J. R. Heidemark, G. F. Stainton, M. L. Harner, H. S. Pearce, H. Van Antwerp, T. H. Muddell and R. Morton have all returned from their vacations.

H. H. Henry, an old timer, who has for the past

ten years been holding a professional position in Pennsylvania, has accepted a position here.

Mr. Walter C. Burton has again been nominated as a candidate for Senator in the Sixth Senatorial District, Brooklyn. Two years ago he ran, and although opposed to the dominant political party came near to being elected, running far ahead of his ticket.

P. H. Ferriter, known for some time as one of the most rapid and skillful operators in this office, died at Northampton, Mass., on Oct. 3, of quick consumption.

J. H. Marsden has been appointed traffic chief of the Jerseys, vice E. E. Brannin transferred to the Southern switch.

J. F. Olmstead has been on the sick list for two weeks.

S. J. Collins, who has been in the hospital undergoing a severe surgical operation, has resumed work.

Henry W. Pope, general manager of the Bell Telephone Company, Buffalo, N. Y., was a recent visitor.

"Senator" W. L. Ives has been elected a delegate to represent the Tenth election district at the Eighth district senatorial convention. He has also been requested to contribute his services as a speaker in Brooklyn during the campaign.

S. C. Rice, wire chief at Albany, N. Y., was a recent visitor.

Harry A. Du Souchet, the author of the well known comedy, "My Friend from India," has, after a few years absence, returned to work as an operator.

The quadruplex department heretofore located on the seventh floor is being removed to the eighth floor where it will occupy the space previously given up to the city department. The city lines will be removed to the seventh floor.

The new Stock Exchange building is nearing completion, and to form an idea of the work necessary to equip the structure with telegraph lines, it is only necessary to state that between three and four thousand telegraph wires will have to be run into the new building to accommodate the needs of the stock brokers.

A new terminal room is being equipped in the basement of this building. Ten thousand wire splices will have to be made in the completion of the work.

POSTAL.

W. C. Morris has been assigned to the leased wire switchboard.

V. C. Poe left Oct. 15th on an indefinite leave of absence for the West, where he goes for the benefit of his health.

Mrs. Eckman, of the Norfolk wire, is back again after spending the summer in a broker's office at Saratoga.

J. B. Roleson, formerly of this office and more recently in the Government telegraph service at Governor's Island, New York harbor, has returned to duty here after a six weeks' pleasure tour of the West and Northwest.

Chief W. E. Todd has been absent for several weeks engaged in installing quad sets in the larger Pennsylvania Railroad offices.

Traffic Chief John B. Rex, who has been absent on a two weeks' vacation; M. J. O'Donnell, after a vacation of a month in the South and Southwest, and chief S. A. Coleman, are all back again.

W. J. Evans of the Buffalo bonus wire resigned Oct. 1st to resume his medical studies. Mr. C. F. West takes his place.

NEW ORLEANS, LA., WESTERN UNION.

The latest arrivals are as follows: F. H. Bell, Matt. Flippen, J. A. Galbreath, Jr., H. Hermann, J. W. McNamara, G. W. Maynard, R. E. Olliphant, R. G. Pearce, E. J. Ryan, C. N. White, J. W. Kemp, P. A. McGriff, C. A. Posey, A. F. Waitz and B. B. Wescott.

Departures: P. Harper, U. Mauberett and G. C. Herdberg.

Mr. and Mrs. W. D. West have gone to California for a stay of several months. Mr. West's health has been very poor for some time and it is thought that the change will be beneficial. If best wishes will help to accomplish the result he certainly has them.

Mr. Frank Ross, formerly chief operator of the Western Union at Memphis, Tenn., has been appointed chief operator here as already noted. Mr. Ross has taken hold of the reins in a manner which indicates that he is not going to stop till he has the office up to the highest standard. There will probably be many changes, all for the benefit of the service.

The Magnetic Club Dinner.

The Magnetic Club's Entertainment Committee is making arrangements for the club's annual dinner at which the delegates attending the annual meeting of the Telegraphers' Mutual Benefit Association are to be entertained on Wednesday evening November 10th, next. The place in which the dinner is to be held will be announced later. Every effort will be made to make it a most enjoyable affair to all who can find it convenient to attend. It is confidently expected that Col. Robert C. Clowry, president of the Western Union Telegraph Company, as well as the recent additions to his official staff in New York, will grace the occasion by their presence and afford the members the pleasure of a renewal of old, or a forming of new, acquaintances with them. An attractive programme will be furnished.

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.

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

The First Sound-Reading Operator.

EDITOR TELEGRAPH AGE:

Recently I saw a claim advanced by some one of being the first person to read the telegraph ticks by sound. He is mistaken. The first reader by sound was a young boy of Ithaca, N. Y., named Spencer. I forget his first name although I had some acquaintance with him. He died many years ago in New York city. I have been trying to refresh my memory as to the details of this first reading by sound. I am now strongly impressed it was with Professor Morse, and not Ezra Cornell, that young Spencer traveled and illustrated reading by sound. Members of the Morse family would certainly remember the circumstances if I am correct. If it was with Cornell, his family would remember. L. G. Tillotson of Ithaca, N. Y., former superintendent of telegraph of the New York and Erie Railroad, introduced Spencer to me in 1852 or 1853, and told me of the lectures and exhibitions of "sound reading," and that Spencer was only twelve or fourteen years old—I forget which, but twelve I believe—when he was giving these exhibitions. He appeared when introduced to me to be twenty or twenty-two years of age. Professor Morse had an instrument placed at each end of the hall in which he gave exhibitions, the two being connected by wire. Two committees would be appointed by the audience, one to stand by Professor Morse and witness his sending a message written by them, the other standing by the boy to read the message as he received it by sound and wrote it down, and compare it with the original. Although the wire and apparatus were in full view, many refused to believe the message came over the wire. There must still be many living cognizant of these facts.

De Wilmot Smith.

Breckenridge, Minn., September 24.

Recent Telegraph Patents.

A patent, No. 710,335, has been granted to William Palmer, Jr., of Rincon, N. M., for a selective call for telegraph or telephone lines.

A patent, No. 710,348, has been issued to W. H. M. Weaver, of Macon, Ga., for an electrical system of recording and checking as applied to railway signaling.

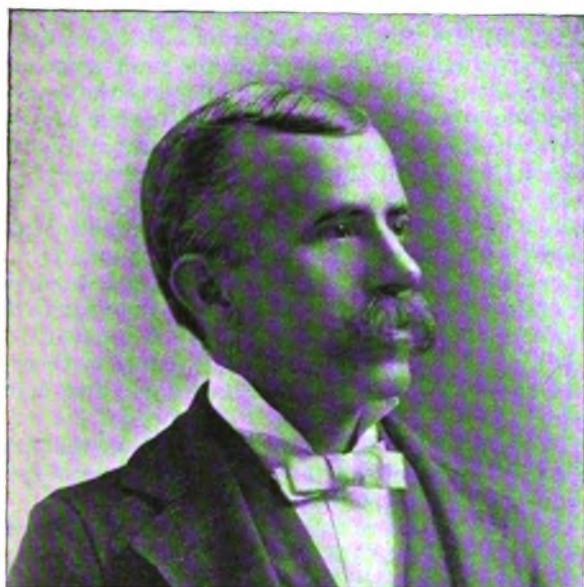
Most of us are apt to blunder in our spelling, hence there is no more useful book for the busy man, no matter what his occupation, than a spell-book and definer of a size to fit the pocket. A "companion piece" of this nature is worth its weight in gold, is literally a "friend in need," and its convenient presence at a critical moment, common to the lot of all, has saved many an one from committing a mortifying break. Such a volume is the Excelsior Webster Dictionary, with marginal index, bound handsomely in leather, and advertised in another column. The price is but fifty cents and on receipt of this sum it will be sent postpaid to any point. Address J. B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York.

AT RICHMOND, VA.

Convention of The International Association of Municipal Electricians.

The seventh annual convention of the International Association of Municipal Electricians was called to order October 7, at Richmond, Va., at 10 o'clock in the morning. The room was crowded with delegates from all parts of the United States and Canada, many of them accompanied by their wives and daughters. Mr. Marx Gunst chairman of the Council Committee on Electricity, called the convention to order, and Rev. Carey E. Morgan delivered the opening prayer.

Governor Montague welcomed the visitors in the name of the Commonwealth of Virginia. When he closed the room rang with applause.



WILLIAM H. THOMPSON, OF RICHMOND, VA.,

The New President of the International Association of Municipal Electricians.

Mayor Taylor, of Richmond, was next introduced, and spoke in behalf of the citizens, extending a hearty welcome. He closed with a compliment to Richmond's electrical engineer, Mr. W. H. Thompson.

President A. S. Hatch, of the association, introduced Captain William Brophy, of Boston, who gracefully responded to the welcome given. He spoke of the little differences which had once existed between the States, but were now forgotten, and grasping the Governor's hand, ended with the remark: "Thus do I join the country from Massachusetts to Virginia."

The president then read the annual address, and the programme of the meeting was outlined. President Hatch's paper was on the subject of "Electrical Government." He defined what he meant by electrical government, and spoke of the advantages of such government. He showed by reviewing history, that municipal ownership was as old as municipalities. He mentioned the pres-

ent conditions existing between the employer and the employee, which, he said, gave rise to grave apprehension.

At its close a general discussion of the subject treated was entered into, and the rest of the morning session and part of the afternoon was thus taken up. It is from these discussions, which are a feature of the association, that the greatest benefit is derived.

When the afternoon session was called to order the discussion of Mr. Hatch's paper was continued for some time, after which Mr. Walter M. Petty, of Rutherford, N. J., read a paper on "Municipal Inspection and Control of Electrical Matters," and a lengthy general discussion of this followed.

Captain William Brophy was elected a delegate to the National Underwriters' Association, and was authorized to endeavor to secure their co-operation in forming rules for outside construction and general electrical inspection. The underwriters' association meets in December.

After the opening speeches of the morning session the ladies withdrew to the parlors of the hotel, where the local Committee on Entertainment awaited them. About thirty carriages had been engaged and the party started on a tour of the city. They visited all the points of interest, and were delighted with the beauty of the city and its many associations, to say nothing of its hospitable people.

In the evening a theatre party was given the visitors at the Bijou. The new boxes had been engaged and the guests came and went through a private entrance. The affair was perfect in every detail, and showed careful management. Little Miss Cora Lucille Thompson, the "Daughter of the Association," with several companions, sat in the front of the box, the honored guest.

The second day's session was called to order at 10 A. M. by President Hatch, who invited further discussion on Captain Brophy's paper on the "Relation of Electrical Interests to Other Branches of the Municipality." Captain Brophy was followed by Mr. Jerry Murphy, with a paper on "The Telephone Service in Connection with Fire Alarm and Police Signal Systems." A general discussion ensued.

Mr. Charles F. Hopewell, of Cambridge, Mass., then read a paper on the "Joint Use of Conduits," which was discussed at length. The hour of 12 having arrived, the convention adjourned for dinner.

At 1 o'clock the visitors boarded the steamer Berkley for a trip down the James River. Immediately before starting, the ladies grouped themselves on the decks of the boat and the men on the wharf below, and a picture of the excursionists was taken.

At 2 o'clock the steamer started and the guests, who numbered several hundred, settled themselves comfortably on the decks and took in Richmond from the water front as the boat slowly moved away. The afternoon was perfect, and

never did the country along the James, every inch of which is of historical interest, look more beautiful. Objects of interest were pointed out.

The band proved a popular institution, infusing life and merriment into the whole party, soon becoming so happy that they did clogs and cake-walks, to the especial amusement of the ladies present. Everybody was in for a good time, and each member of the party seemed determined to do his or her part.

Soon after the boat got under way luncheon was served. Four tables were set and beautifully decorated.

Probably the most interesting point on the river is Dutch Gap. The history of how it was cut, having been begun by Ben Butler during the war in hopes of getting his boats to Richmond, without passing the Confederate forts, around the bend, and finished by the United States Government after the war, was told by Mr. R. L. Taylor along with the history of Henrico, the town which stood on the site, and had a hospital, library and college before Plymouth was settled. As the boat passed through the Gap the band played "Dixie," amidst wild cheering.

During the trip, Mr. G. F. MacDonald, of Ottawa, Canada, was called upon for a speech. He mounted the hurricane deck and made a bright talk, ending with a glowing tribute to Mr. Thompson, to whom he presented the colors of Ottawa, remarking that it was an honor which had heretofore been restricted to the nobility. Mr. Thompson accepted the honor with becoming modesty.

The trip back was made in the late afternoon and early evening, and a hushed stillness seemed to fall upon the crowd and was only broken by the soft strains of the band as they sat and drank in the beauty of a Virginia sunset in early fall with all its gorgeous coloring.

The saloon was cleared and dancing was indulged in by both old and young. A troop of negro singers were in constant attendance, and were a source of much amusement to the delegates from the Northern States.

At a quarter to seven Richmond was sighted, and with many regrets that the trip was ended, the guests landed and hastened to the hotels to get supper and brush up for the next event.

At 8.30 in the evening the delegates visited the fire alarm and police telegraph departments at the City Hall, and made a thorough inspection. They pronounced the system the most up-to-date and the best managed they had yet seen.

Informal talks were made by President John H. Frischkorn, of the Board of Fire Commissioners, Messrs. Charles F. Taylor, Sol. Bloomberg, Cunningham Hall, Frank C. Mason, of Brooklyn, and President Hatch. Mr. Thompson made a short talk, telling of the humorous experiences of the association during its organization. Light refreshments and cigars were served.

The meeting adjourned to the Mechanics' Institute at 10 o'clock, where Mr. C. F. Hopewell,

of Cambridge, Mass., showed magic lantern illustrations of the fire and telegraph systems in different cities of the country.

The third day's session was called to order by President Hatch, who read an editorial from a Grand Rapids, Mich., paper, condemning the fire commissioners of that city for removing from office the superintendent of fire alarm, Mr. Canfield, for political reasons. Mr. Canfield brought the telegraph system in that place up to the present high state of efficiency and his removal was denounced by all. The committee on the Magneto Fire Alarm System read its report, which was ordered printed in the proceedings of the meeting.

Mr. W. Y. Ellett read the constitution and by-laws of an auxiliary association designed to protect its members in case of need. The matter was referred to a special committee consisting of W. Y. Ellett, A. J. Newman and W. A. Barnes, with instructions to report at the next meeting.

President Hatch then announced that the next two hours would be devoted to listening to associate members who had something to say regarding the merits of the goods they had on exhibition. Those who took advantage of the offer were: Mr. F. S. Palmer of the Montauk Multiphase Company, New York.; J. Jones, Jr., of Jones & Sons, New York.; T. E. Hughes, of the Standard Underground Cable Company, of Pittsburgh, Pa.; P. H. Alexander, of the Magneto Electric Company, of New York; Frederick Pearce, electrical manufacturer, of New York, and many others.

Atlantic City, N. J., was selected as the next place of meeting, the date to be agreed upon later by the executive committee.

The report of the finance committee, which was next read, was to the effect that the finances of the association were in an excellent condition and properly cared for.

The following officers were then elected for the ensuing year: President, W. H. Thompson, of Richmond, Va.; first vice-president, Jerry Murphy, of Cleveland, O.; second vice-president, A. C. Farrand, of Atlantic City, N. J.; third vice-president, W. A. Barnes, of Bridgeport, Conn.; fourth vice-president, C. L. Williams, of Meridian, Miss.; secretary, F. P. Foster, of Corning, N. Y.; treasurer, Adam Bosch, of Newark, N. J.; executive committee, W. L. Petty, Elmer Loomis, Wm. Brophy, A. S. Hatch, J. B. Yeakle, F. C. Mason, W. Y. Ellett, G. F. MacDonald and Wm. Crane; finance committee: C. F. Hopewell, Charles Greenwald, I. Simmons and C. R. Newman.

Treasurer Adam Bosch next read his report which showed a balance on hand of \$190.63.

The new members elected during the session were: Fred W. Hart, Denver, Col.; W. L. Kent, Lynchburg, Va.; E. P. Leonard, St. John, N. B.; J. McManus, San Antonio, Tex.; Jacob B. Platt, Augusta, Ga.; Oliver M. Shafer, Trenton, N. J.; C. L. Williams, Meridian, Miss.; H. E. Waterstreet, Amsterdam, N. Y.; Chas. Worden, Jack-

son, Mich.; R. D. Brixey, E. B. Baker and Messrs. Foote, Pierson & Co., New York; W. H. Bradt, Troy, N. Y.; C. E. Beach, Binghamton, N. Y.; J. B. Yeakle, Baltimore, Md.; H. G. Ferguson, St. Louis, Mo.; Geo. L. Fretett, Portland, Me.; Frank L. Loomis, Akron, O.; Leon Sullivan, Decatur, Ill.; John Lininger, Canton, O.; Jas. F. Burns, Schneckady, N. Y.; C. A. Hopes, Reading, Pa.; W. J. Denver, Boston, Mass.; C. G. Sundquist, Jamestown, N. Y.; Kellogg Switchboard and Supply Co., of Philadelphia, and E. E. Beam of Ashtabula, Ohio.

After listening to an address of Captain Wm. Brophy, of Boston, thanking the citizens of Richmond, the governor of the state, the mayor of the city, the telegraph and telephone companies, W. H. Thompson, of Richmond, and president A. S. Hatch, of Detroit, for numerous courtesies extended which contributed to make the Richmond convention the greatest possible success, the convention adjourned at one P. M.

At 2 o'clock all of the delegates, accompanied by their families and friends, and the local Committee on Entertainment, boarded special cars and enjoyed a delightful trip to lovely Lakeside Park. The party remained at the resort for an hour or more, luncheon being served, and a general good time being indulged in.

The reunion covering three days was brought to a close at Murphy's Hotel on Thursday evening with a sumptuous banquet and a grand ball. There were present a hundred or more delegates from all sections of the country, their wives, sisters and daughters, and a number of outsiders, every one of whom was lavish in the praises of the entertainment accorded the electricians by the city of Richmond. The convention will long be remembered as one of the most successful ever held in this section of the country.

With a blessing by Councilman E. W. Miner, the banquet was opened, and scarcely had the good things commenced to come in before Mr. Frank C. Mason proposed a toast to Lucille, the little daughter of Mr. W. H. Thompson. He referred to the child as the daughter of the association, and the toast was drunk with a will by the entire body. Whereupon some one inquired to know what was the "matter with the old man," referring to the newly elected president. Replies from all sections of the hall were numerous. He was the real thing, and no mistake.

The speech making of the evening, was commenced by Mr. Marx Gunst, who acted as toastmaster.

He called upon W. H. Thompson, John H. Frischkorn, W. M. Petty, Sol Bloomberg, G. F. McDonald, F. C. Mason, and Capt. Wm. Brophy. The latter paid the most glowing compliment to Richmond and frequently was interrupted by prolonged applause. His talk proved to be one of the most enjoyable of the evening.

Of course, the dancing was enjoyed. This goes without saying. The room in which the exhibits were shown was cleared for this purpose long before the banquet was over, and then the or-

chestra, which had furnished music while the feast was in progress, adjourned to the hall. With the first strains of the waltz melodies the floor became alive with couples, and until an early hour this pleasant pastime was enjoyed.

Among those present were:

New York.—F. W. Harrington, F. C. Mason, W. J. Watson, C. D. Burdett, Fred Pearce, W. C. Banks, M. E. Malcolm, W. H. Niles, P. H. Alexander, G. H. Osterhard, Geo. F. Porter, F. J. H. Kreaake, F. M. Kreaake, J. F. Haggerty, F. L. Ebberts and wife; J. Jones, Jr., Geo. T. Manson, E. B. Baker, R. D. Brixey, A. P. Eckert, J. B. Taltavall and wife; G. W. Elliott and wife; Fred S. Palmer and Will H. Kirnan.

Elmira, N. Y.—W. Y. Ellett.

New Rochelle, N. Y.—A. J. Bell and wife.

Newark, N. J.—Adam Bosch.

Pittsburgh, Pa.—Thos. Hannan and wife.

Eric, Pa.—Wm. Crane, James N. Boyd, Addison Maupin, Henry G. Brandt, J. M. Durner.

Jamestown, N. Y.—C. G. Sundquist and wife.

Memphis, Tenn.—R. E. Moran.

Philadelphia, Pa.—T. E. Hughes, Paul W. Bossert.

Troy, N. Y.—Wm. Bradt and wife.

Utica, N. Y.—G. F. Breitenstein and wife.

Altoona, Pa.—G. R. Downs.

Ottawa, Ont.—G. F. MacDonald.

Boston, Mass.—Captain Wm. Brophy, T. H. Bibber.

Albany, N. Y.—E. A. Callahan.

Amsterdam, N. Y.—H. E. Waterstreet.

Rutherford, N. J.—Walter M. Petty and wife.

Richmond, Va.—Chas. Keppler, L. S. Jones, W. H. Thompson and wife; Marx Gunst, H. C. Warren, Richard M. Taylor, C. T. Sydnor, J. W. Kates.

New Brunswick, N. J.—Charles Greenwald.

Corning, N. Y.—F. P. Foster.

Jackson, Mich.—Chas. Worden.

Meridian, Miss.—C. L. Williams.

Savannah, Ga.—W. D. Claiborne.

Detroit, Mich.—A. S. Hatch.

Cleveland, O.—Jerry Murphy and wife.

Bridgeport, Conn.—Wm. A. Barnes.

Decatur, Ill.—Leon H. Sullivan.

Niagara Falls, N. Y.—M. J. Donohue, J. M. Watkins.

Canton, O.—John Leninger.

Schenectady, N. Y.—James F. Burns.

Baltimore, Md.—J. B. Yeakle.

Charleston, S. C.—Ion Simmons.

Watertown, N. Y.—H. C. Bundy.

Cambridge, Mass.—Charles F. Hopewell.

Lynchburg, Va.—W. L. Kent.

Norfolk, Va.—R. A. Smith.

Petersburg, Va.—E. N. Farley.

Atlantic City, N. J.—A. C. Farrand, T. H. Thompson and wife.

Morristown, N. J.—F. E. Pierson and wife.

Passaic, N. J.—C. R. Newman and wife.

There were several interesting exhibits made at the convention. Among them that made by the

Magneto Electric Company, of New York, in charge of Mr. P. H. Alexander, of the new magneto fire-alarm system was shown in running order, and was most interesting.

The Gamewell Fire Alarm Telegraph Company, of New York, made a very creditable working display, and the genial representative of this old established concern, Mr. Will H. Kirnan, renewed old and made many new acquaintances.

The Gordon Battery Company, of New York, of which Mr. William C. Banks, as usual, was the representative, exhibited their well known batteries which attracted a good deal of attention.

C. H. MACKAY ELECTED PRESIDENT.

RUMORS OF CONSOLIDATION
OFFICIALLY DENIED.

The Board of Directors of the Commercial Cable Company at a meeting held in New York, October 14, elected Mr. Clarence H. Mackay, president of the company and Mr. George G. Ward, chairman of the board of directors and of the executive committee. Mr. Ward continues to be vice-president and general manager. The policy and management will continue as heretofore. On the same date Mr. Mackay was also elected president of the Postal Telegraph-Cable company and the Pacific Postal Telegraph-Cable Company, and Col. A. B. Chandler was continued as chairman of the board of directors.

All rumors to the effect that a consolidation with any other telegraph company is contemplated are officially denied.

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At the special meeting of the Gold and Stock Life Insurance Association, New York, June 23rd, adjourned to July 21st, the amendments to the by-laws, including graded rates, as follows, for new members,

Between 18 and 30, 50 cents per month,

Between 30 and 35, 60 cents per month,

Between 35 and 40, 75 cents per month,


Between 40 and 45, \$1 per month,

and as recommended at the last annual meeting, were adopted to take effect January 1st, 1903.

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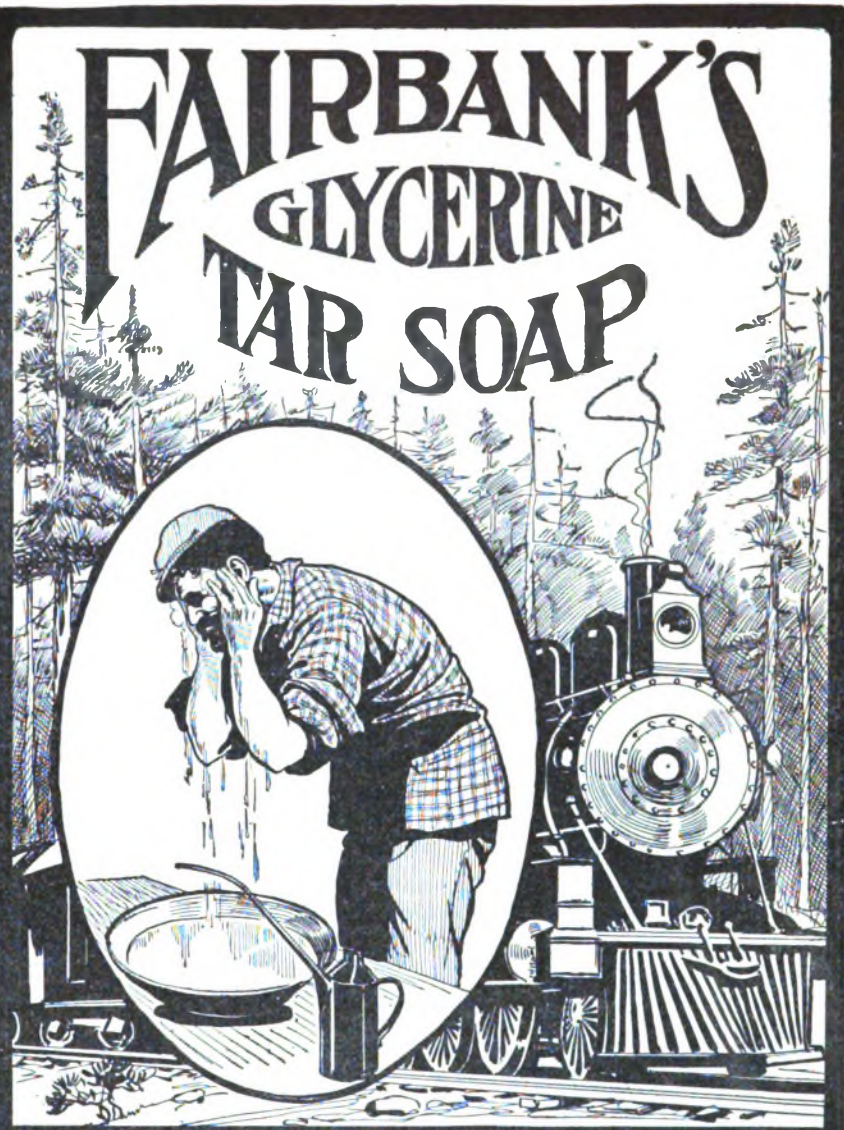
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I will send it—and more. I will mail with it an order that any druggist will recognize. It will authorize the druggist to furnish the sick one six bottles of Dr. Shoop's Restorative. He may take it a month at my risk. If it succeeds the cost is only \$5.50. If it fails, I will pay that druggist myself

I will leave the decision to the one who is sick.

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Another is the absolute faith within me, that all that is required in almost any case—no matter how difficult—is a test by the sick one. How could I better secure that test than by saying: "Here are six bottles of my Restorative—use it 30 days. If it cures, pay your druggist \$5.50; if it fails, the loss is mine."

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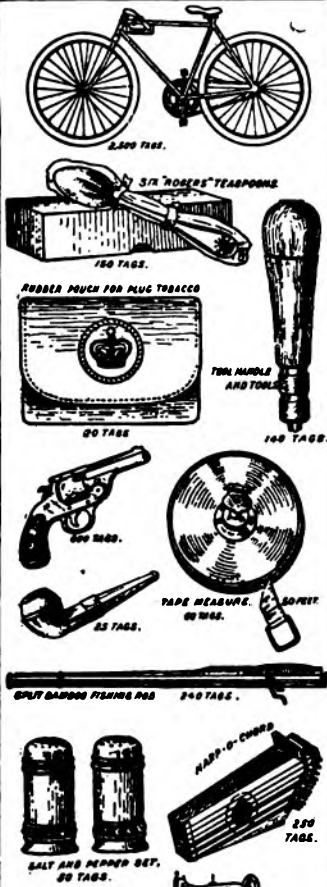
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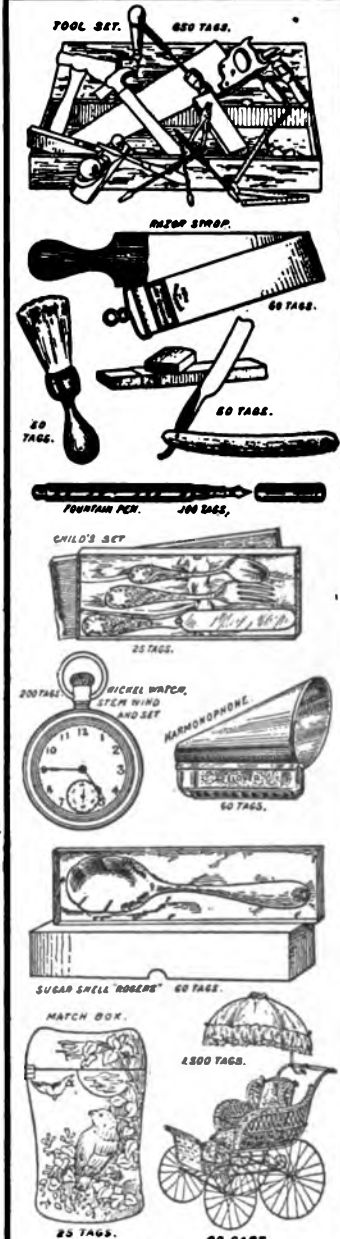
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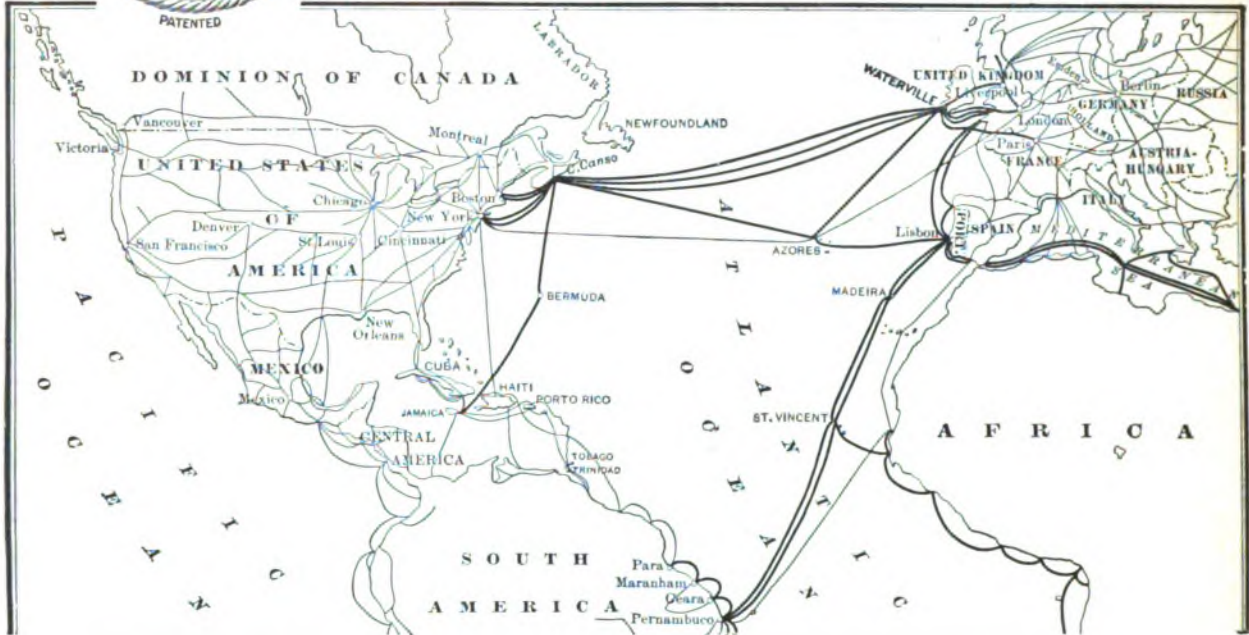
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