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Vol. XIX.—No. 21.

NEW YORK, NOVEMBER 1, 1902.

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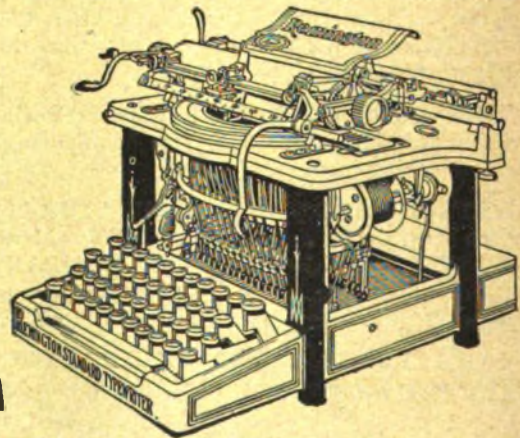
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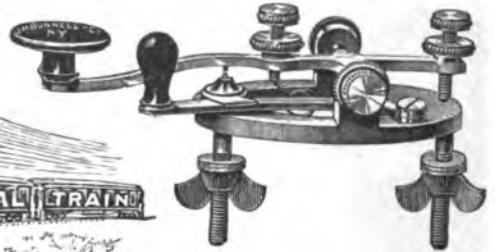
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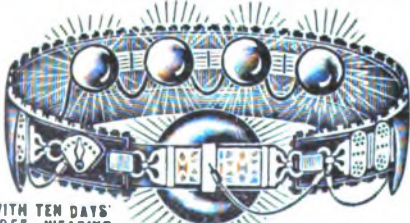
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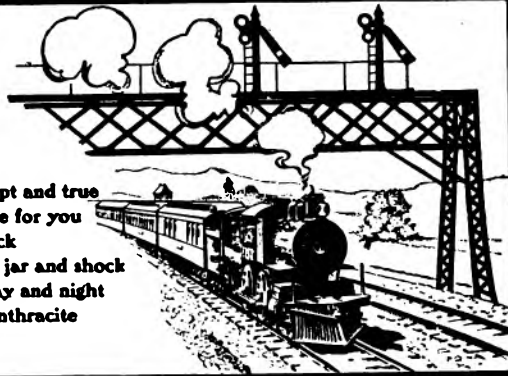


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# THE TELEGRAPH AGE

No. 21.

NEW YORK, NOVEMBER 1, 1902,

VOL. XIX.

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## SOME POINTS ON ELECTRICITY.

### An Overlooked Source of a Perplexing But Familiar "Trouble."

WILLIS H. JONES.

The word "trouble" is so universally employed by telegraphers to express various kinds of disturbances in working circuits that we use the word in the caption of this article in a strictly fraternal sense. If there is one "trouble" which a chief operator is called upon to locate that is more annoying than all others, it is probably a mysterious "opening" of a circuit at frequent intervals followed by its closing in an equally unexplained manner.

When a circuit becomes affected in this manner the chief operator is greatly handicapped in making a test for the reason that usually as soon as he alters the existing conditions of the circuit by cutting in his testing instrument at the board, or altering the strength of the battery, the "trouble" disappears.

Then, again, should the opening still continue despite the mere cutting in or out of the test instruments, he can, frequently, close the circuit by asking one of the branch offices to "ground" the wire for a moment.

In many cases after the ground wire has been removed the circuit will remain closed permanently, or at least for some time thereafter. This method of closing wires applies more particularly

to short circuits, such as loops or legs extending to branch offices. From the fact that a loop does remain closed after a branch office has removed his ground wire the latter is frequently erroneously accused of having had the circuit open there.

Sometimes a loop will close the moment a branch office cuts in his test instruments at the board. When this occurs the incident again often leads to a dispute between the chief operators at the main and the branch office through ignorance of the true situation. The chief at the main office perhaps hastily jumps to the conclusion that because the circuit closed at the moment the branch office cut in, that the fault must necessarily have been there, and tells the branch office so, while the latter replies with equal haste that it could not have been there because he was "cut out" until that moment.

Now, the fact is, the trouble may or may not have been at the branch office, but the latter really did close the circuit, unknowingly, by means of his temporary "ground" or during the act of cutting in his test instruments, in a manner which we will explain later on.

"Troubles" of this kind occur so frequently nowadays that it would be well for all who are not posted to brush up their information a little and view the situation from an electrical standpoint.

One factor which makes these "openings" possible is the accumulation rust or dust in the springjacks, or other movable parts of the switchboard. Another is loose connections, and it would surprise many managers of branch offices to learn how great a number of such defects could be found provided they went about the search in a proper manner.

Aside from the switchboard and flexible cord defects, is the prevalence of loose key connections under the tables, which add greatly to the resistance of the circuit. It would be safe to make the assertion that there is scarcely a telegraph office of any size in the country, not having been recently overhauled, that will not show one or more key connections to have worked loose through the constant jarring they receive.

On long main line circuits such defects are not always noticeable as the connection is not actually broken, hence the high electromotive force used on such wires overcomes the enemy easily. On very short circuits and loops, however, the low electromotive force employed is at times unable to cope with it, hence a temporary "opening" due to the high resistance at that point.

Now, when a loop stands "open" the chief oper-



ator at the main office should follow a method of testing something like this:

His first move should be to put on a heavy battery for a moment only. This will determine whether the source of the trouble is due to a partially loose connection in some part of the circuit or to an actual break. If the former, the loop will immediately close and possibly remain closed for hours, even after the original battery has been restored.

The explanation is that the strong current which the big battery produced burned away the rust or dust which caused the circuit to appear open. In reality the circuit was not open but it contained so great a resistance that the weaker current could not close the sounder. If the heavy battery will not close the loop, the chief operator must then search for a legitimate break in the conductor, or in some key in one of the branch offices.

Frequently a branch office when testing for an opening with his ground wire finds that the circuit remains closed after he removes it. This test also frequently misleads the loop chief at the main office to suspect that the fault was at the branch office where the "ground" was made; or that the opening was beyond that point but had simultaneously with the test disappeared.

Now, this test means that the opening was really at or between the main and the testing branch office, and that the latter had simply accomplished with his ground wire what the loop chief at the main office does with a heavy battery, namely, caused a greater volume of current to flow through the defective joint, and thus burned the disturbing element away.

Through a more general understanding of these many sources of loop and short circuit annoyances, together with a knowledge of what the results obtained by each test really mean, the process of locating quickly and eliminating such faults may be greatly simplified.

Our advice to loop chiefs and testers at branch offices generally, is, that until you are thoroughly familiar with the facts here mentioned, do not be so ready to insist that "it wasn't open here!" Remember that many faults noticeable on short circuits fed by a low electromotive force do not always develop on long ones under the strain of greater electrical pressure.

#### Recent Telegraph Patents.

A patent, No. 710,667, has been issued to L. Cerebotani, Munich, Germany, for a device for automatically unrolling the paper ribbon in Morse telegraph apparatus.

A patent, No. 710,448, has been granted to J. Gell, Wellington, New Zealand, for an apparatus for perforating tape for automatic telegraph instruments.

#### Business Notices.

A bright and amusing little story told in a way that will interest everyone who believes the

course of true love can sometimes run smooth is that of a "Romance on the Rail", handsomely illustrated in colors and beautifully bound. The booklet will be sent free to anyone who will mail two cents in stamps to cover the cost of postage. Address T. W. Lee, General Passenger Agent, Lackawanna Railroad, New York City.

Mr. E. S. Russell, of 253 Broadway, New York, who is advertising the 20th Century telegraph key, as per announcement in this issue, states that he had lately received a number of gratifying letters highly commendatory of the device. The key has been advertised as a preventive of, and a cure for lost grip, and these letters are based upon the fact that a number of operators, suffering from this very serious trouble, as well as operators' paralysis, have been cured by its use. And Mr. Russell further says that he has not yet received a single complaint of failure of this key, when faithfully used, to accomplish all that is claimed for it. This surely is a record that ought to carry conviction to all of the superior utility of the instrument.

The Kellogg Switchboard and Supply Company, of Chicago, Ill., the well-known telephone manufacturers, have issued a neat little brochure bearing the outside imprint of "The 'Express' and some of its stopping places." Less than two years ago this company placed a small switchboard on the market called the "Express" in order to meet the demands of small exchanges requiring a board of from 50 to 500 lines capacity, simple, rapid and easy to operate. It appears that the "Express" switchboard has met with favor and large sales have resulted. The little volume tells what users think about the new device. The company would like to explain the merits of their latest design, and invite special correspondence relating thereto.

The Continental Tobacco Company, whose products have justly attained so high a standard of excellence throughout the entire country, has in operation a scheme by which the simple saving of its tobacco tags by users and the return of the same in packages by registered mail or by express, to the company at the St. Louis address, has resulted in the wide distribution of hundreds of useful presents, including valuable household articles, among the tobacco using readers of this journal. This generous offer of the company, which now has been in operation for sometime, and which is fully explained in the Company's advertisement on advertising page XI of this issue, where is also shown in illustration an attractive assortment of some of the serviceable articles that may be obtained for the asking, will expire by limitation on the 30th of this month. Those who have received presents in exchange for the tags express themselves as highly gratified with the fair and generous treatment accorded them by the Company. As the time is now so short pending the withdrawal of this offer, it behooves those who have not yet



sent in their accumulation of tags, to do so within the limit of the date named. It is worthy of note in this connection, and as an illustration of the spirit of generosity governing this Company in all of its dealings, to state that they recently, and without request, voluntarily raised the wages of all their mill employees ten per cent.

#### Personal Mention.

Mr. James R. Baird, secretary of the Central and South American Telegraph Company, who has been suffering severely from hay fever for some months has wholly recovered.

Col. A. B. Chandler, chairman of the Board of Directors of the Postal Telegraph-Cable Company, was in New York a few days since. After attending to some business he returned to his Randolph, Vt., home, where he will remain for some time.

Mr. D. Clarence Durland, who is well known in the electrical field, has been elected second vice-president of the Sprague Electric Company, New York. For the past three years he has been assistant general manager of the Sprague Company and his promotion is evidence of his engineering and executive abilities which he has combined to a marked degree.

#### New York Visitors.

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

Mr. J. E. Bierhardt, manager of the Western Union Telegraph Company, Syracuse, N. Y.

Mr. C. H. Ward, of the Western Union Telegraph Company's cable station, Canso, N. S.

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

Mr. A. R. Porte, superintendent, Great North Western Telegraph Company, Ogdensburg, N. Y.

Mr. L. W. Quick, grand secretary and treasurer of the Order of Railroad Telegraphers, St. Louis, Mo.

Mr. George L. Lang, superintendent of telegraph of the Queen and Crescent Route, Chattanooga, Tenn.

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

Mr. John I. Sabin, of Chicago and San Francisco, an old time telegrapher, now president of the telephone interests in the two cities named.

Mr. Stephen D. Field, of Stockbridge, Mass., an old time telegrapher, manager of the Western Union office at San Francisco, in the early seventies.

#### Resignations and Appointments.

Mr. J. R. Terhune, manager of the Western Union Telegraph Company, New Orleans, La., has been promoted to be assistant superintendent

of the same interests with headquarters at Nashville, Tenn.

Mr. A. J. Mills has been appointed manager of the Western Union Telegraph Company at Sullivan, Ind., vice J. R. McKee.

Mr. M. H. McCranie has been appointed manager of the Western Union Telegraph Company at Thomasville, Ga., vice C. Johnson, resigned.

Mr. E. Johnson has been appointed manager of the Western Union Telegraph Company at Charleston, S. C., vice D. M. O'Driscoll, resigned.

Mr. Allen Woodle, manager of the Western Union Telegraph Company, at Newport, R. I., has been appointed manager of the Portland, Me., office, vice C. D. Livermore, resigned.

Miss Katherine Going has been appointed manager of the Postal Telegraph-Cable Company at Edwardsville, Ill., vice H. J. Nieman, resigned, to enter other business.

Mr. W. W. Wagoner has been appointed manager of the Western Union Telegraph office at Muncie, Ind., vice E. T. Coy, transferred to the operating department.

Mr. H. Van Devender, traffic chief of the Western Union Telegraph Company, at Atlanta, Ga., has been appointed manager of the same interests at Mobile, Ala.

Mr. F. N. Andres has been appointed manager of the Western Union Telegraph Company at Bloomington, Ind., vice R. P. Johnston, transferred to Lafayette, Ind.

Mr. R. E. Scoralh has been appointed manager of the Western Union Telegraph Company at Bedford, Ind., vice W. H. Guthrie, resigned, to accept a railroad position.

Mr. H. M. Killian, has been appointed manager of the Western Union Telegraph Company at Savannah, Ga., vice Lewis J. Maxwell, promoted to be assistant superintendent.

Mr. Edgar Winter, manager of the Western Union Telegraph Company, Montgomery, Ala., has resigned, and the vacancy has been filled by the appointment of C. H. Morris, of Atlanta, Ga.

Mr. J. E. Carney has been appointed night chief operator of the Western Union Telegraph Company at Montgomery, Ala., vice J. P. Higgins, resigned, to enter the service of a broker.

Mr. J. M. Crowley, manager of the Western Union Telegraph Company at Augusta, Ga., has resigned and his place has been filled by the appointment of John W. Brown, the chief operator, who will hereafter fill both positions.

Mr. W. H. Butler, manager of the Western Union Telegraph Company at Denver, Col., has resigned to accept the position of general manager of the recently organized Douglas Mercantile Company, at Douglas, Wyo. For twenty-five years Mr. Butler has been continuously associated with the Western Union Telegraph Company, principally as manager of various western offices.

### General Mention.

The report comes from Pittsburg that a few Western Union employees at that point have had their wages increased.

At New Haven, Conn., both the Western Union and the Postal Telegraph-Cable Companies will move their main offices to other localities within the next three months.

Mr. Jesse H. Hadley, manager of the Western Union Telegraph Company at San Rafael, Cal., met with a painful accident on September 1, by the breaking of his knee cap while alighting from an omnibus in front of his office.

The Western Union Telegraph Company recently placed an order for several thousand enamel signs, which will be distributed throughout the entire country wherever needed. This is one of the largest orders of the kind ever given.

Mr. George H. Albee, of Windsor, Conn., in a recent letter renewing his subscription, writes: "In this 'age' of progress and push it becomes absolutely necessary for one to keep abreast of the times, and I know of no better way than to keep the 'AGE' in sight.

Mr. Frank E. Wolfe, for the past eleven years with the Postal Telegraph-Cable Company in Boston, Mass., has resigned his position, to later engage in fruit raising in California. For nine years he was manager of the Postal's interests in the Boston Herald office, bringing it up to one of the best paying branch offices in that city.

He was a member of the Telegraphers' Aid Society, was founder of the Sixteen Associates, and was one of the founders and the vice-president of the Telegraphers' Savings and Purchasing Association. It was his untiring energy as much as that of any one man that made the latter association one of the greatest paying concerns of its kind in the United States.

### Obituary.

F. A. Sandeen, a well known Boston, Mass., telegraph operator, died on October 12.

Andrew Van Walraven, a telegraph operator and electrician of Paterson, N. J., died at that point on September 30.

Archibald Clark, aged fifty-five years, superintendent of construction of the Western Union Telegraph Company, along the Erie Railroad, was found dead October 24, in the Erie yard, Jersey City, N. J., near dock No. 5. Death was due to apoplexy.

Andrew T. Creelman, an old time telegrapher, for several years past identified with the profession at Chicago, Ill., died of heart failure at Los Angeles, Cal., on October 12. Mr. Creelman was employed in the New York office of the Western Union Telegraph Company from 1876 to 1880, and while there earned the reputation of being one of the brightest telegraphers in the service.

George Ralph Williamson, a former auditor of the Postal Telegraph-Cable Company, New York, died at his home in Belfast, Me., on September 23. Mr. Williamson was a native of Belfast, where he was born April 13, 1836. He graduated from Bowdoin College in 1856, afterwards studying law which he practiced for several years in New York. Abandoning the law for telegraphy he became the secretary of the Postal Telegraph Company, and later auditor of the Postal Telegraph-Cable Company, New York, a position he held for some fourteen years, withdrawing in the spring of 1900 and retiring to his early home where he had since resided. He is survived by his widow who was formerly Miss Emma I. Sprague, of New York, and whom he married in 1884.

### Organization.

Sixty-three telegraph operators organized a branch of the International Union of Commercial Telegraphers at Louisville, Ky., October 26, and elected John A. Esslinger, president; James J. Clary, vice-president, and G. M. Hewes, secretary.

A conference was held in Washington, D. C., October 20, at the headquarters of the American Federation of Labor between representatives of the International Union of Commercial Telegraphers, the Order of Railroad Telegraphers, the Brotherhood of Commercial Telegraphers and other organized bodies of commercial telegraphers. It was decided to call a general convention for October 26, at Pittsburg, when a national union will be formed, which undoubtedly will be controlled by and called the International Union of Commercial Telegraphers. This organization is in its infancy at the present time, and it is stated that there are thirty-three lodges in as many cities in the United States.

A meeting of about three hundred telegraphers of New York city and vicinity was held Sunday afternoon, October 19, in the lodge rooms of the Grand Opera House, at Twenty-third street and Eighth avenue, for forming a local of the International Order of Commercial Telegraphers. Vice-President M. J. Reidy, of Boston, came to this city for the purpose of organizing the telegraphers. Not only are employees of the two telegraph companies interested in this movement, but press, brokers' and private operators.

Percy Thomas was chosen president, John B. Lawrence vice-president and Henry E. Wheeler secretary and treasurer. An executive committee of nine members was also chosen, of which those named above are three. The others are Thomas J. Dunn, Austin P. Velie, James A. Griswold, Norman A. Munz, Cornelius O'Connor and H. A. Yoell.

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



**Line Construction.\***

(Continued from page 432, October 16.)

**REPORTS.**

Mail to your superintendent on the first day of each month a list containing the name and salary of each man in your party, also the name of his nearest relative, and his (or her) post-office address. In case you hire a new man during the month, you will forward by telegraph the particulars as above stated, giving date of employment.

Whenever one of your men resigns, or is discharged, you will pay him the amount due for service rendered, taking as many vouchers therefor as may be necessary to correspond with the reports you may have during the portion of the month that he was in your service, care always being taken to notify your superintendent by telegraph of such resignation or discharge and cause thereof, giving date of same, together with amount paid. Such vouchers must in all cases be sent in with your monthly reports.

In paying men always take separate vouchers for regular and extra time. If one of your men goes away on leave of absence, or is transferred to another construction party, you will settle with him the same as though he were leaving the company's service.

As soon as you complete a job of work, you will make up a report of the same and forward it to your superintendent by express in a package sealed with sealing wax, the same as a money package, taking a receipt from the express agent for the same. No fixed value should be placed upon the package, but it should in all cases be marked, "Valuable Papers." If there is no express office accessible, send the reports by registered mail. In several instances monthly reports containing meal rolls and vouchers for money disbursed have been forwarded by train mail. Investigation has in each instance brought out the fact that the foreman carelessly gave his reports to the agent without taking a receipt for the same, and took no pains to ascertain how the reports were sent forward. Had the reports in question been lost, it would have been impossible to trace them. Foremen who handle reports and vouchers in this manner are not competent to disburse money belonging to the telegraph company. Reports containing vouchers of any description must in all cases be sent by express in a package sealed with sealing wax, the same as a money package and a receipt should be taken from the express agent. Should reports be lost from the failure or neglect of a foreman to carry out these instructions, such foreman will be required to bear the loss. Inclose with reports a list of material left from the work, and state disposition made of it.

On the first day of each month, make up and forward your last report for the previous month. The work in your superintendent's office is seriously delayed when your reports are not sent in

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

promptly. There is no reason why you can not as well forward your reports on the evening of the last day of the month as to hold them until the fourth or fifth of the month following. If you enter each day's work on your report the evening of the day on which the work is performed, when the end of the month is reached your work report will be complete and you will have nothing to do but settle your board bill and enter meal rolls and vouchers on "Form 21." When you finish a job during the month, close up and send in your report for that work at once, instead of holding the report until the end of the month. Your reports are expected to reach your superintendent not later than the second of the month.

Special attention is called to the rules and instructions on blanks Nos. 21 and 22. Blank No. 10 should be used in all cases when taking receipt for money paid out, excepting railroad company's charges on freight, for which the receipt of the railroad company is preferred. Be careful to keep a supply of blanks on hand at all times.

When completing a job of work telegraph your superintendent a list of the surplus and scrap material that you will have, and you will be instructed how to dispose of it. Report correctly by mail amount of material used, left over or transferred, immediately after completion of each estimate.

Report by letter defective line material or tools which have come under your observation, stating under what estimate furnished, with any other information regarding it that you think will be of interest. Inspect all lag bolts furnished, and reject all that have not first-class threads or points. Such rejected bolts should be carefully saved and packed in kegs for reshipment to the manufacturer, to be replaced with first-class bolts.

Report, on your form No. 21, the amount of manufactured guy wire used. When manufactured guy wire is used, designate same on your report as "Feet manufactured guy wire." When you twist your own guys, show same on your report as "Feet No. 8 wire used for guys."

Report points at which aerial cable is used, giving number of conductors and length in feet of each size used; also machine bolts, turnbuckles, circuit breaks, irons for window fixtures, etc.

**DAILY REPORTS.**

At the close of each day report by postal card, progress made with your work, except when stringing wire, when you will telegraph number of miles strung and where you can be reached at noon and night of the following day.

Material and tools should not be ordered by telegraph unless it is absolutely necessary to do so, and in emergencies, such as storms, fires, wrecks or floods. Do not order tools or materials on Saturday if it can be avoided.

Report by telegraph all wire trouble caused by your men while transferring or handling wires, or trouble caused by accident.

Make your telegrams in all cases as short as

you would if compelled to send and pay for them yourself.

**REPORTING HAND AND VELOCIPEDE CARS—ORDERING AND REPORTING TOOLS.**

In reporting hand-cars and velocipedes on your monthly inventory be particular to give the manufacturer's number of such car in each case.

When ordering tools be particular to call them by the names given on the inventory. Do not call for "spurs" when "climbers" are wanted, for "pikes" when you want "raising forks," nor for a "soldering pot" when a "furnace" is required. Be particular to report all tools in your possession at the end of each month, and see that your inventory is correct in every particular.

**USE OF HAND AND VELOCIPEDE CARS, AND SHIPMENT OF SAME.**

When using a hand-car on a crooked road a flagman must be kept a sufficient distance from the car in each direction to prevent the car being run into by trains. So many trains are being run on telegraphic orders that time cards can not be relied upon.

Always remember that hand-cars have no rights. Run slowly through all railroad yards and over all frogs, switches and street crossings. Hand-car racing and the "towing" of hand-cars behind railway trains is forbidden.

Do not use oil or grease of any kind on the drive gear of hand-cars or velocipedes. Cars are at times received at the supply department so badly gummed as to be unfit for service until thoroughly cleaned, which is expensive, and is unnecessary if cars are properly taken care of.

In shipping hand-cars detach drive rod from axle crank bearing; then detach hand lever from gallows frame bearing, and tie the lever and rod securely to side of gallows frame, and see that all nuts that have been loosened in detaching lever and rod from their bearings are securely tightened, so no parts of boxing or bearings can be lost in shipment.

In shipping velocipede cars tie the guide axle and rod and third wheel securely alongside of velocipede car frame, so it can not become detached in transit without cutting tie wires.

In shipping materials, tools, hand or velocipede cars by freight, take a regular bill of lading for same, properly filled out and signed, and mail to your superintendent. Bills of lading must specify every article and the number of each, in each bundle or box. Each package should be sufficiently marked for identification, giving point of shipment as well as of destination.

(To be continued.)

**An Example of Wireless Telegraphy's Efficiency.**

A very adequate idea of the utility of the Marconi wireless telegraphic invention, and the wide and beneficial influence it will exercise from a commercial point of view, in connection with vessels engaged in the transatlantic traffic, says the Scientific American, was afforded recently by the log of the Cunard liner "Campania" on a round

voyage from Liverpool to New York and back. The "Campania" left Liverpool at 4.30 P. M. on Saturday, August 30, and remained in communication until 6.10 P. M. with the same company's steamer "Ivernia," also fitted with the Marconi system, which was lying in the Huskisson Dock, Liverpool. From 7.05 to 8 P. M. she was in communication with the homeward-bound "Umbria" in the Mersey channel. At 8.30 Holyhead was signaled, followed by Rosslere station at the southeast corner of Ireland until 3 A. M. on Sunday, August 31. Passengers and mails were embarked at Queenstown, and the ship sailed at 10.15 A. M. on Sunday, August 31. She was then in communication with Crookhaven from 11.40 A. M. until 3.15 P. M. At 1.35 A. M. on September 3 she came into communication with the homeward-bound "Lucania" and exchanged messages with her for some time. At 4.45 P. M. on September 5, she signaled Nantucket lightship, and continued in communication until 8.30 P. M. At 11.30 P. M. Sagaponack station replied to her call, and continued talking until 1.40 A. M. the next day, when she was abreast of Fire Island, distant about 60 miles, and the new station at Babylon, north of Fire Island, came into communication about the same time as Sagaponack ceased. She kept in touch with the latter until Sandy Hook lightship was passed at 3.18 A. M.

On the homeward passage the "Campania" left New York on September 13 and was in communication with the "Umbria," which was just arriving at that port between quarantine and dock. She then got in touch with the Babylon station at 7.40 P. M., and continued until 1.40 P. M. Then Sagaponack station followed. She next communicated with the inward-bound "Lucania" on September 16 at 11 P. M. and continued until 1.40 A. M. on the following day. On the 17th she conversed with the Atlantic Transport vessel "Minnehaha" for some hours. The Cunard homeward-bound "Saxonia" was signaled at 2.50 P. M. on the 18th, when she was 36 miles ahead of the "Campania," and the two steamers were in communication until the evening, when the "Saxonia" was 100 miles astern. Crookhaven was signaled on the 19th at 8.45 A. M. and conversation was maintained until 11.40 A. M. The "Campania" arrived at Queenstown at 12.50 A. M. on the same day.

From this log it will be seen that it is practically possible to cross the Atlantic, and to remain in communication with the land all the way across via various ships, which can act as re-transmitting stations. If all the vessels plying between this country and Europe were similarly equipped with the Marconi apparatus, it would be possible for a man to remain au courant with home or the commercial world the whole of the five or six days' sea passage.

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



### The Telegraph and the Weather Service.\*

BY J. H. ROBINSON CHIEF OF TELEGRAPH DIVISION,  
U. S. DEPARTMENT OF AGRICULTURE, WEATHER  
BUREAU, WASHINGTON, D. C.

Our present chief once said that without simultaneous observations and the electric telegraph, discoveries in meteorology would be of little value. Judging from this remark he has a high and proper appreciation of the value of the co-operation which has been given the national weather service by telegraph officials.

At our last convention several speakers advised the cultivation by the Weather Bureau people of the good will of the press. No reference was made to the uniformly cordial relations which have existed for the past thirty years between our observers and their closest co-workers, the telegraph officials and operators. Nor does it appear necessary, in the presence of men who have for years maintained close and agreeable business relations with telegraph officials, to dwell upon the importance to themselves and to the service of cultivating and preserving, by all legitimate means, the friendship and good will of men who have, as a class, been so closely identified with the origin and development of the United States weather service. In the early history of the telegraph its officials noted, in making their line tests, the advance over the country of storms. During the period from 1830 to 1840, Espy had demonstrated that areas of rain advanced eastward from the interior of the country to the Atlantic coast, and that severe storms reported in the West and Southwest were usually experienced within a period of one to three days in the Atlantic coast district. In 1850 Mr. George B. Prescott, an employee of one of the telegraph companies then in existence, following in lead of Redfield, Loomis, Espy, and Henry, declared that our Government should establish storm-warning stations along the New England coast and at other points. In the same year Mr. Joseph Brooks requested Mr. Prescott to employ an agent to make daily observations at New York. At the same time observations were also taken at Boston and Portland, Me., and exchanged by telegraph. These reports were found to be of considerable value to steamers plying between New York, Boston, and Portland. Mr. Prescott also advocated the inauguration of a similar system of telegraphic reports upon a larger scale, and stated that, in his opinion, a service of this description would be of great value to shipping and coast property.

In the late sixties the telegraph officials again demonstrated the value of telegraphic reports of weather conditions by furnishing daily reports of weather reported along their lines at the request and expense of the Cincinnati Chamber of Commerce. It is a historical fact that these re-

ports were utilized in the preparation of daily forecasts by Prof. Cleveland Abbe. It will thus be seen that the telegraph performed pioneer service in connection with the present Weather Bureau establishment, and that full credit should be given the telegraph companies for the important part assumed by them in originating our service, and for the more than business interest they have taken in our work since the service became a regularly organized department of the Government. This interest has been shown on many occasions when telegraph communication has been seriously interfered with by storms. At such times they have given us the only wire they had in operation to the exclusion of all other business, and they have almost invariably given us the best service at their command.

The growth of the Weather Bureau system of reports and warnings has been co-extensive with the growth of the electric telegraph, and the collection at Washington within the space of an hour of reports of simultaneous observations from an area which covers nearly one-fourth of the surface of the earth, and an equally rapid dissemination of forecasts and warnings, a feat which a few years ago would have been declared impossible of accomplishment, now constitutes a part of the daily routine work of the Bureau. The uniformly splendid work of co-operation of the telegraph companies can not be ascribed to purely business considerations. The telegraph officials have not viewed our work wholly in the light of a business proposition. The many courtesies we have received at their hands have been prompted by a real regard for co-workers in an important and valuable branch of the Governmental service, whose origin and history has been so intimately associated with the great and progressive service which they represent.

#### Action Against the Pennsylvania Railroad.

The Western Union Telegraph Company on October 18, entered a suit in equity against the Pennsylvania Railroad Company to restrain the latter from taking away from the former the right to use the telegraph lines along the Pennsylvania Railroad, west of Pittsburg. When the Wabash Railroad, a Gould property, started to enter Pittsburg and secure a portion of the great tonnage of that city, the Pennsylvania company, as a retaliatory measure, it is alleged, rescinded certain contracts between it and the Western Union Telegraph Company, involving the use of thousands of miles of lines, offices, etc., and transferring this right to the Postal Telegraph system.

In the suit begun injunctions are asked to restrain the defendant from interfering with the maintenance and operation of the plaintiff's lines along the Pennsylvania roadways, contending that the removal of its lines by the defendant was in violation of contracts between the two companies, and that the Pennsylvania company is without authority in attempting to terminate the agreements by serving notice as it did last June.

\* A paper read before the Proceedings of the Second Convention of Weather Bureau officials, held at Milwaukee, Wis., August 27, 28, 29, 1901.

### The Telegraph in Porto Rico.

The development of the telegraph in Porto Rico since the American occupation of that island has kept pace with the general improvements that have been instituted in that newly acquired territory. The credit for this should be given to L. G. McGuigan, superintendent of the Insular telegraph bureau, whose headquarters are at San Juan, in the department presided over by Gen. William H. Elliott, Commissioner of the Interior. Mr. McGuigan has been connected with the telegraph service of the island since he first went there with the expedition under General Miles, and he has performed herculean work in bringing the system to its present high state of efficiency. He is young and far more strenuous in his efforts than most men care to be in that semi-tropical spot.



L. G. MCGUIGAN.

Superintendent of Insular Telegraph System, San Juan, Porto Rico.

There are now nine American operators in the telegraph service, which number ought to be increased to fifteen, as there are not enough Porto Rican operators yet qualified to handle the business of the larger offices.

In order to provide additional operators, Mr. McGuigan established in June last a telegraph school at San Juan at Government expense. This is in a flourishing condition and at the present time there are twenty-five young Porto Rican women being instructed in telegraphy.

The Insular telegraph bureau now controls 1170 kilometers of line and twenty-nine offices. During the past year eighteen new offices have been opened and one hundred and forty kilometers of new wire has been strung. The last legislature appropriated \$26,187.65 for the maintenance and extension of the telegraph system, an amount sufficient to extend the lines to all important points

in the island. Forty offices will soon be in operation.

The commercial rate charged for telegrams in Porto Rico is twenty cents for ten words, exclusive of address and signature. The charge for each additional word is two cents. The charge for Government messages and press matter is one cent a word.

The volume of this business has so increased under the moderate charge and American method of administration, as to transform the telegraph system of Porto Rico, heretofore considered by some as an expensive and unprofitable institution, supported by the treasury, to a self-sustaining branch of the government.

The Insular telegraph lines handled during the fiscal year ending June 30, last, 192,028 commercial messages, the cash receipts from tolls on which aggregated \$23,054.07, an increase of \$2,075.37 over the same period in 1901.

### The Old Time Telegraphers' Association.

Mr. U. J. Fry, of Milwaukee, Wis., president of the Old Time Telegraphers' and Historical Association, has appointed members of the Executive Committee for the coming year as follows: F. J. Matchette, an old time telegrapher, now proprietor of the St. Charles Hotel; P. W. Drew, superintendent of telegraph of the Wisconsin Central Railroad; H. G. McGill, manager of the Postal Telegraph-Cable Company; F. V. Moffitt, manager of the Western Union Telegraph Company, all of Milwaukee, Wis., and Joseph Uhrig, of Chicago, Ill.

### Post Office Official Telegraphing.

Postmaster General H. C. Payne, has issued the following order to the officials under him: "Owing to the meager appropriation provided the Postoffice Department for telegraph service, it is necessary that official telegraphing be limited to the actual necessities of the service. Those officials whose duty it is to prepare and sign official telegrams will govern themselves accordingly, resorting to the use of telegraph lines only when it is absolutely necessary."

T. M. B. ASSOCIATION.—Assessment No. 400 has been levied by the Telegraphers' Mutual Benefit Association to meet the claims arising from the deaths of Wm. Stoneback, at Orange, N. J.; Theodore O. Cord, at Memphis, Tenn.; Don C. Martin, at Everett, Mass.; Chas. W. Kennedy, at Ocean Grove, N. J., and W. P. O'Keefe, at Augusta, Ga.

The annual meeting of the Telegraphers' Mutual Benefit Association will take place at four o'clock in the afternoon of Wednesday, November 19, at 195 Broadway, New York.

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



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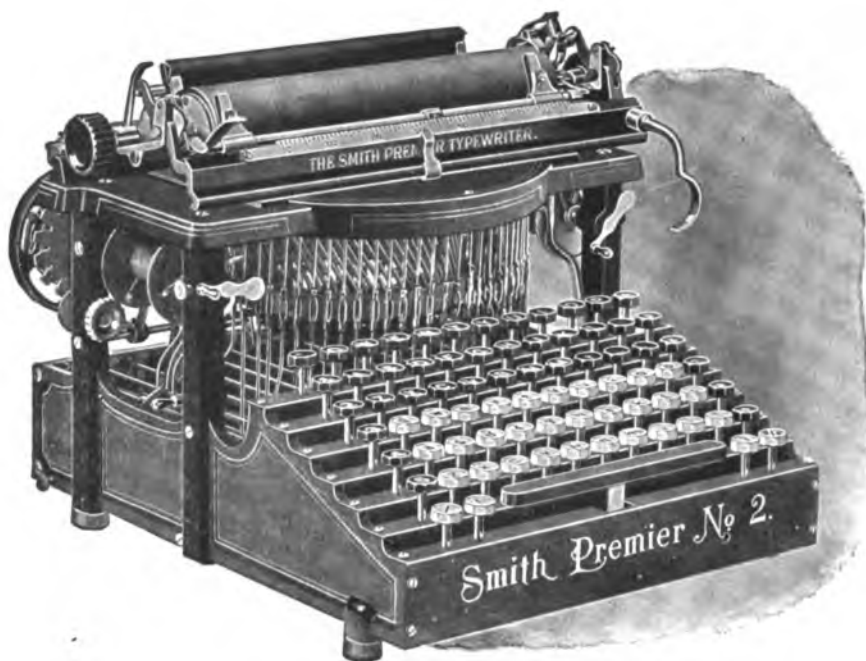
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Published on the 1st and 16th of every month.

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One Copy, One Year, - - -	\$1.50
One Copy, Six Months, - - -	.75
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253 BROADWAY, NEW YORK.

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**NEW YORK, November 1, 1902.**

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.

## It Pays to Understand the Telegraph Business.

A career that has carried a telegrapher from the position of operator to one of the higher offices in the gift of the Western Union Telegraph Company, is revealed in the recital confided to us recently by the individual concerned. The story of his upward climb in the telegraph service strikingly serves to illustrate and point a moral to the important lessons TELEGRAPH AGE has sought to impress upon the minds of operators, especially the younger element whose future lies in long perspective before them.

Twenty-five years ago the person referred to was a young operator, not particularly well versed in his business, and with no defined purpose in life. Like thousands of others, then and now, he was drifting without compass or rudder, a good fellow, careless, not exactly contented

with his position, or the outlook before him, yet having little disposition to exert himself to give the question of his own welfare much consideration, influenced, no doubt by the fact that his pay for a young man with no responsibilities was fair in amount and on the whole easily earned.

It so happened one day, that a telegraph paper came into his possession in which he read an article on the A B C of the telegraph and which, as good luck would have it, as he said, explained to him in language easily understood the simple Morse circuit and instrument. For ten years he had, with growing expertness, been able to receive by sound and manipulate the key; but of the principles, the technique, governing the telegraph, he knew but little. Its elementary revelation, even, was new to him. Naturally of a bright mind his interest in the subject, with which he had so long been superficially associated, at best, became aroused and he read and studied with avidity all that came in his way treating of the technical side of his profession. He became a buyer of telegraphic books, thus beginning the collection of a library that has since grown to be a large and well selected store of volumes, the reference value of which he declares to be of inestimable worth. His hunger for further knowledge grew upon what he fed, and his ambition to excel in his profession became a dominant trait in his character, in marked contrast with his former apathy.

At last when he felt assured that he knew more of the science of his business, of the construction of the telegraph, of its operation, etc., than is usual to the average operator, he requested one of the wire chiefs in the office where he was employed, to let him have a "crack," as he expressed it, at balancing duplexes and quadruplexes and testing wires for trouble. His preparation demonstrated that he was equal to the task, and the success attending these first trials "made a man of me," as he said. It was about three months from the time he began to study that his manager, who it appears, had closely noted the change in his employee, remarked to him that he was apparently taking much interest in the service, and complimented him on the efficiency of his work. Shortly after he received his first reward which came in the promotion to the position of wire chief. That was his start; other promotions followed which finally placed him at the head of the office as its manager.

Recently our informant was further advanced. Each successive post he has filled thus far has received the impress of his intelligent individuality, the benefits due to his thorough understanding and execution of all the duties attaching thereto. He does not hesitate to declare that he owes his entire success achieved thus far in his chosen field, to his habits of careful study; and furthermore states, emphatically, that other members of the profession have equal opportunities with himself.

It is the will and the energy to do that enables a man to break away from the fold of indifferent-

ism or timidity that possesses so many; to take determined action looking to betterment before character has become permanently set in molds of sluggishness.

The record of the man to whom this reference has been made, may well be held up as an example worthy of emulation. Operators, many of whom deplore their condition, in order to attract attention and gain success, ought to do something more than they are actually told to do. It should be remembered that a man who does no more work than he is paid for is not paid for any more work than he does.

### **The Typewriter in Telegraph Offices.**

The very general use of the typewriter in the telegraph service has prompted the reflection whether typewriter operators were worth more, and therefore entitled to receive more pay for their services, than operators who use the pen. The subject is an interesting one from many points of view. With a desire to obtain some definite official expression regarding the matter we recently put the question to a number of chief operators and others, as to the relative difference, measured by results, between those who do and those who do not use the typewriter. While opinions differ somewhat the negative view appears to be largely in the ascendancy. For, out of ten men approached two only claimed that the telegraph service is an actual gainer by reason of more matter being transmitted over a wire because of the adoption of the machine, while the other eight held to the contrary belief. The latter state that while the operator may perform his work with greater ease by means of the typewriter, as a matter of fact it enables him to handle no more messages, and therefore cannot be regarded as a wire saver.

Regarding the collateral question of typewriter ownership now required of the individual, it is maintained on the part of the officials that as the use of the instrument simplifies and lessens the operators' work, and so inures to his benefit, it is proper that he, and not the companies, should bear the expense of purchase.

The further question propounded, of whether the retroactive influences induced by the use of the typewriter tends to develop a first class operator out of a second class man, was answered in the affirmative. At this point, however, the sequence of development from the lower to the higher, appears to be restricted for many chiefs are of the opinion that the typewriter does not improve the work of what is termed a third class operator.

By way of explanation it may be remarked that a second class operator is usually denominated as such because of his inability to reduce to legible writing the incoming message. While he can easily receive from the sounder, he fails readily to transcribe and so breaks occasionally in his endeavor to catch up. A third class operator is described to be one who, while he can send and re-

ceive fairly well, lacks the requisite education and mature judgment essential to good work. In his case the use of the typewriter, if anything, makes more glaring his deficient schooling. Punctuation and the use of capitals are of little moment to him. As one of this order remarked, when reprimanded for his slovenly typewriting work in using too many capitals, he would hereafter begin only every other word with a capital and hoped that that would give better satisfaction.

While the use of the typewriter in telegraph offices has undoubtedly resulted in the production of more readable copy and materially minimized the labor and consequent fatigue of the operators, it would appear that there are no more messages actually handled per individual than before its introduction.

It is interesting to note that quite a number of chief operators still express a preference for the pen, attributable, no doubt, to the remembrance of the beautiful copy formerly turned out by members of their staffs. But the typewriter, modern and practical, has long since robbed the telegraph of all sentiment in this particular.

### **The Pocket Edition of Diagrams, Etc.**

The Journal of the Telegraph, the official business publication of the Western Union Telegraph Company, has the following to say in its issue of October 20, commendatory of the Pocket Edition of Diagrams, etc., which is now having such a large sale among telegraphers everywhere: "Probably the most satisfactory and complete work respecting the telegraph, from the standpoint of the operator, is that entitled "Pocket Edition of Diagrams and Complete Information for Telegraph Engineers and Students," by Willis H. Jones, published by Telegraph Age, of New York. The subject is simply treated in a clear and lucid way, with abundant information, made plain by copious illustrations, and brings to the telegrapher the kind of knowledge he most needs to aid him in his daily occupation, furnishing him with a key to the better grasp of its details. It is the product of a practical telegrapher, still engaged actively in his profession, and is now in its second edition, although first published in June last. The price is \$1.50, and is supplied by Telegraph Age, 253 Broadway, New York."

### **Will Some One Answer This?**

A correspondent wishes to know whether or not it is within the province of the employer's interest to know whether he was married or single, whether he saved his money and paid his debts or whether he squandered his earnings; whether he was lazy or ambitious; whether he was clean and tidy, or dirt and slovenly; whether he understood the instruments he worked or whether he depended upon the chief operator to adjust his relay or balance his duplex or quadruplex; whether he was generally liked or disliked by other employees; whether he progressed in knowledge or stood still; whether he was a grumbler and kick-or, or a cheerful worker?

### A New Southern Assistant Superintendent.

Mr. Lewis J. Maxwell, for fourteen years manager of the Western Union Telegraph Company at Savannah, Ga., has been promoted to be assistant superintendent of the lately consolidated third and fifth districts of the Southern Division, of which Mr. B. F. Dillon, of Jacksonville, Fla., is superintendent.



LEWIS J. MAXWELL.

Who Has Been Appointed an Assistant Superintendent by The Western Union Telegraph Company.

Mr. Maxwell is one of the best known men in the Western Union service in the South, and his selection for the post he now occupies has met with very general approval throughout the section where he is best known, because of his fitness gained by long experience and worth as a man. He was born at Griffen, Ga., in 1865. His telegraphic career commenced at the age of fourteen years, when he was placed in charge of the branch telegraph office at the Brown House, Macon, Ga. Showing an aptness for telegraphy, he also developed those characteristics of energy, accuracy and accomodation which go far in the making of successful men in any calling. In this position young Maxwell saved enough money to complete his education, and after two years thus spent at the key, he attended a course of study at the University of the South, at Suwanee, Tenn. Returning to his chosen calling in 1883 he worked as an operator at Macon, Ga., Charlotte, N. C., and Lynchburg, Va., and soon gained recognition as a first class operator.

In 1885 he received an appointment as manager of the Southern Telegraph Company at Augusta, Ga., a position he continued to hold until 1888 when the consolidation of his company with the Western Union went into effect, a union that relegated Mr. Maxwell again to the key. A man of his abilities, however, could not remain long in that subordinate position, and at the end of six

months he was promoted to the managership of the Savannah office by Superintendent Brenner, lately retired.

This position he has continued to hold from that time until his recent advancement, bringing the office up to a high standard of excellence and gaining for himself the full confidence of his official superiors.

### The Western Union Manager at Washington, D. C.

Mr. Henry Franklin Taff, manager of the Western Union Telegraph Company, at Washington, D. C., is a native of that city, where he was born on August 8, 1867, and in which his entire career has been passed. He entered the Western Union employ as a messenger at the Capitol, in October, 1881. Bright and ambitious, he soon earned promotion and was advanced to the clerical department, where he filled various positions and acquired the art of telegraphy, in which he quickly became proficient. This led to his transfer to the operating department where he served with great acceptability; his assignment being principally at the Capitol. After a period of eight years devoted to the telegraph interests, during which time he fittingly proved his special abilities in that service, he resigned in 1889 to accept the place of stenographer in the office of the general manager of the Southern Railway Company. Here he remained for two years when he returned to the Western Union to fill a position of similar capacity in the office of the manager. In January, 1900, he received the appointment as assistant manager and



HENRY FRANKLIN TAFF.

Manager of the Western Union Telegraph Company, Washington, D. C.

on July 7, 1902, following the death of the late lamented manager, Morrell Marean, he succeeded to the managership.



### LOW RESISTANCE RELAYS.

#### On the Reduction of Relay Resistance, the Energy Expended in the Circuit, and the Static Condition of the Line.

(Reprinted from *Telegraph Age*, August 16, 1898.)

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

The table herewith shows the energy expended in the circuit under the two conditions of the case. The resistance data is that of case No. 6 taken from the report of the committee of the Association of Railway Telegraph Superintendents at their June meeting, 1897, and with the exception of the resistance of the low-resistance relays is the same as shown in that report. The total resistance of the low-resistance relays—900 ohms—as given in that report, is the resistance of the twenty-five-ohm relay equipment. In the table herewith I have substituted for this the estimated resistance of a 37.5-ohm relay equipment. This estimate, however, is arbitrary, and is made by taking one-fourth of the 150-ohm relay equipment.

Case No. 6, from Report of Committee on Low-Resistance Relays, Association of Railway Telegraph Superintendents' Meeting of June, 1897.	Relay Resistance, 150 Ohms. Current, .030. Drop in Voltage per Relay, 4.66.			Relay Resistance, 37.5 Ohms. Current, .060. Drop in Voltage per Relay, 2.33.		
	Ohms.	Volts.	Watts.	Ohms.	Volts.	Watts.
Line, 160 miles.....	3,451	103.5	3.10	3,451	207.	12.42
36 relays.....	5,627	168.8	5.06	1,406	84.	5.06
Totals for line and relays.....	9,078	272.3	8.16	4,857	291.	17.48
277 cells Calland battery.....	831	24.9	.767			
326 cells Calland battery.....				978	58.6	3.52
Totals for circuits....	9,909	297.2	8.927	5,835	349.6	21.00

From this table it will be seen that under the former arrangement with 150-ohm relays and a working current of thirty milliamperes, the total energy expended in the line was 3.10 watts and in the relays 5.06 watts, the total in the circuit 8.16 watts. When we consider that under many conditions the insulation losses may carry away probably half of the total energy and that the resultant energy available to energize the distant relays will be reduced in a corresponding manner, we readily see why the 150-ohm relay equipment failed to work under such conditions. The already small amount of energy is readily choked off into the ground through the high-resistance insulation by reason of the high-resistance relays, and little is left to get through to the distant relays.

While it is true that in case of excessive insulation losses the battery is usually capable of, and usually does supply, an additional quantity of current to the line, it is also true and more interesting to note that with a heavily loaded 150-ohm relay equipment none of this additional current gets through to the distant relays. It merely supplies the insulation losses.

In the 37.5-ohm relay equipment the total watts expended in the line is 12.42, in the relays, 5.06—the same as in the 150-ohm relays—and the total in the circuit, 17.48 watts. From this it will be seen that the energy expended in the line is four times greater than in the 150-ohm relay equipment, where it was only 3.10 watts. The 37.5-ohm relay equipment therefore gives us energy to waste; and when wet weather comes it is partly wasted, and still, owing to the increased carrying capacity of the relay portion of the circuit, an ample quantity will get through to the distant relays. The relays having twice the carrying capacity and only one-fourth the resistance are able to carry twice the former current with only one-half the drop in voltage—2.33 volts per relay.

Under the old law, the watts expended in the relays should not exceed the watts expended in the line and battery; but even if these conditions could be fulfilled by limiting the number of 150-ohm relays in the circuit to that quantity, the working margin in wet weather would not be up to what it is in the low-resistance equipment.

Reducing relay resistance, therefore, improves the working efficiency of the circuit in two ways; first, by reducing the insulation losses—that is, by increasing the margin between the resistance of the line and the wet-weather value of the insulation resistance; and, second, by supplying a surplus of energy, so as to provide for unavoidable insulation losses and still leave a good margin for the distant relays.

The number of cells of Calland battery required to maintain 272.3 volts at the switchboard for the 150-ohm relay equipment is 277 cells, and for the 37.5-ohm relay equipment, where 291 volts are required at the switchboard, 326 cells are required. These values are obtained by Pfund's formula,

$$C R$$

$$N = \frac{E - CR'}{E - CR'}$$

The battery data is shown separately. By adding these data to the totals for the line and relays, we have the grand totals as shown.

Comparing this battery data, it will be seen that in the 37.5-ohm relay equipment the energy expended in the battery—3.52 watts—is more than four times that expended in the battery for the 150-ohm relay equipments—.767 watts, which is at the same ratio as that between the line loads for the two cases—3.10 watts in the 150-ohm line and 12.42 watts in the 37.5-ohm relay line.

The additional energy expended in the battery—internally—does not supply any loss whatever, but is an incidental and unavoidable expenditure. Where a dynamo or storage-battery plant is used, this battery expenditure is, to a certain extent, eliminated.

It is obvious that the values given in this table are normal or dry weather values. In wet weather there will be a considerable variation from the values given. The variations will be the greatest in the high-resistance circuit. During wet weather the value of the current output from the battery

may run up to sixty or eighty milliamperes on the high-resistance relay line, but this current will be dropped off by leakage all the way along the line, and the value of the line current will vary at every point on the line.

Every telegraph circuit should be a constant-current circuit, the same as an arc-light circuit; but, owing to the disadvantages under which the 150-ohm relay circuit has to work, it is far from being a constant-current circuit. The low-resistance relay circuit brings us a little nearer to a constant-current circuit.

As a summary of the matter, we see that, in order to improve the working efficiency of a heavily loaded line, we must expend more energy. Furthermore, the relay equipment must be such that the additional energy will be expended where it will do the most good. That place is in the line where it will supply the losses due to defective insulation, and still leave a margin for the distant relays.

With the high-resistance relay equipment the expenditure of additional energy will usually make the matter worse; because it is all choked off into the ground by reason of the high-resistance relays.

In quadruplex working the expenditure of additional energy during heavy weather improves the working efficiency of the neutral relay. The line having no other resistance than its own, is able to carry forward a good part of the additional energy applied.

Aside from the consideration of the case as given in this and the previous article, which appeared in TELEGRAPH AGE of August 1, 1898, (reprinted in the previous issue, October 16), there is another matter which can be considered briefly. This is the changed condition of the circuit as regards its static condition. Owing to the double-carrying capacity of the low-resistance relays, the static charge and discharge of the line will take place in shorter intervals of time, and will therefore be more simultaneous through all of the relays, and more closely in the proper phase to neutralize the currents of self-induction in the relays. It is probable that this change in the static condition of the line has more to do with the low time-constant of the low-resistance relay than anything else.

This matter is capable of practical proof. Take a pony line—which obviously has little capacity—and load it down with low-resistance relays. The retarding effect of the self-induced current will readily be seen.

LOW RESISTANCE RELAYS.

BY FRANCIS W. JONES.

The law that the maximum electromagnetic effect of a relay is secured when the line resistance equals the additive resistance of all relays in circuit (the relays being alike) is only true in the sense that you cannot arrange the windings of your relays in any other way to produce a strong-

er pull from a given battery, but as will be shown by the following figures, the resistance of relays may, to a certain extent, both be increased and decreased without decreasing their electromagnetic effect with a given battery, provided you change the gauge of wire upon them so as to fill their bobbins, which in the following example are supposed to be of proper dimensions to hold 1,456 feet of insulated No. 30 pure copper wire, giving a resistance of 150 ohms. The law is strictly true if you start by reducing the resistance of the relays and maintain the same strength of current. Having arranged the current strength and relay resistance to give a good working margin of magnetism without a harmful amount of inductance for fast Morse signals, it is my opinion that the question of line wire leakage should be attacked on the outside by the removal of its cause, rather than by unduly decreasing the ampere turns of the relays and uneconomically applying battery to overcome the loss of current. It is well known that on an escaped wire that signals can be often read upon a relay of many ampere turns when not observable on one of lower resistance.

By the following calculations it will be seen that upon a given line wire, with a given battery, the total resistance of the relays may be both higher and lower than the resistance of the line wire without decreasing their ampere turns, provided the bobbins are kept filled in each case.

Relay.	Wire.		
Ohms.	Gauge.	Mils	Feet.
37½	27	201.5	728
75	28+	150.7	1,092
150	30	100.5	1,456
300	31+	75.3	2,184
450	32	62.8	2,730
600	33	50.2	2,912

Assume line wire 3,000 ohms and battery 200 volts and 20 relays in circuit, in each case then

600 ohm relays will contain	38.8 amp. ft. of wire				
300 " " " "	48.4 " " " "				
150 " " " "	48.4 " " " "				
75 " " " "	48.4 " " " "				
37½ " " " "	38.8 " " " "				

With .050 ampere, armature 14 mils from cores in each case the inductance of three Postal standard Morse relays is

150 ohm relay	2.60 Henrys
75 " "	0.81 Henry
37½ " "	0.55 Henry

The wires of the fire alarm system at Little Falls, N. Y., recently became crossed with the heavy voltage electric light wires with the result that the fire alarm boxes were entirely destroyed, and in some cases the poles themselves, holding the boxes, also caught fire and were burned.

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

### The Pension Fund Proposition.

BY EDWIN F. HOWELL, OF NEW YORK.

You have laid before the fraternity, in a recent issue the report of the special committee which was appointed at a mass meeting held in New York for the purpose of examining into the subject of pensions for telegraphers. The work of the committee was careful and painstaking, and I believe that it covered the ground completely and thoroughly. The report shows that as a separate proposition the scheme of pensions, to be successful, must have the support of the telegraph companies, and I might almost say must be controlled and administered by them. Included in the report will be found the replies of the executive heads of the principal telegraph companies of the United States and Canada. The President of the Canadian Pacific Telegraph Company tells us that his company has already taken up the subject in an independent way and is developing a scheme which it purposes to adopt. The official heads of the other companies show a warm personal interest in the subject and, while they realize, as we do, the vast obstacles in the way, they do not shut the door in our face. It is therefore one of the chief results of the work of this committee that the fraternity may continue this discussion, knowing and feeling that they have the good will and sympathy of the great corporations for whom they work. It is also safe to assume that if we leave the matter in its present condition, it will not die. The natural result will be that a continued agitation of the subject will result eventually in one company after another, during the next 15 or 25 years, as time, opportunity or necessity dictates, introducing its own particular plan for the care of its worn out employees.

The question before us is whether there is any course by which the entire fraternity can, within a reasonable time, enlist the co-operation of the telegraph companies, secure the assistance of men who have passed through our ranks to positions of advantage from which they are ready and able to help their less fortunate comrades, and at the same time teach ourselves the great lesson of self-help.

We can do this only by consolidation. The fraternity has at hand several noble institutions covering portions of the field and endeavoring to better the condition of the telegrapher. We have The Telegraphers' Mutual Benefit Association which helps the families of its dead members when they most need help. We have Aid Societies organized in the principal cities, who provide sick benefits and funeral expenses for their members, and in some cases relief for the sick and destitute of the profession outside their membership. We have the Gold and Stock Life Insurance Association which affords a limited relief to the families of its members after death. Let us consolidate them, use their present efficient organizations, enlarge their sphere, and ex-

tend their usefulness and beneficence over the whole field of the telegraphers' wants that philanthropic organization can, ought and should provide for. Let us petition the Telegraphers' Mutual Benefit Association, the Gold and Stock, the aid societies, and all other philanthropic organizations to unite in one grand institution that shall take care of us when sick, provide for our old age, bury us when we die, support our loved ones when we have passed away and even as now, save the destitute from the dishonor of Potter's field.

We can then say to our influential friends, "Come over and help us." We will then be in position to secure the recognition and support of the great corporations from whom we earn our daily bread.

### The Cable.

Mr. Charles Cuttriss, electrical engineer of the Commercial Cable Company, New York, left for San Francisco a few days since, on business connected with the new Commercial Pacific Cable.

Advices from Honolulu say it is proposed to run a line of cable from Honolulu to Fanning Island by a working agreement between the British Government and the Pacific Commercial Cable Company.

Mr. J. D. Gaines, of the Commercial Cable Company, Canso, N. S. station, has been appointed superintendent of the Commercial Pacific Cable Company, at Honolulu, Hawaii. Mr. Gaines was a New York visitor last week, en route to his new home.

The cable steamer *Colonia* which has just finished laying the Vancouver-Fanning Island section of the British Pacific Cable, before returning to London, England, will, it is understood, take soundings in the neighborhood of Midway Island and Guam in connection with the Commercial Pacific Cable Company.

Mr. Robert Bain, of the French Telegraph Cable Company, New York, has resigned to accept the appointment of clerk in charge, at the Bamfield Creek, Vancouver, B. C., office of the British Pacific Cable. His fellow workers regretted very much to part with him, as he was popular, and as a token of esteem they presented him with a silver smoker's set, suitably inscribed.

The new cable repairing steamers, *Restorer* and *Patrol*, have been launched at Glasgow, Scotland. These vessels will be in service in the Eastern Extension Telegraph Company's system in Chinese waters. Each vessel is 377 feet long by 44 feet wide and has twin screws, and both vessels are fitted with four cable tanks. It is expected that fourteen and a half knots per hour will be the speed of these ships.

The first commercial message over the new British Pacific cable between Fanning Island and Bamfield, B. C., was received in San Francisco, October 20. It read:—



Prosperity will resign. Alaha Nui from us all. It was addressed to John Wightmore, Jr., a commission merchant of San Francisco, and was signed by George B. Greig, who is known as "the King of Fanning Island."

The Eastern Telegraph Company has equipped its cable-ships with a new system of wireless telegraphy, designed by J. E. Maskelyne, Jr., for the company. He purposes to utilize the ships in an auxiliary cable service for inter-island communication or any other short stretches, where tides and rocks unduly shorten the life of a cable. Mr. Maskelyne's system makes use of a new form of coherer, dispensing with metal filings. He claims that the action is much more delicate and reliable.

Electrical Engineer Arthur Dearlove, of London, England, who superintended the laying of the British Pacific cable from New Zealand to Norfolk Island, has arrived at Bamfield Creek, a landing station of the cable on Vancouver Island, B. C., where he will for thirty days subject the cable just laid, connecting British Columbia with Fanning Island, to a severe test before accepting it from the Telegraph Construction and Maintenance Company. He expects from the perfection of the cable that a speed of 100 letters a minute will be attained. Dearlove transmitters, an invention of his own, will be used on this, the longest line in the world. It is expected the last section from Fanning Island, to Suva, Fiji Islands, will be completed by November 5, by the cable steamer Anglia.

The latest scheme to come to light to prove how eager persons are to transmit cablegrams without paying for them or to send them at the expense of some one else is as follows: A business man who had cablegrams to send each day from Paris, arranged a code before his departure consisting of names of persons. As he transacted his business each day at the French Metropolis, he would call at the office of the New York Herald, located on the Avenue D l'Opera, and register the name or names of individuals. Of course, these names constituted his cablegram, and the partners in New York simply read the "New York Herald's" list of persons registered at their Paris office to obtain a record of the business that had been transacted by their agent the day previous in that city.

#### Wireless Telegraphy.

Recently Messrs. Dr. Rutterford, F. R. S. C., and Dr. Howard T. Wilson, F. R. S. C., Dr. Boney and Prof. McLean of McGill University succeeded in establishing wireless communication between a train, which was running at the rate of sixty miles an hour, and St. Dominique station, on the Grand Trunk Road, Canada. This is the first time, it is said, that wireless telegraphy has ever been attempted from a fast moving train and the experiment was a complete success. Communication was opened eight miles before reaching the

station, and was continued for the same distance beyond.

The "Pleiades," a complete and fully equipped floating wireless telegraph station, left Philadelphia, October 11, for Quogue, Long Island, under the command of Captain O. J. Cobb, with the electricians aboard of the Consolidated Wireless Telegraph Company, of that city. This company is about to establish a wireless telegraph station at Quogue, Long Island, and the "Pleiades" carried aboard complete paraphernalia for this purpose. This station is one of a chain of wireless stations to be established along the Atlantic coast, in additions to the stations now at Atlantic City, Cape May and Lewes, Del. The wireless tower at Highlands of Navesink, N. J., is rapidly approaching completion, from which wireless messages will be transmitted and received for long distances.

#### The Railroad.

Mr. Coleman Nutter, formerly connected with the Western Union at Flagstaff, Ariz., has been appointed wire chief of the telegraph department of the Gulf, Colorado and Santa Fe Railway at Cleburne, Tex., the position of night wire chief being filled by M. F. Simmering, formerly train dispatcher at Wellington, Kans.

Mr. H. D. Teed, formerly wire chief of the Santa Fe system at Las Vegas, N. M., has been appointed assistant superintendent of telegraph of the Gulf, Colorado and Santa Fe Railway Company, with headquarters at Galveston, Tex. The position of wire chief at Las Vegas has been filled by John L. Matthews, night wire chief, Mr. Matthews' former place being given to George Wagener.

#### Telegraphs and Telephones in Madeira.

Consul T. C. Jones writes from Funchal: "The last census gives Funchal a population of 50,000 people. The city is spread over a large area, stretching up and down hill, and yet it has no public telephone. The postal service is not of the best. The common communication is by note and messenger. Several of the leading business houses have private telephones. The different villages of this island have telegraph and postal communications with this city. A wire connects with the light-house at Point St. Lourenzo, 20 miles away, and gives news of approaching steamers from the north about three hours before their arrival. The local telegraph charges are 6 cents for the first word and 1 cent for each additional word. The postal service is triweekly, and the mails are carried on foot. It seems to me that here is an opening for an enterprising American. An English company got the concession for the electric light plant, and I understand it pays well."

Subscribe for TELEGRAPH AGE, \$1.50 a year.

## LETTERS FROM OUR AGENTS.

[Advertising will be accepted to appear in this department at the rate of five cents a word, announcements to be enclosed with a border and printed under the name of the place of the advertiser. The special local value attached to advertising of this character will be apparent. Our agents are authorized to solicit advertisements for these columns, and further information on this subject may be obtained on application.

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

## WASHINGTON, D. C. POSTAL.

Miss May J. Rallo and Mr. Emery Y. Simmons, the latter manager of the messenger department of this office, were married, September 24. Several handsome presents were received, among which was a beautiful silver tea service, the gift of the employees of this office; also a handsome Japanese vase donated by Miss Mabelle Scott and Miss Myra Walter, of the book-keeping department. A northern bridal trip was taken, stops being made at New York, Philadelphia and Baltimore on the return.

Two new wires to Baltimore have been put in to accommodate rapidly increasing business, and eight new single sets of instruments, and a new repeater table, have also been added to our office.

Mr. J. P. Gooch, night manager, arrived in good time with the Presidential party, to take charge of our heavy file of press work here during the G. A. R. encampment, an event through which we passed with much success. This was due to the untiring diligence of Manager Ribble, and Chief Operator J. D. Prosser, with the assistance of Traffic Chief J. D. Trunnell, and Assistant Traffic Chief W. R. Cole, gentlemen who are equal to any emergency. The business at our branch offices was of such a heavy nature that several operators were sent from the main office to assist, among whom were J. Chapple, to the Howard House, and C. A. Burck to the Pennsylvania depot. Mr. Chas. Lowe, operator at the Connecticut avenue branch, resigned to go to Chicago, and Mr. F. R. Blackford was assigned to the place made vacant.

There were several new arrivals during the G. A. R. encampment, among whom was A. L. Thompson, formerly Western Union manager at Harrisonburg, Va. Mr. W. J. Scott, of the Chesapeake and Ohio Railway, was with Superintendent C. C. Walker's private car here during the en-

campment. Mrs. J. D. Prosser is assisting us on the extra, during this rush.

We are glad to see that Mr. H. C. Wooden, who has been very ill for several months with pneumonia and rheumatism, is able to be out again, although not yet sufficiently recovered to resume his duties at the Howard House. His place is being filled by Mr. O. H. Hullings from the main office. A new office has been opened at the Senate post-office, with Mr. C. A. Burck in charge.

General Superintendent C. C. Adams, paid us a visit on his way to Atlanta, Ga.

## BOSTON, MASS.

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

## POSTAL.

L. A. Boone, after an absence of some months at New Haven and Newport, has returned and is working a split trick.

H. B. Fuller is acting manager at Lawrence, Mass. for a few weeks.

T. J. Lawrence, who has been acting manager at Cambridge, Mass., for some months, is back and working a night trick.

T. W. McLean has been laid up for the past ten days with a slight attack of pneumonia.

E. F. Sullivan has resigned to become manager of the Federal Stock & Grain Company's office at Newport, R. I.

F. C. Frazee has returned after a years' absence. A part of this time was spent at his old home in Baldwinsville, N. Y., and the remainder of it in helping out during the summer rush at Newport, R. I.

F. E. Dumas is working nights at the "Herald."

Miss A. O'Brien, for some years manager at the Jordan Marsh Company branch, has resigned, and is succeeded by Miss G. White.

Miss B. A. Smith, night operator at an uptown branch, was the victim of a brutal assault by a negro a few nights ago, while on her way home at midnight. She succeeded in escaping from her assailant, however, with no more serious injury than a heavy blow in the face.

G. H. Merrill, from the Western Union was recently appointed assistant night chief, succeeding W. B. Tait, who was filling the position temporarily. The latter goes back to the wire of his own choice, working a night trick.

J. A. Coughlan, manager of the Broad street branch, who was confined to his house with rheumatism for a week or ten days, is able to resume his duties.

## WOODS HOLE, MASS.

Miss Emilie Blamires, for six years an operator at the New York, New Haven and Hartford Railroad depot, was married October 22, to Wm. L.

Howes, agent for the New York and Boston Despatch Company. After a two weeks' trip, the couple will settle down here.

The mackerel season is at its height, and about one hundred of those well known Cape cat-boats make this point their headquarters on account of its excellent freight and telegraph connections with Boston.

The boats average a catch of from 500 to 1,000 fish per day which are readily disposed of at 6 and 8 cents apiece. It's a grand race home each afternoon.

Numbers of city folk come here for a day mackereeling for the excellent sport it gives. A number of the cat-boats are fitted with motors.

Lineman Peterson of the Martha's Vineyard Telegraph Company has secured an option on an eighteen foot dory fitted with a motor, to chase the finny tribe in his spare moments.

#### INDIANAPOLIS, IND., WESTERN UNION

Patrick Foley, one of the best known operators of this city, died suddenly October 3.

J. W. Price, quad chief, after being laid up a few days, is again on duty.

Arthur Hamilton, who has been in the South for the past three months, has returned, and has accepted a position with the Postal Telegraph-Cable Company.

Miss Nellie Moore, after two weeks' vacation, is once more at her post.

J. E. Foley, division operator of the Pennsyl-

vania lines at Richmond, Ind., with his family, was in this city a few days recently, called hither by the death of his brother Patrick.

#### MONCTON, N. B., WESTERN UNION.

The death of Mr. Jacob Jodrey, one of the oldest telegraph operators in the maritime provinces, occurred at his home in Amherst, N. S., on September 28. His age was about 65 years.

Deceased began his career as a telegraph operator about forty years ago as station agent at Anagance, N. B. Later he entered the Western Union service, filling positions at Sackville, N. B., and Halifax, N. S., until about twenty-five years ago, when he was appointed joint ticket agent for the Inter-Colonial Railway and manager of the Western Union Telegraph Company at Amherst, N. S., a position he held until his death.

R. I. McIver of this office, has been transferred to St. John, N. B.

#### BALTIMORE, MD., WESTERN UNION.

Mr. John J. G. Riley, for the past thirty years transfer agent and cashier of this office, has resigned on account of poor health. He was at one time superintendent of telegraph of the Baltimore and Ohio Railroad, and later manager of the Bankers and Brokers' Telegraph Company. He enjoys the distinction of having been at one time the "Boss" of Andrew Carnegie.

Mr. John W. McLean, who entered the service of this company when a boy, and who has been chief clerk for many years, succeeds to the posi-

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**TELEGRAPH AGE,**

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tion of Mr. Riley. Mr. McLean has been known for a long time as a hustling agent of the Telegraphers' Mutual Benefit Association.

Mr. Samuel Conner, who began his service here as a messenger, our all round clerk and operator, has been promoted to the position of chief clerk.

Mr. Winfield Gladstone has resigned to accept a position with a telephone company.

Mr. George Kirtley, formerly with the Postal, is a recent arrival.

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

Mr. L. B. Tobin, of the Chicago bonus fire, is away on vacation, which he will spend in Chicago, New York and other points East.

John C. Hall, of the Chicago wire, nights, is working the bonus fire, vice Mr. Tobin. Manager H. Morlan of the Board of Trade office, has returned from a week's vacation. Mr. Boyden of the "Times" office acted as manager during Mr. Morlan's absence.

Mr. Sullivan, operator at Lawrence, Kans., Manager Morrison, of Beatrice, Neb., and Manager Hicks of Hiawatha, Kans., were recent visitors.

#### CHICAGO, ILL., POSTAL.

Fred Hans, our night wire chief, has been working extra in the executive offices, days. Mr. Edward Stanton is again on the floor, nights, in the Metropolitan division. Richard Raabe is now working late night trick. George Burmeister, E. G. Anderson, Mr. Knapp, E. A. Leekley and C. W. Ott are new arrivals.

#### CLEVELAND, O., POSTAL.

Noticing that the second district, western division, Postal Telegraph-Cable Company, comprising Ohio, Indiana and Kentucky has been practically neglected by your correspondents, it occurs to me that a little "shop talk" would not be out of place, and so I "take my pen in hand," as we used to say in ye olden time before stenographers and typewriters held sway, and say to your readers that in our mad rush for business we could see nothing but the almighty dollar up to this time, but it has just been noticed that Mr. W. H. Wallace, formerly of Cleveland, has been recently appointed manager at Frankfort, Ky., where he has taken unto himself a wife and is now enjoying "all the comforts of home." He should have done this long ago, but it is presumed that he forgot it.

Mr. H. H. Kelley, formerly manager at Frankfort, has been transferred to a like position at Lexington, Ky., vice Mr. S. G. Bentley.

Mr. E. J. Dolin, manager at Tiffin, O., has resigned and gone to Chicago, being succeeded by Mr. W. S. Seiferd, formerly manager at Wapakoneta, O. Mr. Seiferd is a young man of much force and is doing splendidly at Tiffin, while his brother, E. A. Seiferd has taken up the reins at Wapakoneta and hopes to drive the Postal wagon on to victory..

Mr. F. R. McMorris, of Tiffin, O., has recently been installed as manager at Eaton, O., vice Mr. J. B. Hayes, resigned.

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Mr. John H. Mathias, for the past sixteen years cashier of the Postal office at Cleveland has severed his connection with that office and has been succeeded by Mr. A. R. McGrath, who has worked his way up from the messenger force by close attention to business, and all-around ability.

Mr. W. F. Ryan, audit clerk in the superintendent's office, succeeded Mr. McGrath as general utility man, and with also act as assistant to cashier McGrath.

Mr. W. J. McGrath has succeeded Mr. Ryan as audit clerk in the office of superintendent Collins.

Messrs. W. J. Hoban, of Fostoria, and A. R. Wilson, Piqua, O., have swapped managerial positions, Piqua being Mr. Hoban's home and Fostoria being the home of Mr. Wilson.

Visitors at Cleveland recently were Mr. E. J. Nally, of Chicago, Mr. H. J. Kinnucan, of Detroit, and Mr. Thos. E. Fleming, of New York. Superintendent E. W. Collins accompanied these gentlemen to Toledo, O., and Monroe, Mich., to inspect the new line recently built by Superintendent Kinnucan between Toledo and Monroe.

#### PHILADELPHIA, PA., POSTAL.

Three weeks in charge of the office at the Broad street station waiting room was as much as Mr. W. Branch Wainwright cared to endure and he resigned to accept a more satisfactory position elsewhere. This action called for the re-appointment of the former temporary incumbent, Mr. Leo Miller.

A disappointment in not receiving an anticipated transfer was the cause of the resignation of Mrs. M. E. DeGinther, at the above-mentioned office, nights. She was succeeded by Miss Anna Corrigan from an uptown branch office.

A recent distinguished visitor to the office was Superintendent E. B. Pillsbury, of Boston.

Reporting a foot-ball game from the grounds proved a disastrous experience to Assistant Traffic-Chief Harry Thompson. As a consequence he suffered a severe rheumatic attack which kept him at home one week.

The arrival of the first child—a son—into the home of Mr. George Morris, formerly employed at this office, has caused many congratulations.

The attractions of the "Sunny South" were so enticing as to induce Mr. Joseph Hockery to leave us for Birmingham, Ala.

A change of tricks between Messrs. Lane and Harding transferred these gentlemen from day to night, respectively.

The Messrs Holtzinger, Figgs and Allen were sent to Princeton to care for the immense amount of newspaper matter filed at the Princeton-Columbia ball game.

Distinguished visitors have been very much in evidence of late, chief among whom are Messrs. E. G. Cochrane, general superintendent, of New York City, who, accompanied by Superintendent L. Lemon, made a tour of this city's branch offices, and A. W. Rinehart, manager at Pittsburg.

The removal of the Stock Exchange to its new building at 3rd and Walnut streets, which is to take place early this month, has necessitated many changes in our underground conduits to provide adequate facilities for their constantly growing business.

Departures: Joseph Hockery, Harry Tacy and J. O. Newman.

Arrivals: J. S. Hawkins, Thomas Ryan and J. P. Simons.

The work of a general utility man is most effectively being fulfilled by Mr. Joseph Eder. His latest call is to Lancaster, Pa., where he installed an office in the waiting room of the Pennsylvania Railroad Company.

#### NEW YORK CITY.

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

#### WESTERN UNION.

Early in the year TELEGRAPH AGE had considerable to say regarding the advisability of establishing a purchasing association by and among telegraphers here in New York as well as at other large centres where such an arrangement might be found practicable. It was pointed out that organizations of this character had been affected elsewhere, notably at Boston and Washington, which had effectually demonstrated their value as mediums of economical buying to members, while the stock had yielded exceptionally profitable returns to holders.

Acting upon the advice given by this journal, an organization known as the Central Purchasing Association has recently been formed in this city which from the character of the men promoting the enterprise, and the constitution and by-laws governing the same, appears to offer an exceedingly attractive means of securing to the individual the advantages of the lowest cash price in personal and household purchases, as well as of money borrowing. The workings of such an association are of so practical a nature, closely affecting the economical well being of all concerned, that its successful inauguration in the Metropolis ought to be assured.

Those interested may obtain the printed constitution and by-laws of the association, by which a clearer and more comprehensive insight may be obtained into the plans and scope of the undertaking, by addressing any of the officers. They are as follows: P. J. Tierney, president; Robert A. Griffin, vice-president; William T. Daley, treasurer; I. J. Secord, secretary. Executive Committee: P. J. Tierney, R. A. Griffin, I. J. Secord, E. E. Morison, J. K. Babcock, H. C. Possner, W. W. Price, C. H. Collins and W. H. Glover. Auditing Committee: E. A. Keene, Jr., E. J. Ryan and N. C. Sears.

Charles Loops, one of the stars of the night force, who worked the Richmond wire for some time, has resigned and gone to his home at Kins-

ton, N. C., where he will spend some time recuperating.

The son of Dennis S. Sullivan, who left home and who had not been heard from for nearly ten years, surprised his parents recently by returning. Young Sullivan is now a six footer and of 200 pounds in weight. When he left he was but twelve years of age, and slightly built.

The stork in his flight across the Borough of Kings on the evening of October 18th visited the residences of Paul Sheehan and William H. McElroy, and both fathers are correspondingly happy.

Elder Ephraim Rittenhouse of State Road, Del., father of Arthur W. Rittenhouse, of this office, died October 22, in his 83d year.

Frank Eitemiller, son of George M. Eitemiller, the well known old timer of Pittsburg, Pa., has accepted a telegraph position with the Orford Copper Company in New York.

John B. Hurd, Southern Division traffic chief, whose health during the summer was much impaired, and who has been under medical treatment, has fully recovered.

George W. Patterson, wire chief, who recently resigned to go West on account of his health, is with the Western Union Telegraph Company at East Las Vegas, N. Mex.

Conrad A. Meyer has returned from his vacation, and Arthur M. Lewis has gone on a trip through New England to spend his.

Martin Durivan has returned from Long Branch, N. J., and is acting as relief traffic chief.

A gallery to accommodate the quad department is being erected at the western end of the main operating room; a new section is also being added to the loop switch, and improvements seem to be the order of the day.

Mr. R. Kane, a well known old time telegrapher, formerly of this office, is due to arrive from Europe, where he has been spending several months in search of renewed health.

#### POSTAL

General satisfaction greeted the announcement of the election of Clarence H. Mackay to the presidency of this company. President Mackay has moved to offices on the eleventh floor, those heretofore occupied by his father, the late John W. Mackay.

Col. A. B. Chandler, chairman of the board of directors, moves his offices from the eleventh to the tenth floor.

New offices on the tenth floor have been arranged for J. F. Skirrow, the electrician of the Eastern division and W. H. McCullom, superintendent of construction.

Harry Gibson has returned from Asbury Park, N. J., where he spent the summer.

Chief W. E. Todd has returned from the installation of quads in the various large Pennsylvania Railroad offices, east of Pittsburg.

Chief Fred Zeiss has been transferred from the Eastern division, nights, to the same division, days.

After an absence of nearly two years, Miss M. V. Conaty has returned to this office.

Arrivals.—J. H. Charles, C. P. McInerney, A. G. Sullivan, H. S. Williams, E. A. Walker, G. W. Garland, C. A. O'Connor, M. S. Nelson, H. S. Schaerf, H. M. Van Horne, J. P. Cullen W. M. Wolff, Misses C. M. Haggerty, M. Jessen, F. M. Wilson and Mrs. Lamplugh.

Mrs. H. S. Snow has recovered from her recent severe illness and is again at her post.

Misses Jennie Davies and Ruth Jessen, who have been employed in brokers' offices, are back here again.

V. C. Poe and D. J. Maxwell are absent on leave of absence.

Mr. Albert Eckert Chandler, manager of the messenger department, has returned from a three months' trip to Europe. He was accompanied by his mother, wife and brother.

#### The Telephone on the Railroad.

A New York railroad telegraph superintendent, in a recent interview published in the "American Telephone Journal," discussing the merits of the telephone and telegraph, has this to say:

"One bright boy is able to do the work performed by a number of telegraph operators. And he can do it in much less time. To show this, let us see how the two modes of communication operate. First the telegraph: An agent, at a small station along the line, wishes to communicate with our general passenger agent's office or general office in regard to rates, billing instructions or other business. He writes his message on a blank, involving considerable time and labor to him. He is also obliged to condense his request for information into as few words as possible, not being able to give a full explanation. Next, he sends it to the telegraph office, where an operator gets it, calls another operator at the other end of the wire, and then the first one, slowly and laboriously, ticks off the message, which is again written by the receiving operator. Next, a messenger boy takes the message and carries it to the party addressed. He in turn reads it, writes an answer and sends it back in the same manner. All this involves considerable labor and time. Now, let us see how the same agent can communicate with the general office by telephone. He simply goes to the telephone, calls for the 'general office, New York,' and the exchange operators do the rest. They proceed to build up the connection in exactly the same manner that toll line connections are secured, and in a few minutes the agent miles away is put in personal communication with the general offices of the company, to whom he may make a lengthy explanation, if necessary, and get a reply instantaneously.

"The uses of the telephone are not limited. It can be used in every case that the telegraph can, and in many in which the telegraph is an impossibility. Of course, at the present time we do the bulk of our business by telegraph, but in a few



years this will all be changed. One of the new uses of the telephone is in handling train orders. A second-class train may be waiting on a siding for a passenger train. The conductor of the former, by telephoning to the dispatcher's office, can obtain orders to proceed after setting the proper signals, if he finds he can reach another siding ahead of the passenger train. This was impossible before the advent of the telephone. Often a second-class train was delayed on a siding for hours, waiting for a passenger train to pass. At each siding an iron box is placed on a telegraph pole, enclosing a telephone set. This box can be unlocked with an ordinary switch key, one of which every trainman is obliged to carry. Thus trainmen can instantly get into communication from any point on the line with the dispatcher's office.

"Our general superintendent's car is equipped with a telephone set, having a cord and plug arrangement by which connection can be made at any time with the line wires. This enables the general superintendent, no matter where he may be, to keep in close personal touch with every detail of the work.

"One of the strongest reasons why every railroad system is anxious to install telephones is the fact that any one can use a telephone. In many small towns, where we have stations, there is only one telegraph operator. The communication with this place depends entirely on his being at his post. Should he be ill or meet with an accident, communication with his station would be entirely cut off. Now, by using telephones any one could receive or transmit communications. A conductor of a train could receive his orders, and in turn give them to the engineer. Or he could personally report to the proper official any trouble or breakdown or give or receive information of any kind without the necessity of employing a special operator."

### Semaphores in 1838.

In 1838 the semaphoric telegraphic system used at the Central Wharf observatory, Boston, Mass., was the most ingenious invention for the transmission of intelligence known in its simplicity and rapidity.

This system at Central Wharf consisted of an upright post, having a small arm at the top and two lower arms at convenient distances from the indicator. These arms were placed in six different positions, denoting numerals from 1 to 6, so that the arms together could be placed in 18 different positions. By permutation a sufficient number of signs was afforded to express any numeral from a unit to many thousands.

A signal book was used, called the United States telegraph vocabulary. This commercial dictionary embraced 30,000 different words and phrases, likely to occur at sea between vessels, referring to various subjects of political, nautical or commercial interest. It also contained a list

of numerals designating the names of nearly 1,700 vessels which had adopted the system.

I. R. Parker was the compiler of this telegraph vocabulary. He added in a separate volume the numerals, etc., contained in the Holyhead signal book, with the numbers given to all vessels which adopted their signals.

The marine telegraph flags for vessels corresponded with the arms of the land telegraph. There were six flags denoting numerals from one to six. They were blue and white, all of the same size, with duplicate numbers of each flag, to which was added a conversation flag, showing desire to converse.

The station on Central Wharf was connected with three in the lower harbor, on Long Island, Rainsford Island and at Nantasket; these several stations maintained a communication with the pilot boats in the bay. Hourly reports were transmitted to the reading room and insurance offices, also to the respective owners, all of whom contributed to support the establishment.

For the benefit of those who frequented and did business on State street in the cupola of the old state house the number of vessels reported below were displayed, and the location of fires which occurred were pointed out by colored balls, black balls on the north and south sides and red and yellow balls on the four corners of the cupola, denoting the fires in those sections of the city, respectively. Flags were also displayed announcing the arrival of the mails. Full information respecting this establishment was fully explained on cards furnished to contributors.

The merchants' reading room was in the old state house until 1842, when the Merchants' Exchange was built and occupied by the ship merchants, who numbered over 150.

### Britain's Telegraph Business.

In the London "Chamber of Commerce Journal" is found a rather instructive summary of the forty-eighth annual report of the British Postmaster-General, covering the operations of the department for the last fiscal year, with running comments here and there. The details of the parcels-post system are set forth, the progress made in placing advertisements through the post-office as an agent is noted, the money-order business exploited, and the fact made prominent that the postal-savings-bank system netted the department \$130,885 in clear profits last year.

"As to telegrams," says the Journal, "there was an increase of ninety-five-one-hundredths of 1 per cent. in the number sent (90,432,041), and there is again a considerable deficit on the year's working."

There seems to be one branch of business in England that paternalism in the Government cannot bring up to the point of self-sustentation. In this instance, the Journal omits to state the extent of the deficit from Government operation of the telegraph lines. "Considerable," however, may be taken to mean several millions of pounds

sterling that the Government took out of the taxpayers' pockets to pay for conducting the business after they had already paid the none-too-cheap tolls on their messages. In skillful business hands, as here in the United States, the British telegraph system could easily be made to show an annual increase above ninety-five-one hundredths of 1 per cent., and a good profit besides.

Still the Briton seems willing to put up with that sort of thing. But once let a majority of them be permitted to contrast British with American telegraph methods, and the postoffices over these would forthwith be relieved of their stupidly imposed telegraph burden.

#### An Important Point of Law Decided.

An important principle of law was established October 28, when the United States Court of Appeals, Chicago, Ill., handed down an opinion to the effect that the Western Union Telegraph Company has a right of property in the news which it gathers and that such right does not cease when the news is published on the tickers rented to its patrons. In laying down this principle the Court of Appeals affirms two decisions of the lower court and forever enjoins the National Telegraph News Company, the Illinois Commission Company and other defendants from using the quotations in question.

Magnetic Club.—The fall dinner of the Magnetic Club will be held at the St. Denis Hotel, Broadway and Eleventh street, New York, on Wednesday evening, November 19. Among the invited guests are Thomas A. Edison, the well-known inventor; U. J. Fry, of Milwaukee, Wis., and W. J. Lloyd, of Chicago, president-elect and vice-president-elect, respectively, of the Old Time Telegraphers' and Historical Association, and a number of other old-timers prominent in all walks of life.

Two messenger concerns, named the American District Telegraph Company, exist at Great Falls, Mont. Recently each company has sued the other to enjoin it from advertising as the A. D. T. company.

"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.

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#### Gold and Stock Life Insurance Association.

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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POSITIVELY CURES  
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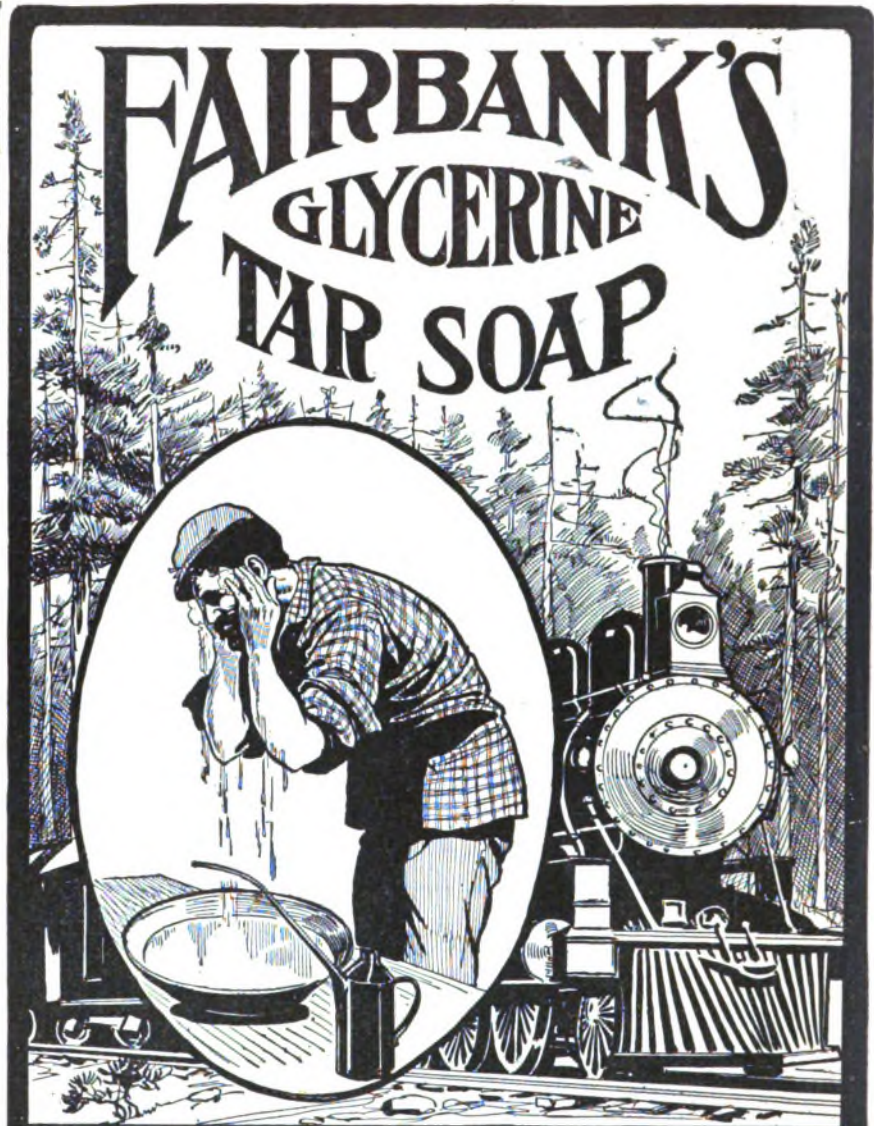
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Could I meet you---for even ten minutes---I would forever convince you that I have what these sick ones need More than that; I have that without which most of them can never get well.

I would overwhelm you with evidence---irresistibly convincing. You would go away and tell all your sick friends about it.

But I can meet only a few, so I have put what I know in six books, And I take this means to ask you who need those books.

Could you meet me, I believe you would willingly take my word.

But you cannot---so I take yours.

I trust to your honesty. Make the test at my risk, and I will pay, or you can pay, just as you decide.

Can you conceive of a sick one who will neglect an offer like that?

I can afford the offer because failures are few. They occur only when there are causes---like cancer---which medicine cannot cure.

I have furnished my Restorative to hundreds of thousands in this way, and 39 out of each 40 have cheerfully paid---because they got well. I pay just as willingly when one says I have failed.

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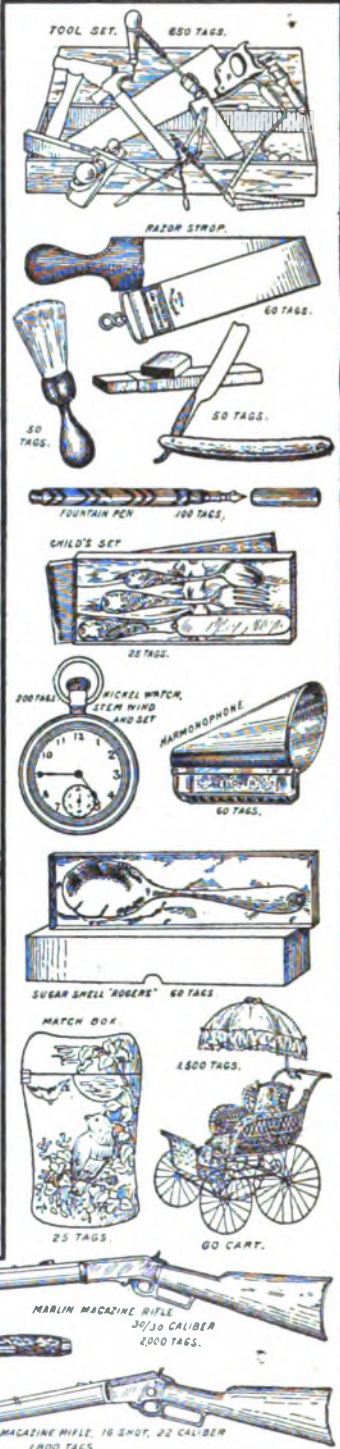
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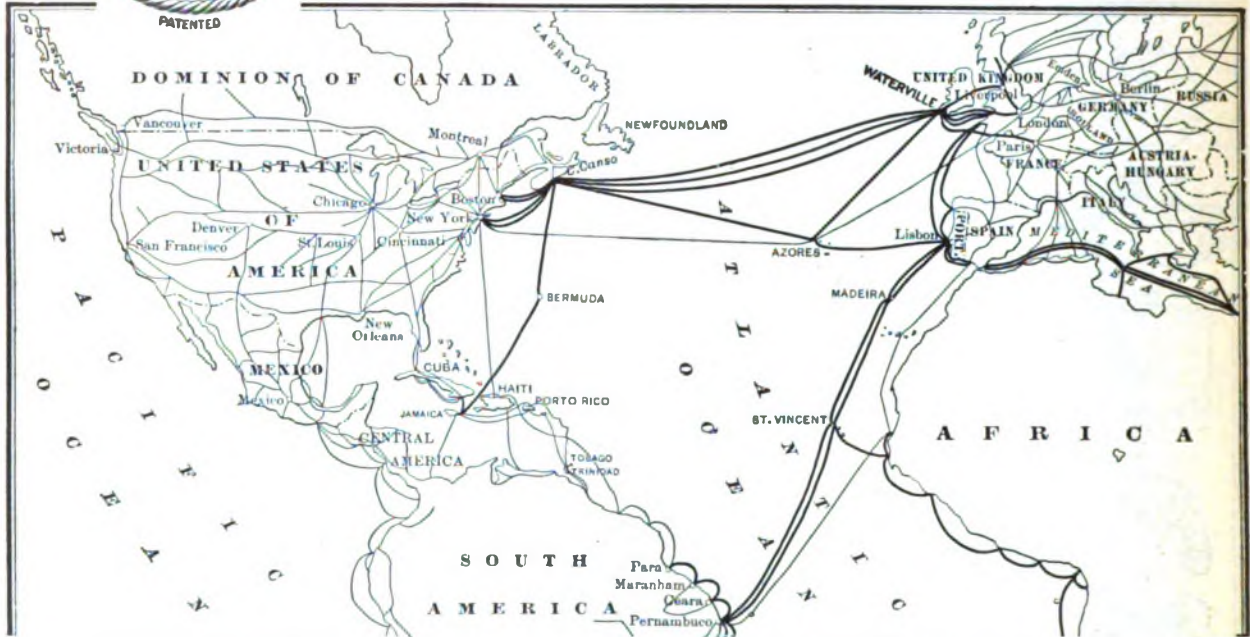


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NEW YORK, NOVEMBER 16, 1902.

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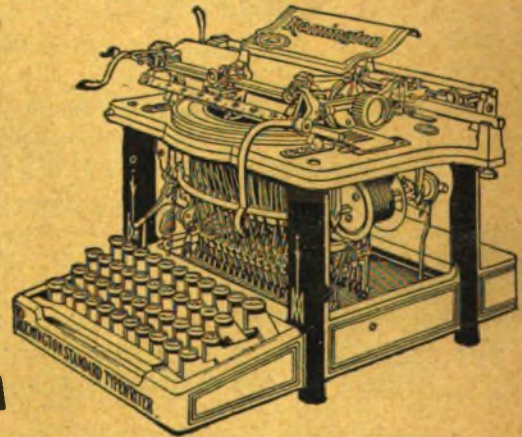
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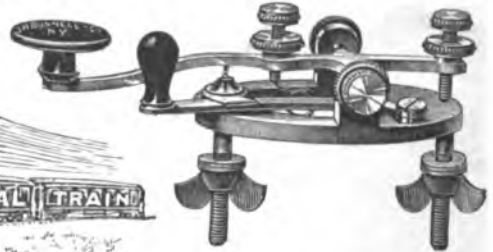
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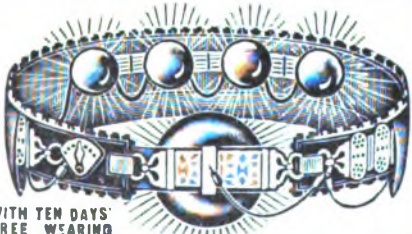
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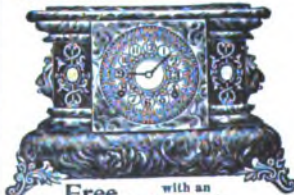
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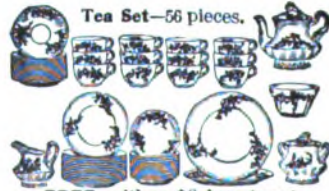
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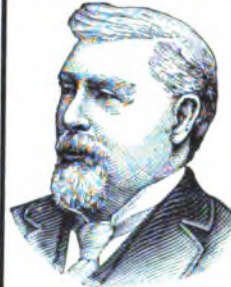
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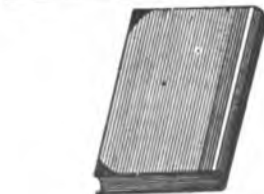


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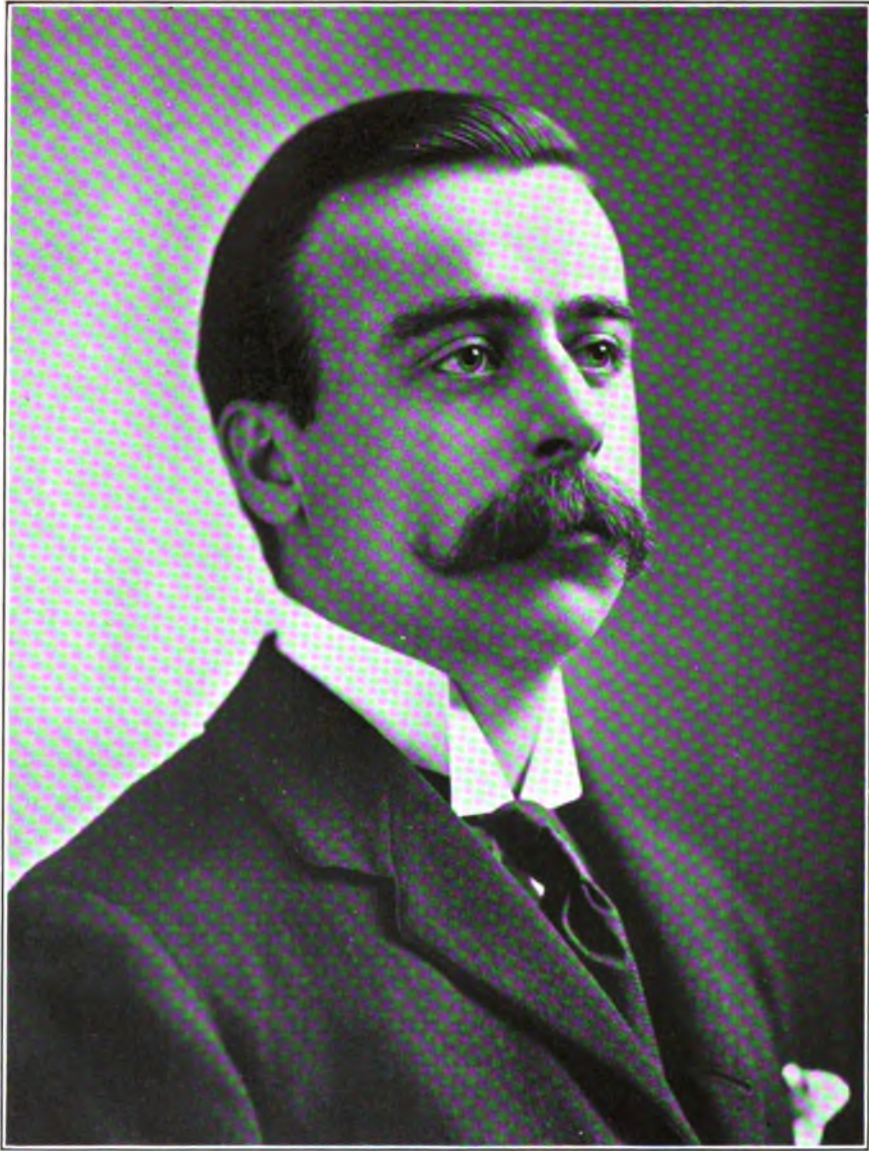


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*November 10, 1902.*



# THE TELEGRAPH AGE

No. 22.

NEW YORK, NOVEMBER 16, 1902.

VOL. XIX.

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## SOME POINTS ON ELECTRICITY.

### Adverse Properties of Positive and Negative Electricity.

WILLIS H. JONES.

In the preceding issue of this journal it was shown how loose connections and defective joints in short telegraph circuits may frequently be closed temporarily by causing an abnormally strong current of electricity to flow through them and thus burn away the accumulated dust or rust at the point where the fault, due to the resulting high resistance, lies.

There is another means, however, by which the joints may be temporarily closed other than that of the "burning away" method. It is accomplished by what might be called the "healing" method and the effect is directly opposite to the first mentioned process, inasmuch as the circuit is closed by coating the joint with a temporary metallic film due to the chemical action at that point of a positive polarity of current.

It has been found that a positive current tends to mend a weak joint while a negative current will make the defect greater. In other words a positive current will weld the joint, and a negative will eat away any film that may be making a partial connection between the ends of a broken conductor, and thereby produce a gap or opening which renders the circuit useless.

This phenomenon may be easily verified by alternately causing a positive and a negative cur-

rent of electricity to flow through a defective river cable, one that is not actually open, but badly escaped.

If you insert a relay in the cable circuit and adjust it so that, with a negative current flowing, it will just stand closed, you will observe that after a period of a few seconds the relay will "open." Decrease the tension of the retractile spring and you will find that there is still a current flowing, but much weaker than before, as the current is now eating away the connecting film and making the resistance greater. After you have readjusted the relay it will again "open" after a short period, and the experiment may be repeated many times before the circuit becomes legitimately open.

After you have practically opened the cable by this method, note the effect produced when you remove the negative current and substitute a positive battery. It will be seen that the effect obtained is directly opposite to that observed during the first experiment.

Adjust the relay so that it will just stand open. In a few moments it will close, the joint is now taking on its first coat of metallic film. Pull up the spring and see it close again. Repeat the operation and after a short time you will find that the cable is apparently as good as ever. We say "apparently," for as a matter of fact it is not anything like as good as ever for the reason that the film thus obtained is very thin and fragile, and while it might last a good while on constantly closed circuits, it will not long withstand the disruptive effect produced by making and breaking the currents during the formation of the telegraphic alphabet; hence the "weld" is in itself not a practical method of repairing cables.

The lesson to be learned, however, is that a positive current tends to heal and thereby lengthen the life of conductors and for that reason is usually employed to feed circuits which are grounded at their distant end. Telegraph companies almost invariably employ a positive polarity of current for their underground cable conductors leading to the various branch offices throughout the cities.

For long circuits, however, this method cannot be followed out for the reason that where a battery is employed at each end of the wire one must necessarily be positive and the other negative.

The application of the rule to multiplex circuits is hardly worth considering, as it is rather a debatable question whether the "closed" or the "open" position of the polechanger sends current to the line for the greater length of time. The rule for assigning the same polarity of current to

the closed contact point of all polechangers, in every office possessing them was not made, however, as many suppose, in order to take advantage of the phenomenon discussed in this article, but to make it possible to work any desired quadruplex or duplex set in one office with any distant companion set regardless of its geographical location. Were this rule not universally complied with the temporary substitution of one set for another might necessitate the rearrangement of wires connected to the relay binding posts, in order to prevent the incoming signals from arriving reversed.

#### THE BEST REPEATER.

Every now and then this journal is requested to give its opinion as to which type or pattern of single line repeater is the best.

This question was submitted to a great number of prominent telegraphers with the result that among experts the concensus of opinion seems to be that there is practically very little difference between the efficiency values of the principal standard patterns employed to-day when properly handled.

The correctness of this verdict is partially verified by the significant fact that the choice of repeater given by laymen and attendants at different repeating points throughout the country almost invariably fell to the particular pattern they happened to be using, or were most familiar with, and, as a rule, each votarie spoke well of his respective method.

If this means anything it certainly indicates that each standard type is capable of performing good work after one gets used to handling it.

The great trouble with many repeater attendants is that they do not understand the apparatus thoroughly, and consequently fail to get its full working value. Unless one can set up a set of repeaters without a diagram, or at least work out a diagram, his knowledge of the apparatus and principles employed is but superficial.

Conditions are sure to arise now and then that will disclose his weakness, but don't blame the repeater—as a type. You will find that any of the standards will do the work properly if you do yours.

#### Personal Mention.

Mr. C. Bradbury, assistant superintendent of telegraphs of British North Borneo, has resigned his position, and left for Vancouver, B. C.

Mr. Frank S. Gannon, an old time telegrapher, for the past ten years vice-president and general manager of the Southern Railway system, with headquarters at Washington, D. C., has resigned.

Miss Leila Morse, grand-daughter of Prof. Morse, sang recently at the dedication of the Kaiserin Augusta Institute, in Berlin, and was called up and complimented by the Empress, who mentioned having heard her at a school concert a few years ago.

Col. Robert C. Clowry, president and general manager of the Western Union Telegraph Com-

pany, New York, will attend the wedding of his niece, Miss Blanche Estabrook, daughter of Henry Estabrook, who will be married to Mr. Karl G. Roebing, of Trenton, N. J., in Chicago, on November 19.

Mr. B. Brooks, general superintendent, and Mr. J. C. Barclay, electrical engineer of the Western Union Telegraph Company, New York, have returned from a tour of inspection of the New England States, which also included the Western Union cable station at Canso, N. S., and other Western Union offices in the Provinces.

#### Resignations and Appointments.

Alfreda Benster has been appointed manager of the Western Union Telegraph Company at Sauk Center, Minn.

Mr. Frank Sims, of the Postal Telegraph-Cable Company, Greenville, Ala., has been appointed manager of the same interests at Athens, Ga.

Mr. M. H. Hyland has been appointed manager of the Postal Telegraph-Cable Company at Canandaigua, N. Y., vice Vina A. Granger, resigned.

Mr. M. F. Metcalf has been appointed manager of the Western Union Telegraph Company at Olean, N. Y., vice George F. Thompson, resigned.

Miss Mary Jones, manager of the Western Union Telegraph Company at Sauk Center, Minn., has been transferred to a similar position at Bozeman, Mont.

Mr. C. O. Blandin, manager of the Western Union Telegraph Company, Topeka, Kans., has been promoted to be chief clerk in the office of Superintendent J. J. Dickey, at Omaha, Neb.

Mr. Martin W. Griffin, manager of the Western Union Telegraph Company at Lockport, N. Y., has resigned on account of ill health. Mr. C. C. Osterhout, of Buffalo, N. Y., is acting manager.

Mr. G. F. McMurtry, manager of the Western Union Telegraph Company, Baton Rouge, La., has been promoted to the management of the same interests at Lexington, Ky., vice V. W. Fritter, resigned.

Ella May Dempsey has been appointed manager of the Postal Telegraph-Cable Company at Franklinville, N. Y., vice Mary M. Crowley, who goes to Salamanca, N. Y., as manager, relieving Mrs. L. Havens Dean.

Mr. J. G. Lay, chief clerk in Superintendent Dickey's office, Omaha, Neb., has been appointed manager of the Western Union Telegraph Company, at Denver, Col., vice W. H. Butler, resigned to enter other business.

Mr. Clarence C. Ramsey, manager of the Postal Telegraph-Cable Company, at Bangor, Me., has been promoted to the management of the same interests at Portland, Me. Mr. Geo. Eames, of Lewiston, Me., has been appointed to the Bangor management.

Mr. E. J. Munger, manager of the Western Union Telegraph Company, Bozeman, Mont., has been transferred in the same capacity to Anacosta, Mont., vice J. G. Davies, resigned, to accept another position in the service.

Mr. Harvey J. Lockrow, up to a few months ago, manager of the Postal Telegraph-Cable Company, at Newport R. I., has been appointed manager of the Western Union interests at the same place, vice A. Woodle, transferred to Portland, Me. Mr. Lockrow is one of the best known telegraphers in Newport.

Mr. Joseph Ahern, chief operator Western Union Telegraph Company, Jackson, Miss., has been promoted to the position of manager, vice T. P. Cummings, transferred to New Orleans. A. M. Stanley succeeds Mr. Ahern as chief operator, and Adolph L. Julienne, son of a former manager, gets Mr. Stanley's place.

Mr. George L. Ferrin, of the Western Union Telegraph Company, Newport, R. I., well known in telegraph circles throughout New England, owing to the impairment of his health, has resigned and retired permanently from the telegraph service, with which he has been continuously connected for thirty years.

#### Obituary.

W. C. Turner, an operator at Covington, Ga., died on October 28.

Charles Smith, a telegraph operator of Lexington, Ky., died at that point on October 28.

Wesley K. De Witt, aged sixty-four years, an old time telegrapher and a member of the United States Military Telegraph Corps during the Civil War, died of heart disease, October 24, at Deposit, N. Y., where he had resided for the past twenty years, being engaged in commercial pursuits. Previous to the war he was an operator on the Erie Railroad, where he earned the reputation of being one of the finest operators in the United States.

William B. Hibbard, a former superintendent of the Western Union Telegraph Company of the lines west of Omaha, died at Colorado Springs, on November 1. He had been in poor health for some time, but his death came suddenly at the end. Mr. Hibbard began his telegraph career as operator on the House Printing lines at Rochester, N. Y., and about 1856 went to Cleveland, O., where he served as an operator for several years. It was about the close of the Civil War that he was appointed to the Western Union superintendency. He left that company's employ which terminated his connection with the telegraph business, in July, 1881.

#### Organization.

In the previous issue the note under the head of Organization which stated that a general convention of telegraphers would be called to meet

at Pittsburg Pa., November 26, it was printed that the convention would be undoubtedly controlled by the International Union of Commercial Telegraphers, and would probably adopt that name. This was an obvious error for the convention will be controlled by the Brotherhood of Commercial Telegraphers, there practically being no opposition to the brotherhood now existing. The convention will take place at the Monongahela House, Pittsburg, November 26, and it is expected that a large number of delegates representing all sections of the country, will be present.

On October 26 the telegraph operators of Baltimore, Md., representing all interests, established a branch of the International Brotherhood of Commercial Telegraphers and elected officers.

The commercial telegraphers of Columbus, O., have organized. At a meeting held October 26, a local branch of the International Union of Commercial Telegraphers was formed. Thirty charter members were listed.

A local branch of the International Union of Commercial Telegraphers was formed at Dayton, O., October 26, with thirty charter members. Officers were elected as follows: W. P. Adams, president; T. W. McCullough, vice-president; R. V. Nowell, secretary-treasurer.

On November 2 a local union was formed at Des Moines, Ia., of the International Union of Commercial Telegraphers with eighteen charter members. The union is an outgrowth of the big movement in Chicago and in order that no discrimination may be practiced by employing companies, the names of the members are kept secret until such time as the order has gained strength enough to resist. The new union will take in members from any part of Iowa.

The commercial telegraphers of Pittsburg have formed an organization which is said to embrace 60 per cent. of the commercial telegraphers of the city, as follows: All of the Postal employees, 75 per cent. of the Western Union, all of Carnegie Steel Company, 90 per cent. of the broker operators and a majority of the newspaper operators.

The organization, "Brotherhood of Telegraphers," has been formed after years of hard work by Pittsburg trades unionists, and through the efforts of the American Federation of Labor. W. F. Craig, Jr., was elected president. There will be a general convention of all telegraphers at room 73, Monongahela house, November 26 to 28 inclusive. L. W. Quick and H. B. Perham, of the railroad operators, will be present. The International Telegraphers' union will be represented by delegates and their chief officers.

Over 100 telegraph operators met at the Windsor Hotel, Philadelphia, Pa., October 26, and effected an organization of a local union of Commercial Telegraphers. L. W. Quick, grand secretary and treasurer of the Order of Railroad



Telegraphers, organized the meeting and outlined the purposes of the proposed national association, which will be formed at Pittsburg on November 26. He said that within the past six weeks forty local unions had been organized, and that others were being formed all over the country. The Order of Railroad Telegraphers is the only one of many organizations formed by telegraphers that has ever been of any real service to the craft, and railroad operators throughout the country, almost without exception, are affiliated with it or in sympathy with it. The proposed organization of commercial operators will be patterned after the Order of Railroad Telegraphers.

### The Cable.

Dr. A. E. Kennelly has just returned to New York from a successful cable laying expedition in Mexican waters, for the Safety Insulated Wire and Cable Company, and has proceeded to Harvard University to take up his studies as professor of electrical engineering.

Mr. D. Cuthbert, formerly of the Direct Cable Company's Ballinskellig, Ireland, station, who was recently appointed superintendent at Fanning Island by the British Pacific Cable, has arrived at that point and writes that he is delighted with the place and the climate.

The last section of the British Imperial Pacific Cable was laid at the Fiji Islands, October 30. A congratulatory cable message to King Edward reached Buckingham Palace, London, England, October 31, being the first message sent over the line, which links the British Empire together.

Sir Sanford Fleming, at Ottawa, Ont., who suggested a Pacific cable in 1879, received October 31, the following dispatch over the Pacific cable from Premier Seddon of New Zealand:

"Delighted to congratulate you on completion of great work of Pacific cable, thus rewarding your interest and labor, forging further link to advantage of our empire."

At the banquet given by the Board of Trade of Vancouver, B. C., to commemorate the completion of the British Pacific Cable, Mr. James Wilson, the energetic superintendent of the Canadian Pacific Railroad's telegraphs at that point, came in for his share of praise for the manner in which he pushed the interests of this great cable project in British Columbia.

Charles J. Glidden, of Boston, an old time telegrapher, former president of the Erie Telephone Company, sent the first cable message around the world by way of the new British Pacific Cable, establishing a record of 39 hours and 20 minutes. He started a dispatch addressed to himself from the Hotel Touraine at 9.15 A. M., November 4. It read as follows: "Boston, Mass., via Vancouver British Cable to Australia around the world." It was received in Boston by the Western Union at 12.35 A. M. next day, 39 hours and 20 minutes after it left Boston. Three

errors were made, the message arriving: "Gleddon, Boston, armund the world," dated at Southport, Australia.

The completion of the cable line between Vancouver and Brisbane was accomplished October 30, though the first message did not get through until the following day, when the announcement was made that one dream of the imperialists was a reality. The cable is still in the hands of the contractors and will not be open for business for about two weeks. In that time it will undergo an elaborate system of test, that the officials may be satisfied that it is in thorough working order before taking it from the contractors.

The section between Bamfield Creek, B. C., and Fanning Island, which is the longest in the world, already has undergone a series of test and proved entirely equal to expectations. The great question in the success of the cable was over this enormous stretch, but it was found by test to give a speed of over one hundred letters a minute with the Deerlove transmitter. The actual time occupied in the transmission of a message from Vancouver to Sydney, Australia, will be less than five minutes in the case of a short commercial message. This time, of course, will be occupied mainly in the manual repetition of the message at Bamfield Creek, Fanning Island and Norfolk Island.

### Wireless Telegraphy.

Signor Marconi is accompanied by Marquis Solari and Mr. Kemp, chief electrician of the company, who will superintend the work of installing the wireless telegraph instruments at Glace Bay. Marquis Solari will remain until the experiments are ended. Major Flood Page, of London, accompanied the party and will witness the tests.

Signor Marconi arrived at Sydney, N. S., October 31, on board the Italian man-of-war Carlo Alberto. Much apparatus which will be used in experimenting with wireless telegraph messages across the Atlantic was refused entry for a time by the custom-house officer because the war-ship had not been regularly entered at the custom-house. The officials at Ottawa were notified and sent instructions for the goods to be released.

It is now asserted that the international congress to consider space telegraphy called by Germany will be held in Berlin toward the latter part of March next. The purpose of the convention is the discussion of the relations between the space-telegraph stations of different nations. America, Austria, England, France and Italy responded to the initiative of Germany in a most friendly spirit, and a majority of these states have intimated to the Berlin government that they will accept an invitation to such a conference on condition that the program is fixed beforehand and sent with the invitation. It is not yet quite certain whether it will be possible to draw up a program before the end of February next.

**Line Construction.\*****(Concluded from page 454, November 1.)**

The majority of the railroad companies have adopted a rule that no piece of baggage exceeding two hundred and fifty (250) pounds in weight will be received for transportation in any baggage car. You will therefore see that your tool boxes do not exceed 250 pounds in weight when moving from place to place by passenger train.

**PURCHASE OF TOOLS OR MATERIAL.**

Hereafter no tools or material will be purchased without due authority. When irons are required for self-supporting poles or for fixtures, the foreman will get prices from two or three parties, and will then report the lowest price to his superintendent for instructions, giving no order for such material without authority.

**FREIGHT CHARGES.**

When you find freight charges on material which you are to use, wire your superintendent, giving amount of same, and you will be instructed regarding payment.

**USE OF PERSONAL OR COMPANY TOOLS.**

In order to avoid difficulty which might arise from men using their own tools or claiming the ownership of tools in their possession, you will allow the use of none but company tools on work in your charge.

Ascertain if your men have any tools claimed as their own property, and record the facts for future reference. Furnish your men with such company tools as you want them to use, and make them responsible for the proper care of the same.

You will be held accountable for all tools furnished you by the company, and you must likewise hold your men accountable for what you furnish them, and see that the tools are returned to you when the men leave your service.

**USE OR DEFAACEMENT OF RAILWAY COMPANY MATERIAL.**

While working on any railroad, do not allow your men to cut the ends of ties in order to get fuel for the soldering furnace.

In construction or reconstruction work no ties or other material belonging to the railway company will be used without permission. If any foreman should allow his men to use railway material of any kind without authority, he will be held responsible personally, and be expected to pay the railway company's bills for such material.

**RAILWAY FENCES.**

Foremen employed on railroad work have permitted right of way fences to be cut and damaged, and failed to make proper repairs, resulting in stock getting on the track and being injured. When any fence is cut or broken by men working under any foreman or through the handling of any material connected with the work in his charge, he is expected to immediately repair it, and failing to do so will be held responsible for any damage that may result.

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

**CARE OF MEN IN CASE OF ACCIDENT.**

Reports should be made by wire whenever a person is injured, and prompt attention should be given to the injured one, so far as the actual necessities are concerned. If instructed to continue the salary during disability you should send the salary and expense vouchers to your superintendent for reimbursement by the legal department. Time allowed on account of injuries should be separated from the allowance for time during which work was performed.

Foremen should send as early as practicable full details of any accident, including, in addition to expense incurred,

1. Full name and residence of person injured.
2. Age and occupation.
3. How long in our service.
4. Married or single.
5. His capabilities in our service.
6. If married, names and residence of wife and children. Names of parents or nearest relative.
7. Nature and extent of injuries, to be given as fully as possible.
8. What was done with and for him.
9. Full name and address of physician who rendered first attention, accompanied by his written statement of the case whenever possible.
10. Present address of injured person.
11. Prospect of recovery.
12. Date, hour and place of accident.
13. The cause. Give full particulars.
14. Full names and addresses of all eye-witnesses with full statement in writing from each witness whenever possible.
15. Statement from other parties in gang who did not see the accident, to the effect that they did not witness it.
16. Condition of tools and material at time of the accident. If material or tools are found defective, ask for disposition of same.
17. Statement of the injured person as to the cause of the accident, and the extent of his injuries. If his statement can not be secured, give his reason for refusing to make a statement.

Promises should not be made to continue the salary or hospital expenses until the injured person is able to return to work, or for any other indefinite period.

**CARE OF AND CAUTION TO MEN TO PREVENT INJURY.**

Care must be taken to see that men are not injured by poles breaking. When the last wire is removed from old poles foremen will see that the poles are held up, either with ropes or forks, and in all cases the lineman should carry the last wire part way down the pole with him, or let it away from the pole with rope while he climbs down. The utmost care must be exercised in this matter, and no excuse will be received for failure to observe these instructions.

Do not climb or stand on wood pole braces without first testing them to see that they will safely carry your weight.

Do not stand on the inside angle of wire when it is being pulled up into position for trying.

Do not climb poles without first testing them carefully, and if any are weak, call for assistance to hold poles while working on them.

Do not use either pins or arms to assist you in climbing pole when you get within reach of arm.

Do not attempt to wedge pole top with hand-axe while pole is lying on framer's horse.

Do not stand, sit or lean on arms when working on poles, until fully satisfied the arms are strong enough to carry your weight.

Do not attempt to get on a moving hand-car from in front or one side.

Do not run hand-cars or velocipede cars closer than 150 feet apart in one direction.

Do not use a ladder while soldering or while putting on fixtures or for any other purpose without having a man to hold it.

When stringing or taking down wires above an electric light or power lead of wires, always regard those wires as alive and dangerous to life, and handle your wire entirely with rope.

When taking down old or very bad wires which are above light or power leads and liable to break and fall while handling, use a basket made of rope reaching from one pole to another, so that it will be impossible for your wire to fall on the light or power wires below.

Under no circumstances should a foreman allow a man to stand upon his climber, a step or a ladder in such a position when doing his work, that the breaking of an arm, pin, bracket or tie wire would or could endanger his safety in any way.

Foremen will read the order "Warning to Employees" (Form 1824) to every man employed under their direction, deliver a copy and take a receipt therefor as directed in the order.

Leather or canvas belts, known as safety or body belts, should not be used under any circumstances. If the situation requires it, a good rope, not less than 3-8-inch in diameter, should be used and carefully tied around the pole or fixture and around the man's body under the arms.

#### TRIMMING TREES.

Foremen should never order or allow shade or fruit trees to be cut or trimmed without first securing permission from the owners in person. Disobedience of this order will render the foreman responsible for damage if any results. As far as possible trimming should be done in the Fall, say after the 20th of November.

### High and Low Resistance Relays.

BY FRANCIS W. JONES.

The following table calculated upon international ohms at 68° F., may be of some use to those interested in the adaptation of the most effective relays to telegraph wires. The ampere feet are derived from assuming a line wire and battery resistance of 3,000 ohms with 20 relays and a battery of 200 volts. The two bobbins of the

relay between the iron core and shell are each 1.531 inch long and .4 inch deep. The core is 1.218 inch long, .375 inch diameter and 1.531 inch between the heads, both bobbins holding .443 pounds of insulated copper wire of Matthiessen's Standard, and strictly adhering to this weight of copper for all the relays it will be seen that the highest number of ampere feet is contained in the 150 ohm relays whose added resistance equals the resistance of the line wire.

WIRE.					
Relay Resistance.	Gauge.	Circular Mils.	Feet.	Lbs.	Ampere Feet.
9.28	24	404	362	.443	22.7
14.76	25	320.4	456.8	.443	27.8
23.45	26	254.1	575.4	.443	33.
37.5	27	201.5	728	.443	38.2
59.2	28	159.8	915.3	.443	43.7
75	28+	142	1028.6	.443	45.6
84	28+	134	1092	.443	46.6
94.4	29	126.7	1155	.443	47.2
117.3	29.5	113.6	1287	.443	48.1
150	30	100.5	1456	.443	48.4
186	30.5	90	1616.8	.443	48.1
238	31	79.7	1832	.443	47.2
337.5	31.7	67	2184	.443	44.7
379	32	63.2	2312	.443	43.6
435	32+	59	2478	.443	42.3
510	32+	54.5	2684	.443	40.6
607	33	50.3	2926	.443	38.6
959	34	39.75	3683	.443	33.1
1524	35	31.51	464	.443	27.7
2430	36	25	5866	.443	22.6
150	20	1022	14799	45.7	492.8
150	25	320.4	4642.5	4.5	154.6

The lack of agreement between the ampere turns of the 75 ohm and 300 ohm relays in this table and those given for the same relays respectively on page 461, TELEGRAPH AGE, of November 1st, is due to a difference in the weight of copper calculated for the wire in the two cases,—the latter being reckoned with a greater weight of copper, consequently the wire contained a greater number of feet and required slightly larger bobbins to hold it. The last two entries in the table will illustrate in a marked manner the effect of increasing the size of the wire on the 150 ohm relays. The first with No. 20 gauge and the second with No. 25 gauge wire which increase the ampere feet of a 150 ohm relay under the above conditions to 10 times, and to 3.2 times, and requiring bobbins 100 times and 10 times as large respectively.

#### LOW RESISTANCE RELAYS.

EDITOR TELEGRAPH AGE:

Referring to the discussion of the low-resistance relay question now going on in your columns: It seems to me the "poor insulation" argument is the strongest one in favor of the low-resistance relay, and as, fortunately, the insulation of most properly kept lines is not so rotten that it is necessary to throw away a large percentage of the energy, I am unable to see the reason for a general system of this kind. Of



course, with dynamo currents the question of loss is not of so much importance, but in the average conditions found throughout the country where the current is furnished by battery it does not take much figuring to determine under which system (high or low resistance relays) the better average results will be had.

So far as the time constant of the relay itself is concerned, with a fixed space for winding and the same magnetic flux, it will be the same whether the relay is wound to  $37\frac{1}{2}$  or 150 ohms. Of course, with the addition of the non-inductive resistance of the line wire the time constant of the circuit as a whole will be lower in the line equipped with the low-resistance instruments, but that this enters as a serious factor into the working of a properly equipped and adjusted Morse line is, I think, open to question.

The much-discussed law of maximum magnetic effect, which, by the way, is as true as it was before the experiments quoted at such length by one of your correspondents, is not identical with the law of maximum economy or that of quickest action; it is impracticable to even approximately comply with the law of maximum effect in the average case.

In order to work the relays it is necessary to produce a certain degree of strength in the magnet, and I am strictly with Mr. Jones in the opinion that the sensible thing to do is to put the energy where it will accomplish this object; if the desire to throw money around is too strong to hold, instead of putting it into waste energy put it into a little finer construction of instruments, and let the time of the linemen that would be devoted to keeping up the additional battery be turned to a general improvement of the line.

D. A. Starkweather.

Greensboro, N. C., Nov. 4th, 1902.

#### Magnetic Club.

The regular autumn meeting of the Magnetic Club will be held at the St. Denis Hotel, Broadway and 11th street, New York, on Wednesday evening, November 19th, 1902. Dinner will be served promptly at half past six o'clock.

Officers of the Western Union Telegraph Company, and others have been invited to be guests on this occasion, and delegates from various sections of the country to the annual meeting of the Telegraphers' Mutual Benefit Association will also be present.

On account of the death of a near relative of Mr. C. P. Bruch, Chairman of the Reception Committee, guests will be received by Mr. T. E. Fleming.

At the conclusion of the dinner there will be an intermission of fifteen minutes in the programme of the evening for social converse, and in order that those present may become better acquainted.

Mr. T. A. Brooks, Chairman of the Entertainment Committee, has secured the services of several artists whose versatilities will contribute much to the pleasures of the occasion.

#### Denver's New Western Union Manager.

Mr. James Garfield Lay, chief clerk to Superintendent J. J. Dickey at Omaha, Neb., has been appointed manager of the Western Union Telegraph office at Denver, Colo., succeeding to the position lately vacated by W. H. Butler.



JAMES GARFIELD LAY,  
New Manager at Denver, Western Union Telegraph Company.

Mr. Lay was born at Akron, Ohio, March 31, 1862, and was named for his godfather, General Garfield, afterwards President of the United States, under whom the father of the former served in the army. He commenced his business life in the telegraph service in May, 1880, as a helper to the station agent of the Kansas Central Railway, Onaga, Kan. He saw further service of this kind on the Union Pacific and other Western roads until 1891, when he went to the Denver and Rio Grande Railroad as an operator. The following year he was made manager of the Western Union office at Durango, Colo., afterwards serving for three years as superintendent of telegraph of the Denver and Rio Grande Railroad at Denver, Colo. During the year 1896 he was an operator in the Western Union office at Denver, and for five years thereafter was manager of the same interests at Lincoln, Neb. In May of this year he became chief clerk to Mr. Dickey, as stated above. Mr. Lay is popular with both employees and the public, and his recent promotion is regarded as a fitting reward for a deserving man.

"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.

### Mr. Roberson Goes With the Bunnell Company.

Mr. Oliver R. Roberson, for the past twelve years identified with the electrical engineer's department of the Western Union Telegraph Company, New York, has resigned to accept the position of electrical engineer for the Bunnell Telegraphic and Electrical Company. This well known house is one of the largest electrical manufacturing concerns in the country, and maintains three extensive and fully equipped factories, two in New York City, and one in Milford, Conn.

Mr. Roberson was born in Hunterdon County, N. J., July 12, 1859, and entered the telegraph business as an operator when quite young, working several years at the key, afterwards becoming quad chief and traffic chief in the main office of the Western Union Telegraph Company, New York. In 1890, he was assigned to the electrical engineer's department. He is the inventor of the Roberson alternating current quadruplex sys-



OLIVER R. ROBERSON.

tem which has the reputation of never failing to work quadruplex in rainy weather. His quadruplex has been described in this paper several times. Mr. Roberson is an associate member of the American Institute of Electrical Engineers. Familiar with the details and the wants of the telegraph service, his long experience well qualifies him for the new duties which face him as general inspector and designer of the highest class of telegraph apparatus manufactured by the Bunnell Company.

In the prime of life, an enthusiast in his profession, his new field of labor opens up for him an abundant opportunity for the working out of many new ideas, and his present employers are to be congratulated upon securing the services of one who should be a valuable member of their staff.

### An Important Decision.

Judge Thayer of the United States Circuit Court of Appeals at St. Paul, Minn., rendered a decision on November 3 of much importance to the Western Union Telegraph Company. Ten years ago the Great Northern Railway Company brought suit to oust the Western Union from its right of way, saying that the Western Union had no title under its contract. The case has been in the courts ever since. On November 3 the court decided that the telegraph company had a perpetual right and title to the right of way, but added that the Great Northern road was entitled to compensation for the transportation of material used in the construction of the telegraph lines, and further added that if the two companies could not agree on this compensation a master in chancery and two commissioners would be appointed to decide on the amount. The length of line involved in the controversy is 825 miles, valued at \$2,500,000, but the issue involved the right of way on all the roads of the United States, the contracts being the same as with the Great Northern. The decision is therefore of much importance to the Western Union Telegraph Company.

### 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 (published in this journal September 1), 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.

### The Messenger Boy Stamp.

The messenger boys are to have official recognition by the Government. In a few weeks the delivery stamp will have a new design of a boy riding a wheel instead of the familiar messenger rushing with a letter in his hand. The size and shape of the stamp will be kept, but the design is regarded as much more characteristic and artistic. Instead of dark blue, the new stamp will be light blue or carmine.

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



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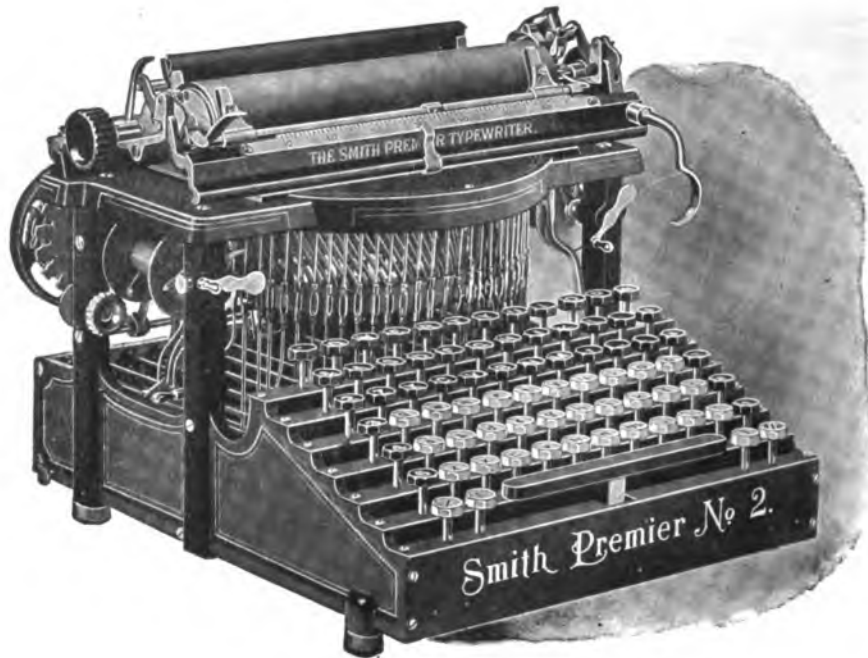



W.A.V.O.





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One Copy, Six Months, - - - -	.75
Foreign Countries, - - - -	2.00

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253 BROADWAY, NEW YORK.

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**NEW YORK, November 16, 1902.**

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.

## Organization.

From all over the country comes the intelligence of the organization of telegraphic unions composed of commercial operators. The object of such organization, thus far expressed, does not clearly reveal the true nature of the movement, for secrecy appears very largely to screen all action. Possibly the outcome of the convention called to meet at Pittsburg on the 26th inst., for the purpose of uniting the various local unions into one body, will define the situation, and the declaration, if one be reached, will be awaited with interest.

Organization among the commercial men for fraternity reasons, for mutual help and advancement, for intellectual and moral betterment, should, if properly advised and directed, have in it all of the elements of success. If conducted

along these lines it would become a powerful force securing to members many advantages. And a movement of this kind is but a natural following out of the thought and trend of the times. It but follows in the lead of such brotherhoods as that, for instance, of the Locomotive Engineers and of the Order of Railroad Telegraphers, both of which under present guidance have won for themselves enviable positions in the labor world.

On the other hand, organization if effected simply or mainly for the sake of awakening and setting in motion the spirit of opposition to employing interests, would be an evil fraught with danger and in the end disaster. It is hoped that conservative councils will prevail at Pittsburg.

In a previous article, in discussing the question of organization, the subject was concluded as follows, a paragraph which it is not out of place to repeat at this time:

"Telegraphers are a trusted, honorable body of men and women, carrying at their fingers' ends vast and varied interests that affect every individual and every home in the nation. They should not lightly look upon such a trust, but should sacredly and jealously guard it. They are in the field of labor, as a special class, and so it would seem to be well that in any telegraphers' organization only the wisest counsels should prevail, and only the most conservative leadership and methods should be permitted to govern."

## The Human Side of a Corporation.

The recent retirement of Superintendent J. A. Brenner, of Augusta, Ga., on an annuity of \$1,200, and with the salary he has lately been receiving, continued up to January 1, reveals not only a graceful, but a humanitarian act on the part of the Western Union Telegraph Company, in whose service this now venerable and well known official has long been identified, that we are glad to record. And this deed, we are further pleased to say, is but only one instance of many similar that has characterized the present management of this company in its general method attending reorganization. For, a number of other cases have come to our knowledge where, in the retirement of employees, occasioned by age or sickness, those who have been faithful in the service, during long periods of years, that generous financial provision on the part of the company has been made for them. The Western Union officials appear to be quietly solving the pension problem themselves, and in a way that is redounding to their credit.

## Overwork.

In the recent death by consumption of Mr. F. A. Sandeen, the well known telegrapher, at Boston, Mass., a striking object lesson is presented of the utter futility of maintaining health under the constant strain of overwork. It was the frequent boast of the late Mr. Sandeen that he could work twenty hours out of the twenty-four without physical injury to himself. He was a fine

operator and was capable of earning a substantial income, but nature too heavily pressed, at last suddenly gave way, as it always will under such circumstances, sooner or later, and the strong man succumbed to consumption which ran its fatal course in six months time. At the age of forty-one, a period of life that should see a man in his prime, Mr. Sandeen has passed away, a victim to his own folly, a pathetic ending. There are many other commercial operators who are drawing on life's vitality precisely as Mr. Sandeen did, and to these we sound a note of warning, emphasized by the sad example referred to. The "scooping" of what amounts to a double salary does not compensate for the loss of health and of life.

### The Electric Girdling of the Earth.

The successful laying of the first Atlantic cable was hailed by great popular acclaim; and very naturally so, because it was a tremendous advance in the means of world communication. The recent completion of the British Pacific cable across that mightiest of oceans, a hitherto untouched sea, in spans outreaching in length any before laid, is received with little public attention and the important achievement accepted as a matter of course, in striking contrast with the earlier event. And this, too, is natural, for cable laying has come to be regarded almost as a commonplace affair, yet this late consummation is a magnificent one, fairly marking an epoch, for it establishes the encircling of the globe with the electric wire, and cements the widely separated British possessions with bonds infinitely closer than ever before.

Another year should see the completion of the Commercial Pacific Cable, an enterprise of incalculable value to the United States. These two great systems, so nearly contemporary, will play momentous parts in the maintenance and development of the vast interests they are intended to serve.

### Recent Telegraph Patents.

Patent No. 711,942 has been granted to Albert C. Crehore, of Tarrytown, N. Y., for a quadruplex telegraph apparatus.

Patent No. 711,941 has been granted for a submarine cable system to Albert C. Crehore and George O. Squier, U. S. A., and assigned to the Crehore-Squier Intelligence Transmission Company, of Cleveland, Ohio.

### New York Visitors.

Mr. G. M. Dodge, manager of the Western Union Telegraph Company, Valparaiso, Ind.

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

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

### The New Head of the Mackay Properties.

Mr. Clarence H. Mackay, a fine portrait of whom accompanies this issue, and who, in consequence of the death of his father, J. W. Mackay, which occurred in London, on July 20, last, was elected president on October 4, of the Mackay telegraph properties, comprising the Commercial Cable Company, the Postal Telegraph-Cable Company and the Pacific Postal Telegraph-Cable Company, places a young man who has not yet attained his thirtieth year, at the head of these corporations. Endowed, however, with robust health, with a fine education and with a business training such as it might be expected a son of such a sterling character as J. W. Mackay would naturally receive, he takes up the magnificent work which his father laid down, with all the confidence and hope of youth, and with the continued and undisturbed assistance of those who for years have been united in the successful management of these enterprises.

In the extension of the important trusts that have been unexpectedly thrust upon him, and in the additions thereto that the near future will bring, Mr. Mackay will feel the burden of responsibility in no light measure, but that he will be able to meet all demands upon him that the exigencies of the case may impose there can be no doubt.

In assuming his new duties Mr. Mackay made the following public statement:

"The policy of the Postal Telegraph and Commercial Cable Companies will be the same as it always has been.

"I can do no better than follow along the old lines of policy."

Regarding the rumors of a merger with the Western Union he said: "The whole story is pure rubbish and I am glad to make a personal denial."

Mr. Mackay was born in San Francisco, Cal., April 17, 1874.

### Galileo and the Magnetic Telegraph.

In his dialogues on the Ptolemaic and Copernican cosmogonies, which first appeared in 1627, Galileo, says the Scientific American, places in the mouth of one of his interlocutors, Sagrado, the words: "You remind me of a man who wanted to sell me the secret of communicating with a person two or three miles distant, by means of the sympathy of two magnetized bars. When I told him that I would gladly buy his secret, but that I first wanted to see the thing proved, and that it would be sufficient for my purposes to communicate with him in his room while I was stationed in my own room, he answered that the operation could hardly be observed at so small a distance. Thereupon I dismissed him, saying that I had neither the desire nor the time to travel to Cairo or Moscow, but that if he would journey to either of these two places, I would gladly act as his correspondent in Venice."



**Promoted to an Assistant Superintendency.**

Mr. John R. Terhune, who has recently been promoted from the position of manager of the Western Union Telegraph Company, at New Or-



JOHN R. TERHUNE.

Western Union Assistant Superintendent, Nashville, Tenn.

leans, La., to that of assistant superintendent, with headquarters at Nashville, Tenn., has made an excellent record during his career in the telegraph service. He was born at Rome, Ga., in 1859, at which point he entered the Western Union employ, beginning as a messenger in August, 1874. He made rapid advancement through the various grades, reaching that of chief operator at Chattanooga, Tenn., from which he was promoted to the managership of the Lexington, Ky., office, a post he held for eighteen years, when he was transferred to New Orleans. This was two years ago, and in this larger office with its greater responsibilities, he proved his entire fitness for the trust reposed in him. In going up a step higher to a position of increased importance he carries with him the confidence and best wishes of his official superiors.

**Wonderful Speed!**

A dispatch from Budapest, Hungary, is going the rounds of the press to the effect that the much-talked-of Pollak-Vireg rapid telegraph system has been developed to the point where a four-word message was recently transmitted over one wire from Presburg to Budapest at the speed of from 50,000 to 75,000 words an hour.

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

**The New Western Union Manager at New Orleans.**

Mr. T. P. Cummings, who has lately been appointed manager of the Western Union Telegraph Company at New Orleans, La., succeeding J. R. Terhune, promoted, was born in that city on October 25, 1868. He entered the telegraph service as a Western Union messenger at Jackson, Miss., November 3, 1883. Watching his opportunities, he acquired the art of telegraphy, and in January, 1886, entered upon his duties as an operator, first at Jackson and afterward at Vicksburg and Greenville, returning to Jackson in the same capacity early in 1887. In January, 1891, he accepted the managership of the Postal Telegraph-Cable Company at Jackson, and in March of the year following transferred his allegiance to the Western Union to take charge of the office at Greenville. This position he held for eight years, when he was transferred to Jackson in February, 1900, there to succeed Mr. Julianne, who had just died, the man under whom he entered the service and from whom he received his training. His going to Jackson was made the occasion of the tender of a farewell dinner and the bestowal of a gift of money on the part of his Greenville friends. The position at Jackson he continued to fill with marked ability, in recognition of which he has now been pro-



T. P. CUMMINGS.

Western Union Manager at New Orleans.

moted to the head of the important Western Union office at New Orleans.

Mr. Cummings's career has been steadily upward. He has a fine record as an executive officer, and as an operator enjoyed a reputation as a fast and proficient sender.

### Christmas Presents.

These will soon be the subject of consideration. Let us give you a suggestion. A good book is always suitable and welcome. For operators, what could be better than books treating on the telegraph in a manner fully explanatory and making simple and clear the technicalities of their own profession, often so difficult of mastery? To bring all this down to the level required for a quick understanding of perplexing problems, requires first, the work of a thoroughly practical man, and second, the gifts of a trained writer. First, then, standing easily at the head of the list is "Pocket Edition of Diagrams, and Complete Information for Telegraph Engineers and Students," by Willis H. Jones, electrical editor of TELEGRAPH AGE. The popularity of this book is indicated by its enormous sale, it being now in its second edition, although it is less than five months since it first came off the press. This splendid work is endorsed by all leading telegraph authorities, and no operator who desires to gain a comprehensive and practical knowledge of his calling, and so fit himself for promotion, should be without a copy. It certainly constitutes a magnificent gift and will do more for a telegrapher in the way of conveying desired information than any other publication of its kind we know of. It is advertised fully on another page of this issue. This volume is \$1.50 per copy.

Next to the above and sharing with it in popularity, is the old familiar Phillips' Code. This standard work which has lately been carefully revised, and brought up-to-date by Mr. A. P. Velie, is a thoroughly tested method of shorthand arranged for telegraphic purposes, and is simply indispensable to every telegrapher as an aid in the rapid sending of press reports. It is also intended to be used as an easily acquired method for general newspaper and court reporting. The book is of convenient pocket size, bound in red flexible leather. It is advertised in another column. The price is \$1.00 per copy.

The following series of books, considered from every point of view, constitute one of the best all around telegraph libraries extant. Not only are the technicalities of the great subject fully treated, but its storied literature as well, is told in sketches that will appeal strongly to every member of the profession. As will be noticed, in several instances the prices of the books of sketches have been sharply cut. This is done in order to make the sale doubly attractive for the holiday occasion. The prices are the lowest ever named and will be in force until December 31, only.

"Sketches Old and New," by Walter P. Phillips, elegantly printed and handsomely bound. A charming souvenir of Christmas time. Price, \$1.

"Lightning Flashes and Electric Dashes," 160 pages, illustrated. An original and sparkling collection of telegraph stories, quaintly descriptive of scenes and incidents that a telegrapher will appreciate and heartily enjoy: bound in cloth: a most acceptable holiday present. Price, \$1, reduced from \$1.50.

"Telegraphers of To-day," 354 pages. This volume presents a compendium of illustrated life sketches of over 800 well-known telegraphers who have been prominently identified with the telegraph during the past fifty years; bound in cloth; an eminently fit Christmas gift to any telegrapher. Price, \$2.50, reduced from \$5.

"The Telegraph in America," by James D. Reid, 894 pages, illustrated. This book is of marked interest and worth, inasmuch as it contains telegraphic records of great historical value, not to be found elsewhere. There are only a limited number of volumes of this great work now available; bound in full morocco. This splendid legacy left by the late well-beloved "Father of the Telegraph," should find its way to many homes this holiday season. Price, \$7.

"Tales of the Sierras," by J. W. Hayes, 136 pages, illustrated. This volume, full of laughable incident, presents a collection of original and well told telegraph sketches, partaking in character largely of the former wild life of the frontier. The fun in the book, which never descends to vulgarity, is accentuated by droll illustrations by John L. Cassidy the well known telegrapher at Minneapolis, Minn; bound in cloth; will be a welcome holiday addition to any library. Price, \$1.00.

"The Quadruplex," by Wm. Mayer, Jr., and Minor M. Davis, 128 pages, 63 diagrams and other illustrations; treats of the technical side of telegraphy in a manner at once simple, comprehensive and easily understood; bound in cloth. Price, \$1.50.

"Electricity Made Simple," by Clark Caryl Haskins, 229 pages, illustrated; contains information for those whose opportunities have been limited; cloth \$1.00, paper 50 cents.

"A. B. C. of the Telephone," by James E. Homan, A. M., 335 pages, illustrated, is a practical and useful treatise for students and workers in telephony. Price, \$1.00.

"A. B. C. of Electrical Experiments," by W. J. Clark, 146 pages, illustrated; an elementary book adapted to beginners. Price, \$1.00.

"A. B. C. of Electricity," by W. H. Meadowcraft, revised edition, a brief outline, clearly stated of the simplest rudiments of electricity. Price, 50 cents.

"American Telegraphy", by William Maver, Jr., 563 pages, thoroughly illustrated. This fine work, of great intrinsic value, has long held a leading position as a work of authority in telegraphy. treating on system, apparatus and operation. Price, \$3.50.

"Commercial and Railway Telegraphy," by J. P. Abernethy, 424 pages, illustrated, discusses modern service of the same both in theory and practice, as well as that of railway station and express service, arranged in the form of question and answers. Price, \$2.

"Excelsior Webster Pocket Speller and Definer," by F. M. Payne. This careful and reliable compilation of about 22,000 words, 319 pages, is a splendid pocket companion of inestimable



value; marginal index, flexible morocco binding. Price only 50 cents.

"Wireless Telegraphy," by G. W. de Tuzelmann, 104 pages, illustrated. This is a popular exposition of wireless telegraphy, and treats the subject in all of its latest developments in a most interesting and comprehensive manner. Price, 75 cents.

Any of the above publications will be sent on receipt of price to any point in the United States or Canada, express charges prepaid. Address J. B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York.

### SMILES.

BY JOHN A. DREAMS.

In the hazy past an inexorable rule requiring segregation of sex in the Western Union, New York, main office, was rigorously enforced and flirtation, however mild, regarded little less than a capital offense. One day the presiding genius of a very heavy circuit located in close proximity to the "dead line" was detected making "Goo-Goo" eyes,—whatever they may be—at a maiden fair, and was directed to forthwith exchange places with another who revelled in the enjoyment of a soft snap far removed from feminine surroundings. To this proceeding the victim of circumstances—a model in deportment—made vigorous but unavailing protest and in reply to his expression of amazement, the culprit said: "You have been assigned to my old 'roast' because I flirted with a young lady in the city department; had I offended her you would have been fired. You ought to be glad you're alive."

Not only did his "stuph" not "carry" but in making the letter "P" the number of dots employed would put an uncovered mirror to shame in fly time. Upon being jollied by a listener on one occasion he said: "Well, what's the difference, only five of them reach Chicago anyway."

"Yes," said the check girl, "I expect to become an operator; Senator Ives is now teaching me to send." "Why don't you learn the Morse system," she was asked.

The new lineman was ordered to cover a certain section and "look for trouble." He immediately resigned ascribing as a reason therefor that, being peaceably inclined, he never looked for trouble.

"You are charged" said the chief to a new comer, just off the griddle, "with failure to check off ten numbers. What is your explanation?"

"Well," replied the N. C. innocently "I had a pretty fair average and didn't need 'em."

The annual meeting of the Telegraphers' Mutual Benefit Association will take place at four o'clock in the afternoon of Wednesday, November 19, at 195 Broadway, New York.

### Southern Pacific's New Superintendent of Telegraph.

Mr. Adolph E. Roome, who has lately been promoted to the position of superintendent of telegraph of the Southern Pacific Railway, from that of assistant, vice J. B. Donner, deceased, with headquarters at San Francisco, Cal., whence he has removed from New Orleans, was born at Mandeville, La., March 31, 1867. Early in life he studied telegraphy, and in 1884 found his first service with Morgan's Louisiana and Texas Rail-



ADOLPH E. ROOME,

Superintendent of Telegraph Southern Pacific Railway.

road Company, working for the first two years at various points along the line of that road. From 1886 to 1891 he was stationed at Morgan City, La., where he had charge of the telegraph and of the outgoing freight department; from 1891 to 1894 he was chief operator in the general office of that company at New Orleans; from 1894 to 1897 he was chief clerk to the manager's assistant, and on January 1, 1898, received his appointment as assistant superintendent of telegraph, of the Atlantic system of the Southern Pacific Company, a position from which he has just been advanced.

Mr. Roome, as his picture indicates, is still a young man, being but thirty-five years of age. He has gained his present important office on this great trunk line by sheer hard work and diligent application to business, and his career affords a striking example of what may be accomplished in any branch of the telegraph service by persistent and intelligent effort.

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.



### Walter C. Burton, Senator.

Mr. Walter Cramer Burton, chief operator of the Commercial News Department of the Western Union Telegraph Company, New York, who resides in Brooklyn, was elected State Senator from the sixth senatorial district of Kings County on the Democratic ticket on November 4.



WALTER C. BURTON,

Who Has Been Elected a New York State Senator.

Mr. Burton was born Oct. 7, 1864, at Carlisle, Wentworth County, Ont. His first experience in the telegraph service was as a messenger in the employ of the Dominion Telegraph Company, at Durdas, Ont., where later he became an operator and then manager. From a position with the Great Northwestern Telegraph Company, in Buffalo, N. Y., in 1881, he came to New York in the following year to enter the service of the Western Union Telegraph Company. His identification with the Race Bureau of the Commercial News Department dates from 1886. Here he rapidly acquired a knowledge of the varied details of his department and in 1891 was promoted and placed in charge of the force. He was the delegate of the American Telegraphers to the International Telegraph Congress, at Como, Italy, in 1899, in commemoration of the hundredth anniversary of the discovery of the Voltaic pile by Volta. His intelligent discharge of his duties as representative won for the Americans many tributes from the Italians and other delegates. The late King Humbert desired to confer a decoration upon Mr. Burton in recognition of his services, but the request was not approved by the United States Government.

Mr. Burton is active in the Royal Arcanum, United Workmen, Gold and Stock Life Insurance Association, Telegraphers' Mutual Benefit

Association, New York Telegraphers' Aid Society, Old Time Telegraphers' and Historical Association, Magnetic Club and Serial Building Loan and Savings Institution, being a director in the latter. In addition to his active interest in all associations connected with the telegraph, he has found time to take an energetic part in politics since 1894, when he was a candidate for the State Assembly on the Independent Democratic ticket, later becoming affiliated with the regular Democratic party. He was an unsuccessful candidate two years ago for the office to which he has now been elected by a handsome majority.

Mr. Burton's intellectual attainments are of a high order, he is a fluent speaker, broad minded and scholarly, and possesses the courtesy of a true gentleman. He should make a high minded and efficient legislator and add dignity and strength to the Brooklyn delegation in the Senate during the next two years.

### General Mention.

Mr. Daniel A. Hebner, late of St. Paul, Minn., is now located at Bremerton, Wash.

Mr. G. W. C. Purnell, of The Associated Press, St. Louis, Mo., has been transferred to the Galveston, Tex., Bureau.

The United States has a telegraph line in Alaska 500 miles long. The line connects Fort Gibbon and St. Michael, and it is proposed to connect Seattle with Valdez either by cable or land lines.

The Western Union Telegraph Company has bought out the Alabama Midland Telegraph Company, whose lines reach from Montgomery, Ala., to Thomasville, Ga., along the old Plant System Railroad.

Mr. Joseph Uhrig, of Chicago, Ill., an old time telegrapher, in renewing his subscription to TELEGRAPH AGE for another year writes: "There is no publication that I receive which interests me so much as TELEGRAPH AGE."

In a recent letter from Hon. M. J. Burke, American Consul, at St. Thomas, Ont., he writes: "Every 'Old Timer' extant ought to take TELEGRAPH AGE if he desires to keep abreast of the times in telegraph matters, to say nothing of the pleasure it affords in keeping track of his friends in the telegraph world."

Because of earthquake disturbances in connection with volcanic eruptions in the extreme south-eastern end of Mexico, mainly in the states of Chiapas and Tabasco, all telegraphic connections with that section was interrupted recently. The area which seems to have been disturbed extends from the Pacific Ocean on the south almost to the Gulf of Mexico on the north, a distance of about 200 miles. A number of volcanoes, including Soconusco, Sapatitlan, Tacana and Acatenango are situated within this area.

### General Greely's Annual Report.

The activity of European and Asiatic nations in establishing cable routes, each one to be controlled by a separate government, is dwelt on at considerable length by General Greely, chief signal officer of the army, in his annual report, which was made public on November 4. General Greely complains that the United States alone refrains from installing, operating and maintaining a submarine cable between this country and our Asiatic possessions. He says:

"The chief signal officer of the army has previously expressed his official opinion that the military command by the United States of the Pacific in the future will depend very largely on cable communications under its complete control. The importance of an alternate route between the Philippine Islands and the Asiatic Coast has been strongly emphasized by the interruption to the Manila-Hong Kong cable in June, 1901, which, fortunately, lasted only ten days. It is a matter of grave importance that a second route should be obtained, either by an all American Pacific cable or by connection with Borneo or Japan. As regards the supplementing of the single cable between the Philippines and the rest of the world by an alternate route to Borneo, by a cable of one hundred miles from Siasi, such action is possible only by partnership with the Eastern Extension Telegraph Company, which possesses exclusive landing rights in North Borneo for many years to come.

"An alternate route from Cape Aparri to Formosa, which would undoubtedly benefit Japan and the United States, is possible only through favorable action of the government of Japan, combined with the consent of the Great Northern Telegraph Company, a Danish corporation holding certain exclusive telegraph rights in Japan. The growing military importance of cable communication with Asia is strongly evidenced by the extension to the China coast of cable systems entirely within the control of certain governments. England and Russia are now the only nations having direct communication over wires under their control. France has taken such action as insures her communications with Tonkin through co-operation with Russia.

"Undoubtedly the most extended system will be that initiated by Germany, which will give practically an all German route. This system, partly constructed and partly in progress, will cross Asiatic Turkey to the head of the Persian Gulf, thence by cable to Sumatra, over the lines in the Dutch East Indies, by cable through South Borneo, Celebes, to the Ladrone Islands, and finally a branch cable at Palau, connecting with the existing German system on the Chinese coast. Scarcely second in importance is the Pacific cable installed by Great Britain and its colonies which, by the time this report is in print, should be in operation between Australasia and British Columbia, via the Fiji group and Fanning Island.

"The United States within the last four years has demonstrated in a manner never before seen by the world the importance of electrical communication in war, and it alone of all nations refrains from installing, operating and maintaining a submarine cable between this country and our Asiatic possessions. Such a cable in war times, while not costing half as much, would be worth half a dozen warships, as stated by competent naval authorities. Such a cable, operating at greatly reduced tariff rates, would not only pay good interest on the invested capital, but would greatly facilitate the evolution of American trade in the East by affording speedy and economical facilities to citizens of the United States.

"The official experiences of the chief signal officer of the army show unquestionably that telegraph operators and managers give their first allegiance to corporations, and, lastly, to their country; this whether they are American, English, French, Spanish, or of other nationality. Should there be failure in the present negotiations looking to a commercial transpacific cable, under such restrictions as will place that cable thoroughly under American control, whether in peace or in war, the chief signal officer believes that action should be taken for the construction and installation of an all American cable, which, in the words of the President's Message on that subject, should remain in the power of the American Government, whether in peace or in war."

And General Greely further says that the Signal Corps has built and put in working order in Alaska 1,121 miles of land lines and submarine cables within a period of twenty-four months. The accomplishment of such results, he says, would be most creditable to officers and men concerned therein if Alaska was an ordinary country, for this work included not only surveying, construction and installation of this length of line, but also involved the manufacture and inspection of enormous quantities of material, instruments, etc., many hundred tons in weight, and their transportation over distances ranging from 4,000 to 7,000 miles.

When one considers, however, the exceedingly difficult physical conditions within the territory, he says, the work must be considered simply phenomenal, as in all parts of Alaska traversed by this great length of line there are not a dozen miles of wagon road and much of the region is unexplored.

Of the work in the Philippines the report says:

"The magnificent system of telegraph lines and cables was very largely constructed and installed under Colonel Allen. This system, increased during the fiscal year by 2,600 miles, consisted on June 30, 1902, of thirty-one submarine cables, 1,326 miles in length, and land lines of 5,108 miles in length, making an aggregate of 6,434 miles. It is almost needless to say that

the work of construction and installation, under the disturbed and difficult conditions existing in the archipelago, demanded talents of the highest order. The system stands to-day a monument to the energy, skill and resourcefulness of the American soldier.

"On entering the Philippine Islands the American army found practically no existing telegraph lines, as the few land lines connecting the Visayan cables of the Eastern Extension Telegraph Company had been promptly destroyed by the insurgents, as well as the lines in Luzon, when they retreated before the advance of our army. The only lines of any importance that came into our possession were several hundred miles of dilapidated and antiquated lines in the Cagayan valley and along the west coast of Luzon."

He again calls attention to the necessity for international cable regulations, and recommends that the War Department be represented at the international telegraph conference to be held in London next year.

#### Ownership of News.

One of the most important, and also one of the most delicate, duties of the judiciary, says the New York Commercial Bulletin, is to apply legal principles created by one set of conditions to the entirely different conditions created by the lapse of time and by political changes. Legislation cannot be changed promptly enough to meet all the altered circumstances, for legislation is safest when dealing with conditions al-

ready well established and clearly recognized. It cannot be enacted to meet each particular case, and legislative bodies are not often gifted with the ability to provide for future contingencies, the comprehension of which has not been gained by experience.

The result is a good deal of "judge-made law." Occasionally the judiciary has gone too far, and has been criticised with some reason for usurping the prerogatives of the legislature and practically making a law to fit an emergency. More often the inherent conservatism of the bench, the long-established habit of keeping as close as possible to precedents, has made the courts somewhat slow—in the opinion of some persons too slow—to recognize altered conditions and adapt statutes and common law and precedents to the new facts of a constantly growing political and economic system.

On the whole, it will be generally recognized that the courts have rendered an invaluable service to the community in their discriminating use of recognized legal principles in meeting situations that were wholly unknown when those principles were established. An illustration of this is afforded by the decision of four Federal judges in Chicago, sitting as a Circuit Court of Appeals, to the effect that the Western Union Telegraph Company has a right of property in the news which it gathers, and that such right does not cease when the news is published on the tickers rented to its customers. Of course, the general question of the property right in

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news was settled long ago. This simply involves a subsidiary branch of the subject. But it is one where the ends of justice might easily be defeated by extreme literalism in the construction of law. The idea of a property right in news could hardly have been grasped by the jurists whose decisions formulated the common law, when newspapers were unknown and the collection of news as a great industry was undreamed of. Happily, in this latest application of the principles of the laws of property to that which was never thought of as property at all by the founders of Anglo-Saxon law, the courts are not in antagonism to each other; the decision in Chicago on October 28th affirmed two decisions of the lower court.

The Circuit Court of Appeals says in its opinion that the ticker and its tape is an implement "which the patron, or the patron's patron, may utilize to the end intended, but may not appropriate to some end not intended, especially if such appropriation result in injury to, or total destruction of, the service. In short, the law being clearly inadequate to that purpose, equity should see to it that the one who is served and the one who serves, each gets what the engagement between them calls for."

The news handled in this case was market quotations, used in speculative dealing, which by many members of the community is regarded as gambling, or, at least, as a form of business injurious to the community. The opinion does not discuss this phase of the matter, but recognizes that the value of all news, and therefore the profitableness of collecting and distributing news, is involved. "Is service like this to be outlawed?" asks the Court. "Is the enterprise of the great news agencies, or the independent enterprise of the great newspapers, or the great telegraph and cable lines, to be denied any appeal to the courts against the inroads of the parasite for no other reason than that the law, fashioned hitherto to fit the relations of authors and the public, cannot be made to fit the relation of the public and this dissimilar class of servants? Are we to fail in our main duty for mere lack of precedent? We choose rather to make precedent." The court will be unanimously sustained in this except by persons who desire to use in their business, and without compensation, the fruits of the labor of others.

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## 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.]

### NEW ORLEANS, LA., WESTERN UNION.

On the evening of his departure for his new field of labor Manager J. R. Terhune was presented, with a handsome silver service. The best wishes of all go with him.

A recent letter received from W. D. West, who is in Los Angeles, California, says he is fast regaining his lost health and hopes soon to be himself again. It is the hope of his many friends that such will be the case.

A son has been born to Mr. and Mrs. J. G. Gilthorpe.

R. M. Jones has gone to Atlanta, Ga.

Local agent DeLappe of the East Louisiana Railroad is quite ill.

Mrs. Frank Ross, the estimable wife of Chief Operator Frank Ross, has returned to Memphis after a brief visit.

Mr. Percy Hewitt, assistant superintendent of telegraph, A. L. Foote, chief foreman and H. C. Turner, all of the Southern Pacific Road, were recent visitors.

Wm. Allen is on the repeater staff.

Miss Petrich, daughter of N. J. Petrich, of the operating force, has been appointed time keeper and clerk to Chief Operator Ross.

Operators Gowland, Heck and Hamm are getting up a foot ball team in opposition to one recently organized by Messrs. Vidal, Ward and French.

E. W. Westerfield is the latest addition to the force.

Thomas Gerald Griffin, chief operator at Fairchild & Hobson's, was married November 4 to Miss Louise Josephine Armbruster.

### CINCINNATI, O., WESTERN UNION.

Tice Connelly, for many years assistant foreman, has been promoted to be district foreman at Pittsburg. Mr. Connelly is an expert in his line and richly deserves the promotion.

J. F. Colligan, after fifteen years service, has

accepted a position with W. E. Hutton & Co., brokers. Mr. Colligan has been secretary of the Morse Mutual Benefit Association since its organization, some ten years ago, and to his zeal and energy is due, to a great extent, its present prosperous condition.

George Derfus has been appointed assistant wire and loop chief, after long continued service on the all-night force.

Orrin Waddell has returned to the waiting list, after quite a long service at F. N. Thomas', an enlisted man having assumed the duties of operator at that station.

The Morse Mutual Benefit Association gave its annual entertainment on Friday evening, October 24, at Stamina League Hall, in the form of a prize euchre and dance.

A handsome prize list was presented for the contestants at euchre, and although a great number of the profession attended, only one or two were fortunate enough to land prizes.

Cards and music were indulged in from 8 to 10 o'clock, and during the remainder of the evening dancing was in order, and refreshments were served. The affair was ably conducted by President Neville, and Secretary Colligan, assisted by the following committee: William Keer, Frank Minning, Albert Brockmann and William Slover; Misses Annie DeLaney, Katie Sorg, Louise Eberhardt and Lizzie Curry, of the Western Union and Miss Hanna Rosenblum, manager at the Burnet House, for the Postal.

A neat sum was realized, which will go into the treasury of the relief fund of the association.

#### CLEVELAND, OHIO, WESTERN UNION.

H. D. Jones has been appointed chief clerk in the district superintendent's office, vice C. W. Douglass, resigned. Mr. Jones has been in the employ of the company at Cleveland for twenty-one years. He began as messenger for the Western Union at Erie in 1874, after which he served as operator for the Empire Line at the same place for five years, then with what is now the "Big Four" at Dayton, until he entered the superintendent's office at Cleveland as stenographer, from which position he has gradually advanced to the chief clerkship. Mr. G. G. Campbell, who was chief clerk for the superintendent of telegraph of the Cleveland, Lorain and Wheeling Railroad, succeeds Mr. Jones. The old-timers and associates of Mr. Douglass, the retiring chief clerk, presented him with a jewelled signet ring appropriately engraved, studded with one large diamond and four rubies.

M. D. Combs has been appointed traffic chief; A. Behner, night wire chief, and W. J. Leith division chief.

Mr. A. L. Dagens has returned from his recent tour of the state in the Johnson automobile. He pronounces the Hon. Thomas L. Johnson a good companion.

#### MONTREAL, QUE., CANADIAN PACIFIC.

Much activity has prevailed in this office during the present autumn, and many new records have

been made. The number of messages handled on home days exceeding the ten thousand mark. The force has also been amply increased to meet all demands and emergencies.

The following are the recent additions to the staff: Messrs. A. E. McLaren, M. A. Sheridan and E. Bergholdt, from this city; J. O'Leary, Boston; J. R. Jandorf, New York; J. H. Schraeder, South Africa; W. G. Jamieson, Halifax, N. S.; D. R. Sheehan, St. Andrews, N. B.; O. Stanton, St. John, N. B.; J. Abbott, Halifax, N. S., and G. C. Gage.

Mr. J. E. Galey had a pleasant trip lately to Truro, N. S., having gone down to meet Mrs. Galey en-route from Halifax, Nova Scotia, where she had been visiting for the past month.

Mr. Robert Bow has returned from Sault Ste. Marie, Ont., where he had been temporarily transferred, pending the arrival of Mr. Charles Mahon, who has accepted the position.

Mr. Al. Jarvis has gone on his annual deer-hunting expedition up the country.

Among the recent callers were: Manager T. W. Robinson and Mrs. Robinson, Ottawa; Mr. Wm. O'Reilly, Thomas Medley and Mr. J. MacKay, Quebec, the latter en-route to North Bay; also, Mr. C. Noble, Mr. Herb Keating and Mr. G. Gitus, of this city.

Mr. R. MacLachlan, the newly appointed superintendent of the Pacific Cable, passed through here en-route to Bamfield Creek, B. C.

#### 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.

#### WACO, TEX., POSTAL.

B. F. Shrimpton, who has managed this office for the past ten months, has been transferred to Forth Worth, where he succeeds Mr. W. Y. Nolley, who goes to Dallas. Manager Church of that office having resigned to accept a position as cashier of the Houston & Texas Central Railway at Fort Worth. Mr. W. E. Herring of Fort Smith, Ark., relieves Mr. Shrimpton.

The personnel of this office now is W. E. Herring, manager; Mrs. E. L. Boutz, day operator; Joseph T. Egan, night operator, and George Dillon, clerk.

#### EVANSVILLE, IND., NOTES.

N. B. Booth, of the Western Union, is slowly recovering from a three months' severe illness due to typhoid fever.

C. E. Shea, former manager of the Postal Telegraph-Cable Company, is now with J. J. Chandler, broker.

W. A. Boyer, the new manager of the Postal is also agent for the Telegraphers' Mutual Benefit Association. N. M. Booth started the agency

here in 1880. That year he attended the annual election of officers. The New York members treated him loyally.

The Western Union force embraces the same old staff all being first class from manager even to the colored janitor.

#### PHILADELPHIA PA.

My motto: Honorable Dealing.

D. A. Mahoney, Special Representative, Western Union Telegraph Co., Philadelphia, Pa. Send for booklet, special price, and monthly terms in the

**"TELEGRAPHERS' CLUB,"** now forming. When such stars in the telegraph firmament as Emanuel, McClintic "Jim" Gould, "Walter" Bair, "Denny" Burns, "Johnnie" Maize, and many others have adopted the No. 6 FAY-SHOLES type writer in preference to all other makes. Operators may profitably investigate its merits. All makes rented three dollars per month.

#### WESTERN UNION.

Having secured a desirable position with the Coxe Coal Company at Drifton, Pa., George Brenckman is now located at that place.

L. Smearer and Daniel McBride looked after the press matter for this company during the recent golf game at Northfield, N. J.

Wire chiefs R. C. Murray and E. L. Maize enjoyed a week's vacation recently, the former going to Portland, Me., and the latter to Washington, D. C.

C. Josephson, who relieved Manager Wilson of Bellefonte, Pa., office, has returned to duty here, the latter having recovered from a long illness of typhoid fever.

Miss Thompson, manager at Princeton, N. J., was greatly pleased with the efficient service rendered by Messrs. Emanuel, Bair, Sell, Smearer, McBride, Madden, Stoddard, Durnin and Moore during the recent football game at that place.

During the football season here Messrs. Emanuel, Burns, Baldwin and McElroy are doing good work at Franklin field, while Messrs. Uber and Shinn hold their end up at the athletic grounds in fine style.

Owing to a dul season at Altoona, Pa., office, A. P. Jones, who has been assistant to Manager Catherman, has again returned to this office.

The extra work occasioned by the recent election passed off without a ripple or hitch anywhere. Night manager J. P. MacLoraine and W. W. Donnelly, into whose hands the arrangement for special clerks and operators were given, were warmly congratulated by Superintendent Altberger, Manager Reed and Chief Operator McCammon on the very successful outcome of their labors. A substantial lunch was served at mid-night, smoking allowed and everybody was jolly till 3 A. M. when "G. N." was given. The ladies were not on duty after 6 P. M.

Mr. G. E. Sornberger, the new manager at

Williamsport, Pa., who took charge November 1, succeeding I. N. Barto, who is now located at Pittsburg, is a gentleman well known to the fraternity at large. Mr. Sornberger has had varied experiences in the telegraphic world which fully equips him for his present position. His home is in Williamsport, where he has been employed for The Associated Press for several years. Prior to that time he held responsible positions in various parts of the country. Good wishes follow him to his new position. Mr. J. G. Hoppes, of this office, succeeds Mr. Sornberger for The Associated Press.

Arrivals: A. L. Barham, Richmond, Va.; J. A. Foltz and John Moore, Atlantic City, N. J.; W. B. Powell, Denver, Colo.; W. R. Lawrence and J. W. Lee, this city, and E. R. Vandersloot, Swedesboro, N. J.

Resignations: Messrs. Eisenberg, Anderson and Purcell.

C. W. Morris, well known here, is now located with the American Can Company, this city, having resigned his position as wire chief of the telephone company.

#### PHILADELPHIA PA., POSTAL.

The newest acquisition to the executive staff in this district is Mr. C. E. Bagley, of Boston, Mass., who has been appointed manager. Mr. Bagley assumed his new duties on the 1st inst., making a most favorable impression at the start, and he can look forward to a successful career.

The foot-ball games, local as well as distant, constantly call for the services of extra men from this office, the Messrs. Holtzinger and Allen being usually called upon to go to Princeton.

The coming winter months, with the usual demand for additional help in the South, has induced Horace Holtzinger and Earl Miller to arrange for a trip with the Texas Oil Regions as the objective point.

After spening a great many years in the North Front street district as manager of a branch office, Mr. F. L. Scott has been appointed manager of the more important office at 102 South Front street, in the wool and wholesale grocers district, vice Wilbur L. Stanger, resigned.

Telegraphers in politics seem to strike a popular chord with the public. The recent state election sends Mr. George W. Dunn, our popular traffic chief, to Harrisburg, as the representative of his neighbors, in the next Legislature.

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

Our chief executive, L. K. Whitcomb, is on the Pacific Coast taking a much merited rest.

Mrs. Hammond, assistant timekeeper, left the service November 10, to go into other business. She has been associated with this office for years



and the sundering of pleasant relations was much regretted.

Miss McDonald, stenographer to L. K. Whitcomb, is quite ill at her home.

W. P. Brougham, who has been in the hospital for some time, is reported to be better and has been taken to his home.

The wife of A. Wilson, died on November 5.

Division Chief Frank Bernkie, has the sincere sympathy of all in the death of his wife, which occurred October 15.

Doctor Brand has suffered a shock of paralysis, but hopes for his recovery are strong.

Lizzie Heppe returned to this office after an absence of some years, but her stay was of short duration for she has accepted a position with Walker & Company.

All night wire chief W. L. Gilpin, has resigned and accepted a position with the Long Distance Telephone Company.

Miss Kiernan, of Fargo, N. D., was recently assigned to this office, where she bids fair to become a popular member.

Miss Ida Palmer is looking well for one who has been so very ill and she is expected to soon resume her place here.

Miss Odays has arrived from Freeport, Ill.

Mrs. Ray Finley, who came here from Maumee, O., has returned to her native town, where she and her husband will take up their residence.

Division Chief, Paul Stillman, has returned from a trip through Arkansas and Kansas.

Mr. and Mrs. Harry Mix were recently assigned here from Omaha, Neb., where they were employed by the Weare Commission Company.

Mr. Charles S. Loewenthal, an old time telegrapher, formerly employed in the Chicago Western Union office, has resigned, to accept the position of traveling salesman for a wholesale furnishing house. Mr. Loewenthal has the reputation of being a hustler.

#### QUEBEC, QUE., GREAT NORTH WESTERN.

Resigned, A. Lachenrotiere and William MacKay.

Assistant Chief M. J. O'Reilly has returned from a short vacation in Gaspé.

Mrs. Boulanger has resumed duty after a month's vacation at Fame Point.

Visitors: Superintendent A. B. Smith, Toronto; Frank Cochrane and James Tucker, Montreal.

#### MONTREAL, QUE., GREAT NORTH WESTERN.

George G. Gittus and William Burriss have returned to work after having spent the summer at Banff, Northwest Territory.

Traffic Chief R. E. McCord is back again, after an indisposition of several days.

John Lanskail, who was seriously indisposed, has resumed duty.

John Moore has returned from a two weeks' sojourn in the maritime provinces.

Leslie Hall has resigned.

Miss G. Egli has been promoted to the position of day sorter, and Miss Bessie Nilson to that of assistant sorter.

Raymond Blakiston is a new checker.

Recent callers: James Barclay, chief operator, Quebec; M. J. O'Reilly, traffic chief, and A. B. Smith, superintendent, Toronto; James Sheridan and Miss Malvina, St. Pierre.

Miss Mae Howard has resigned and left for Bath Beach, New York.

#### TORONTO, ONT., CANADIAN PACIFIC.

Business this month has shown a steady and rapid increase which at the climax has taxed the powers of the staff rather heavily, "extra" being more than plentiful for all, even with an increased force.

The personnel of the office has changed somewhat, but all the old standbys remain—F. C. Robertson, as chief operator; J. Smith, traffic chief, and H. Lillie as assistant, days; E. McSweeney in charge at night; Alexander Bennett, assistant night chief, and J. Clendening as all night chief.

The operating force is composed of Messrs. J. Christie, C. Barber, A. Grimason, J. McLean, G. McBain, Messrs. Tebo, Cumming, Mines, Coady, Hewett, Doctor Thompson, S. McMaster, Stoskopf, Murray, Pierr Morgan, Stanton; day press Matt Bayley; night press Harry Fraser. The ladies are Mrs. Murray, Miss Dobson, Miss Thorley, Miss Miller, Miss Kew, Miss Richardson, Miss Creswell and Miss Patterson.

Messrs. Hines and Hewett take care of the Stock Exchange business.

#### NEW YORK CITY.

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

#### WESTERN UNION.

Gib D. Merrill, aged fifty years, one of the best known and most expert telegraphers in the United States, committed suicide by shooting himself at his boarding place in Brooklyn, N. Y., on November 9. He left a note stating that he killed himself because he was suffering from the liquor habit. For thirty years Mr. Merrill has been a prominent figure in telegraph circles and his expert work at the key was well known from the Atlantic to the Pacific Coast.

The desk of Senator W. C. Burton, who is chief operator in the Race Bureau, was covered with flowers on November 5, when it became known that Mr. Burton had been elected to the New York State Senate. The flowers were a mark of the esteem in which Mr. Burton is held by his fellow telegraphers.

The immense amount of press matter pertaining to the election was handled easily on the night of November 4, and the service gave general satisfaction.

Mr. E. P. Griffith, inspector of the Eastern and Southern divisions, has returned from a Southern trip of two months in the interest of the service.

Mr. H. W. Sauer expects to leave for Denver, Col., within a few days, where he goes in the hope of regaining his health.

Mr. W. E. Montgomery, an operator, aged thirty-five years, died in the hospital on November 9.

The Aid Society will hold its annual entertainment and ball at Terrace Garden, 58th street and Lexington avenue, on the evening of December 5, for the benefit of the "Relief Fund." T. A. Brooks is Chairman of the Entertainment Committee, and it is said he stakes his reputation as a purveyor of entertainment on this being the best show of any that has preceded. The talent engaged is wholly professional and of high grade.

E. W. Hittell who has been on the sick list for over a year past has resumed work on the night force. He lost 125 pounds during his illness.

Miss Tessie Meyer, daughter of Conrad Meyer resigned Nov. 12, it is said for the purpose of entering an alliance which will last a life time.

#### POSTAL.

Thomas H. Lowerre, Jr., a well known New York merchant, the father-in-law of Mr. Charles P. Bruch, the assistant general manager of the company, died on Sunday the 9th inst.

Mrs. A. J. Hutchinson, of the City Department, died on November 9. She was apparently in good health on her return home Saturday night. Sunday morning she became unconscious, a state from which she did not recover.

"Taps" never sounded for a more loyal friend than when the body of John Turnan was interred at Evergreen Cemetery on Wednesday last. His death which occurred in Brooklyn on November 9, while not altogether unexpected, came as a surprise and shock to his friends. He was 48 years old. Mr. Turnan was one of the Old Guard of the Postal Telegraph-Cable Company, having been in its employ for nearly twenty years, during which time he held various chiefships. He was of a genial disposition and made friends readily. A widow and two children survive him.

Arrivals: H. M. Waters, M. Wilson, E. Kaapcke, E. M. Hargis, E. B. Stockwell.

George F. Randolph, one of the oldest operators in the postal service, has left with his wife for Denver, Col., there to take a position with the same company. Mrs. Randolph has been sick for some time, and goes to Colorado by the advice of her physician.

#### A Well Deserved Pension.

Mr. J. A. Brenner, who was lately retired by the Western Union Telegraph Company from his post of superintendent at Augusta, Ga., was given full pay until January 1 next, from which date he will receive an annuity of \$1,200.

Mr. Brenner has been in the service of the Western Union Telegraph Company for more

than half a century. He has, during all that time, been vigilant in the interests given into his keeping, devoting his well known abilities to the advancement of the affairs of the corporation.

The acknowledgment of appreciation of these services by the company is highly commended, especially in the community, where the zeal of Mr. Brenner in behalf of the company is so well known.

#### The Railroad.

Mr. E. Dickinson, an old time telegrapher, for many years general manager of the Union Pacific, has been appointed general manager of the Kansas City Mexico & Orient Railroad.

There is some talk of the five railway telegraph superintendents located in New York City and the telegraph superintendents of a number of roads adjacent to the metropolis, to meet informally about once a month to talk over matters and exchange views calculating to benefit the railroad telegraph service in general.

Mr. Amos M. McKenna, an old Santa Fe engineer, at Emporia, Kan., has invented apparatus for delivering telegraph orders to trains in motion which has been adopted by the company he works for. The invention consists of a large wire loop fastened to the end of a stout stick. Attached to the loop is a metallic case containing a written copy of the orders for the locomotive engineer or conductor. On the stick is a signal lamp and a reflector, to give notice to the engineer of the oncoming train that orders are waiting him. The station agent holds up the loop within reach of the engineer, who grasps it as he flies past. The wire loop with the orders attached automatically detaches itself from the stick and the signal lamp. This invention will obviate the necessity of stopping heavy trains at small stations for orders. Instead, the orders are telegraphed ahead of the train to the station agent, who immediately arranges his signalling device and awaits the train. Without slackening speed the engineer gets the orders.

The American Railway Association held its semi-annual meeting at Detroit, October 22, according to the "Railroad Gazette." There were present ninety delegates, representing seventy members, and President A. W. Sullivan was in the chair. The Executive Committee presented its report, containing a statement of the finances of the association, and recommending some slight changes in the by-laws. It also recommended the adoption of resolutions respecting the admission of roads to the Per Diem Agreement, which were approved by the association. The Committee on Train Rules reported decisions which it has made under Rule No. 210 and respecting "31" orders and "Train Order Blanks," which were approved. The Committee on Safety Appliances reported progress on the subject of the formulation of rules for the physical and educational requirements of employees. The Committee on

Standard Cipher Code outlined the course it purposes to pursue in the development of its work. The next meeting of the Association will be held in New York City, on April 22, 1903.

#### Interment of the Remains of J. W. Mackay.

Mrs. John W. Mackay and her daughter, the Princess Colonna, accompanied the body of the late John W. Mackay to this country, arriving at New York, November 12. The body was at once conveyed to the Mackay mausoleum, in Greenwood Cemetery, where religious services were conducted by Rev. Father Ducey. There were present Mrs. John W. Mackay and her daughter Princess Colonna; Mr. Clarence H. Mackay, Dr. Bryant, Mr. H. Lamberton, Messrs. G. G. Ward, A. B. Chandler, Wm. H. Baker, E. C. Platt, E. C. Bradley, C. R. Hosmer, Edwin Hawley, George Clapperton, Chas. F. Funk, W. W. Cook, Dumont Clark, Dr. C. F. Parker; Capt. Cushman and Mr. Farnum.

#### A Valuable Publication.

Captain Edgar Russel of the Signal Corps, has prepared under the direction of General A. W. Greely, chief signal officer of the army, an interesting volume of notes treating on the laying, repairing, operating and testing of submarine cables. It also contains a supplementary chapter on factory testing, written by Lieut-Colonel Samuel Reber, military secretary. The presentation of the topics considered, which are profusely illustrated, shows careful arrangement and statement of fact revealing a practical and competent mind. The book offers a large amount of desirable information regarding this branch of telegraph engineering that will be welcomed as a valuable contribution to the literature of the subject.

#### Things Left in Cars.

Scotch people are reputed to be very careful in clinging to their possessions, but there must be many exceptions if we are to judge by a report recently published by the Glasgow Tramway Corporation. The report says:

It is interesting to note that during the year 7,258 articles were left on cars, of which 1,162 were umbrellas, 814 bags, 294 baskets, 725 parcels of clothing, 577 purses, 16 watches and 32 sums of money. The articles claimed at the tramway office numbered 4,235, and the remainder were sent to the Central Police Office. The owners of American cars do not bother the po-

lice to look after the articles left in any of their cars.—Locomotive Engineer.

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

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

#### Gold and Stock Life Insurance Association.

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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The 20th Century Telegraph Key  
POSITIVELY CURES  
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Makes fast sending Easy.  
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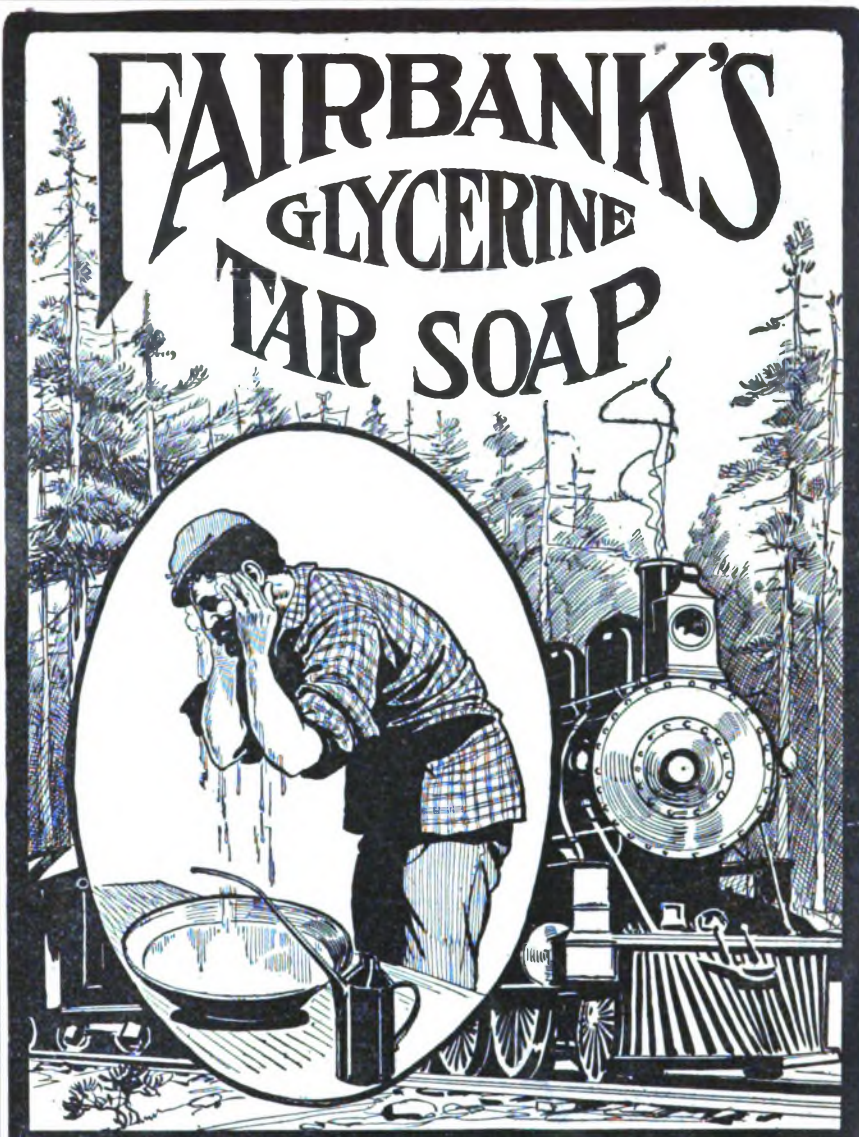


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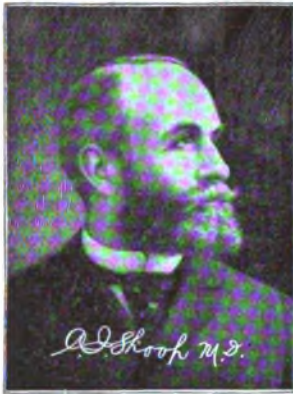
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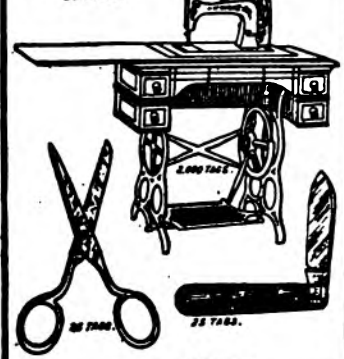
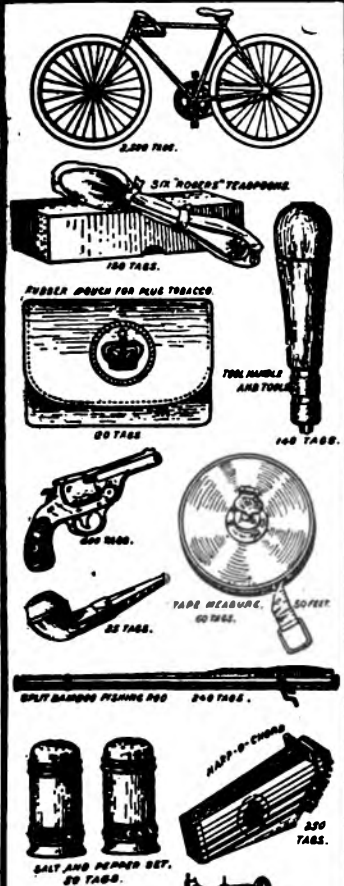
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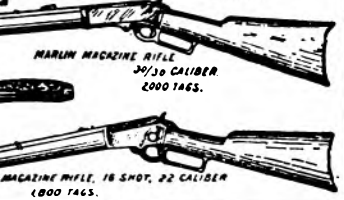
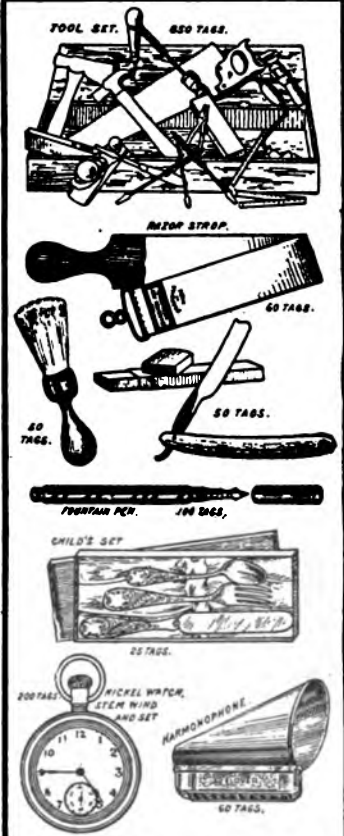
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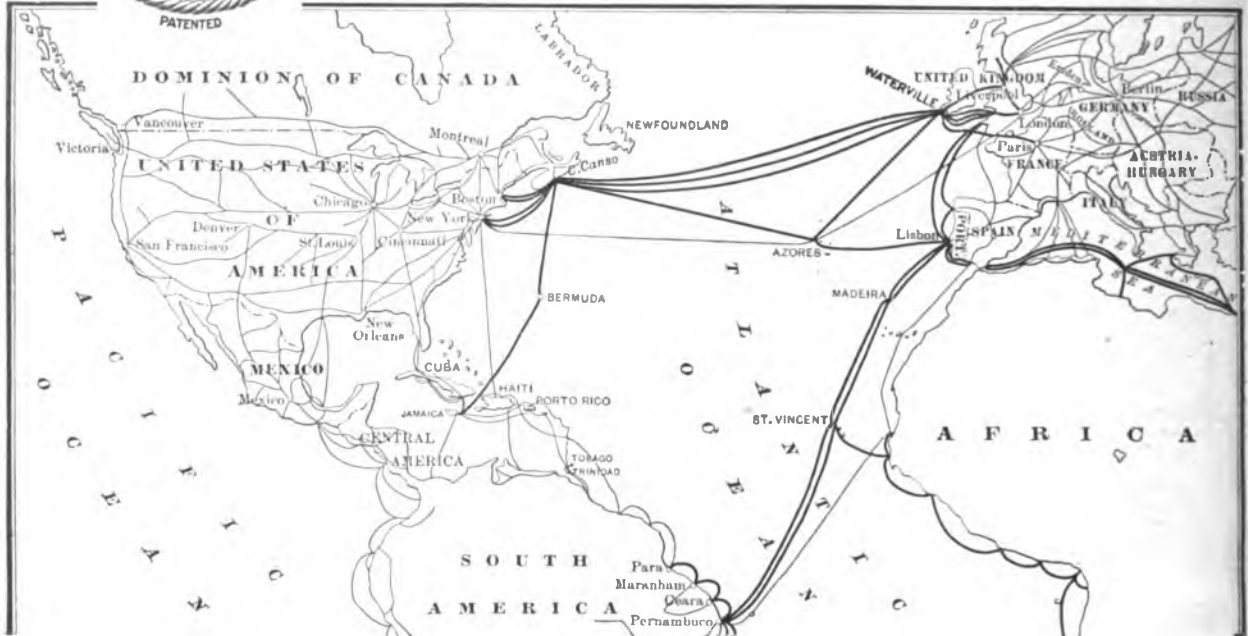


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