

TELEGRAPH AGE.

A SEMI-MONTHLY JOURNAL DEVOTED TO TELEGRAPHY.

Single Copies, 10 cts.

ESTABLISHED 1883.

\$1.50 per year.

Vol. XIX.—No. 11.

NEW YORK, JUNE 1, 1902.

Whole No. 457.



NEW STANDARD DRY CELLS. STANDARD OF THE U. S. NAVY AND THE WORLD.

The price is as low as any; durability, FOUR to ONE over any other make. When you use them once you will want no other. NECKTIE PIN outfit by mail \$1.00.

WILLIAM ROCHE, Inventor and
Sole Manfr.,
42 Vesey St., New York.

Put Alexander's Word-Counter

on your machine to-day. You will be a better operator to-morrow. It will save you lots of work and worry, and silently demand a better salary for the improved service you will give.

Price \$3. JESSE ALEXANDER, 195 Broadway, New York

1889

PARIS EXPOSITION MEDAL FOR
RUBBER INSULATION.



TRADE MARK

1893

WORLD'S FAIR MEDAL FOR
RUBBER INSULATION

THE STANDARD FOR RUBBER INSULATION.

SOLE
MANUFACTURERS OF

Okonite Wires, Okonite Tape, Manson Tape, Candee Weatherproof Wires

THE OKONITE CO., LTD., 253 BROADWAY, NEW YORK.

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

WRITE FOR PRICES.

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

Good Work
Durability
Simplicity
Speed

ARE THE

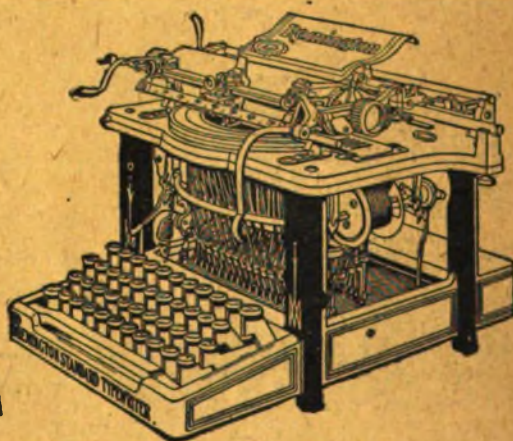
Four Pillars of Strength

which Support the

Remington Typewriter

YOU WILL FIND THEM IN EVERY REMINGTON

Wyckoff, Seamans & Benedict, 327 Broadway, New York.



ALL THE WINNERS at the American Telegraphers' Tournament

USED THE FAY-SHOLES TYPEWRITER

H. V. EMANUEL,
Won Message Class Championship.

W. C. MURRAY,
Won Second Place, Code Class.

CHAS. H. MCGURRIN, Speed Champion of the World also uses and endorses the
FAY-SHOLES

New McGurrin Booklet on Speed Writing, Etc., FREE on application. Agents Wanted.

Fay-Sholes Company, 127 Rees St., Chicago, Ill.

C. N. FAY, President. F. REMINGTON, Vice-Pres. CHAS. B. PRICE, Sec'y and Treas.



F. M. McCLINTIC,
Winner Carnegie and Atlanta
Journal Gold Medals.

70th THOUSAND THE MOST SUCCESSFUL ELEMENTARY WORK. A B C OF ELECTRICITY

PRINTED FROM A
NEW SET OF PLATES

By W. H.
MEADOWCROFT.

One volume, 12mo cloth, 50 cents. Fully illustrated.

This excellent primary book has taken the first place in elementary scientific works. It has received the endorsement of Thos. A. Edison. It is for every person desiring a knowledge of electricity, and is written in simple style, so that a child can understand the work. It is what its title implies, the first flight of steps in electricity.

ENTHUSIASTICALLY ENDORSED BY THE PRESS.

Sent post paid on receipt of price by

J. B. TALTAVALL, Telegraph Age

253 BROADWAY, NEW YORK.

Excelsior Webster Pocket Speller and Definer of the English Language



containing over 25,000 words. This work gives the correct orthography and definition of all the words in common use. The illustration gives a fair idea of the shape of the work being especially made to fit the pocket and bound in a style which makes it durable and elegant. This Speller and definer is not reprint, but has been carefully prepared by competent hands to meet the general want for a book of this kind, and for the space it occupies has no superior in the publishing world; containing 320 pages, double column, it weighs 2 1/4 ounces, size 6 x 2 1/4 inches, bound in elegant American Russia Leather and indexed.

pages, double column, it weighs 2 1/4 ounces, size 6 x 2 1/4 inches, bound in elegant American Russia Leather and indexed.

J. B. TALTAVALL,
253 BROADWAY
New York.

Preece & Sivewright's Telegraphy.—
A description of the English Telegraphs. 412 pages fully illustrated. Price, \$2.00, expressage prepaid. Address J. B. Taltavall, 253 Broadway, New York.

Pope's Modern Practice of the Electric Telegraph. A handbook for operators. 223 pages, fully illustrated. Price, \$1.50, postage prepaid. Address J. B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York.

Any electrical or telegraph book published for sale by Telegraph Age, 253 Broadway, New York.

"The Standard Work on Telegraphy." - -

AMERICAN TELEGRAPHY:

SYSTEMS,
APPARATUS,
OPERATION.

450 Diagrams, 575 Pages, 34 Chapters.

By WILLIAM MAVER, Jr.

Bound in Cloth, - - - - \$3.50

Sent, express charges prepaid, to any part of the world upon receipt of price.

J. B. TALTAVALL,
Telegraph Age,
253 Broadway, New York.

**NOW IS THE TIME... TO SUBSCRIBE FOR
TELEGRAPH AGE.**

IF YOU DESIRE ELECTRICAL OR TELEGRAPH BOOKS,

SEND YOUR ORDERS TO

Telegraph Age, 253 Broadway, N. Y.

TRADE MARK
"Chloride Accumulator"

REGISTERED SEPTEMBER 11, 1904.

Chloride Accumulators for Telegraph Service.

The advantages of the Storage Battery over the gravity are numerous. It occupies less than one-half the space. It requires very little manual labor to care for it, no sines to clean and renew, no liquid to draw off and dilute, and the battery room can be kept as clean and neat as a parlor.

THE ELECTRIC STORAGE BATTERY COMPANY, Allegheny Ave., and 19th St., Philadelphia, Pa.

SALES OFFICES: New York, 100 Broadway. Baltimore, Equitable Bldg. Cleveland, New England Bldg.
Boston, 60 State St. St. Louis, Wainwright Bldg. Philadelphia, Allegheny Ave. and 19th St.
Chicago, Marquette Bldg. San Francisco, Nevada Block. Detroit, Michigan Electric Co.

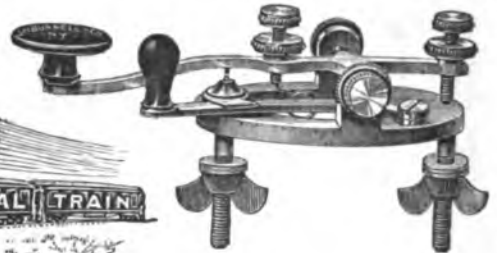
Established
1879

J. H. BUNNELL & CO. (Incorporated)

Telegraph Instruments and Electrical
Supplies in General

MAIN OFFICE
REMOVED TO
No. 20 PARK PL.

Formerly
106 and 108 Liberty St.
and 76 Cortlandt St.



SOLE MANUFACTURERS OF THE GENUINE

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



Operators Wanted to act as agents for the sale of the **Audible Alphabet** the latest and best device for self instruction in learning telegraph operating. Send for circular.

Note well the exact name and address and make all Orders, Checks, Drafts, etc. payable to

J. H. BUNNELL & CO.
20 Park Place, New York.

THE AUDIBLE ALPHABET P. O. BOX 1266.

CATALOGUES FREE.

The Modern Service of Commercial and Railway Telegraphy (8th Edition, revised and enlarged) by J. P. Abernethy. The theory and practice, including railway station and express service. Arranged in questions and answers. 425 pages, 40 illustrations. Price \$2.00, expressage prepaid. Address John B. Taltavall, Telegraph Age, 253 Broadway, New York.

W. R. OSTRANDER & CO.

MANUFACTURERS
OF...

Speaking-Tube Goods
Electric Bells
Annunciators
General Electric Supplies

22 DEY STREET, NEW YORK

SEND FOR CATALOGUE

THE PHILLIPS CODE.

PRICE, \$1.00.

A thoroughly tested method of Shorthand, arranged for Telegraphic purposes and contemplating the rapid transmission of press reports, also intended to be used as an easily acquired method for General Newspaper and Court Reporting.

Address,

J. B. TALTAVALL,
TELEGRAPH AGE, 253 BROADWAY
NEW YORK.

Secret Sounders

FOR TELEGRAPH WORK
PRICE, \$5.00

Invaluable in newspaper and broker offices. Easily adjusted, strong, durable and simple.

ADDRESS,

JOHN B. TALTAVALL,
TELEGRAPH AGE, 253 B'way, N. York



AND NINETY-FIVE CENTS
Buy the celebrated, high grade new 1902 Model EGGEMERE BICYCLE, 24-inch wheel, any height frame, high grade equipment, including high grade guaranteed pneumatic tires, adjustable handle bars, fine leather covered grips, padded saddle, fine ball bearing pedals, nickel trimmings, BEAUTIFULLY FINISHED THROUGHOUT, ANY COLOR HANDLE, STRONGEST GUARANTEE.
\$10.95 for the celebrated 1902 Excelsior Bicycle.
\$12.75 for the celebrated 1902 Elgin line or Elgin Queen.
\$15.75 for the highest grade 1902 bicycle made, our three crura nickel joint, Napoleon or Josephine, complete with the very finest equipment, including MORGAN & WRIGHT HIGHEST GRADE PNEUMATIC TIRES, A REGULAR \$50.00 BICYCLE.
10 DAYS FREE TRIAL on any bicycle ordered. For the most wonderful bicycle ever heard of, **WHITE** FOR OUR FREE 1902 BICYCLE CATALOGUE. Address, **SEARS, ROEBUCK & CO., CHICAGO, ILL.**

Thom & Jones' Telegraphic Connections; 300 pages, illustrated by 20 plates, with circuits distinguished by three different colors. Price, \$1.50, postage prepaid. Address J. B. Taltavall, TELEGRAPH AGE, 253 Broad-

NOW IN THE BINDERY

Pocket Edition of Diagrams

AND

COMPLETE INFORMATION FOR TELEGRAPH ENGINEERS
AND STUDENTS

By **WILLIS H. JONES**
The Electrical Editor of Telegraph Age



BOUND IN FLEXIBLE LEATHER;
ABOUT 250 PAGES

A Telegraphic Classic; The Standard of the World

THIS VOLUME will be the finest, most complete and comprehensive book on the telegraph ever published. It is colloquial, simple and clear in style, copious in the amount and diversity of practical information furnished,

IT IS SPLENDIDLY ILLUSTRATED

and will be welcomed by every student, operator, official and engineer.

There is Sure to be a Big Demand

FOR THIS GREAT AND TIMELY WORK, AND OUR AGENTS AND FRIENDS EVERYWHERE SHOULD LOSE
NO TIME IN FILING THEIR ORDERS.

Price, \$1.50



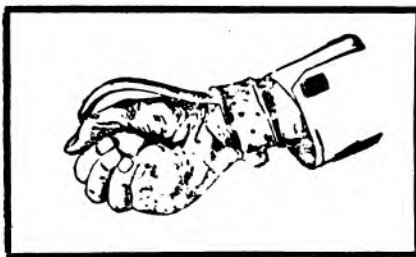
ADDRESS

J. B. TALTAVALL, TELEGRAPH
AGE

EXPRESS CHARGES PREPAID

253 BROADWAY, NEW YORK

IF OPERATORS would avoid and cure
that dreaded affliction



Telegraphers' and Writers' Cramp

They should use



Barclay's
Paralysis
Exerciser

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

No Telegrapher Should be without One.

This simple and durable device is the only one that is reliable and trustworthy, and has always done all that has been claimed for it. There are no complicated parts to get out of order, and with ordinary usage it will last a lifetime.

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

THE PRICE OF THESE EXERCISERS IS \$3.00.

Address: J. B. TALTAVALL, Telegraph Age, 253 Broadway, New York City, N. Y.

Satin Finish

Typewriter Ribbons.
Something new.

Satin Finish

Carbon Paper.
Known everywhere.

Cobweb Carbon

Used once,
Used always.

A. P. LITTLE, Mfr.,
Rochester, N. Y.

Also,
261 Broadway, New York.
161 La Salle St., Chicago.
665 The Bourse, Philadelphia.
413 Wood St., Pittsburgh.
28 Basinghall St., London.
45 Adelaide St., E., Toronto.

Barclay's Paralysis Cure

Strengthens the relaxed cords of the hand, wrist and arm. Cures Telegraphers' and other Writers' Paralysis and Cramps of many years' standing. Stiff joints caused by accident cured. All Telegraphers and Writers should have one.



THIS IS ONE OF MANY TESTIMONIALS NOW ON HAND.

Ft. Atkinson, Wis., July 18, '95.

R. Barclay:

Dear Sir:—I commenced using your valuable Exerciser about two months ago, and have received such great benefit from its use that I consider it necessary to write you and say what it has done for me. If I had not used this instrument, I would have been obliged to give up the telegraph service, as I was in such a condition that nearly every one complained of my sending. I can heartily recommend your valuable remedy to all afflicted with paralysis, and if I know of any one in need of it I shall do all I can and persuade their trying it. Yours very truly,

OTTO REHM, Opr. C. & N. W. R'y.

Bent to any address, postage prepaid, together with full instructions, \$3.15. Address

ROBERT BARCLAY, Green Bay, Wis.



HUDSON'S WORD REGISTER

A simple, accurate device for counting the words written upon the typewriter. It is easily read, instantly set, and covers both message and special work. Price by mail, with full directions for attaching and operating, \$3.00. State what machine you use. Circular free. Address

GEO. E. HUDSON,
Sheridanville, Pa.

BIND YOUR PAPERS.



This Binder is superior to all others, as it is intended to be a permanent or temporary covering for THE AGE. It is worth many times its cost for keeping and preserving all copies of the paper in convenient and compact form. This Binder differs from all others in not having a looseness at the back of the cover, as is the case with other binders.
Price, \$1.00, Postage Prepaid.

JOHN B. TALTAVALL,
Telegraph Age,
253 Broadway, New York

TWO MARVELOUS IMPROVEMENTS make the EDISON

PHONOGRAPH

Perfect.



The New Moulded Record "Hard Wax," and the New Reproducers

duplicate the human voice in volume and clearness. Absolutely free from scratching—perfectly smooth and natural. A new result from your old Phonograph. New Reproducers on all new phonographs. Nine styles from \$10.00 to \$100.00. The new Records, 60 ets., \$5 per dozen. Full particulars at all dealers.

NATIONAL PHONOGRAPH CO.
N. Y. Office 83 Chambers St.

Chicago Office:
141 Wabash Avenue.



My Old Virginia Home upon the Farm.

By BARRINGTON L. BRANNAN.

Try this Chorus on your Piano.

CHORUS.

Oh, my old Vir-gin-ia home up-on the farm, — There the pine tree sheds its ev-er-heal-ing balm, — Tho' my footsteps wander far a-way, My heart will ev-er stray to my old Vir-gin-ia home up-on the farm.

rall.

Digitized by Google

MORE

New Century

TYPEWRITERS

are used in the offices of the World's Fair Commission, St. Louis, than all other machines combined.

“THE BOOK OF THE NEW CENTURY”
will be sent on application.



AMERICAN WRITING MACHINE COMPANY,
343 Broadway, New York.

**MARSHALL'S
ELECTRICAL CONDENSERS**



**MULTIPLE SERIES STANDARD CONDENSER.
STANDARD CONDENSERS A SPECIALTY.**

Condensers for Telegraph, Telephone, Electric Light and Experimental purposes.

These condensers are used in all telegraph offices in America where standard and ordinary condensers are required. Send for catalogue.

Address **WM. MARSHALL,**
700 Lexington Ave., near 57th St., New York.

TEN DAYS FREE TRIAL
allowed on every bicycle purchased of us. We ship on approval to any one in U.S. or Canada, without a cent deposit.

1902 Models, \$9 to \$15
1900 & '01 Models, best makes, \$7 to \$15.
500 Second-hand Wheels, all makes and models, even as new \$3 to \$4. Great Factory Clearing Sale at half factory cost. Tires, equipment & sundries, all kinds, at regular price.

RIDER AGENTS WANTED
In every town to ride & exhibit sample 1902 model. Agents make money fast. **A BICYCLE FREE** distributing catalogues in your town. Write of me for agents' net prices and our special offer.

MEAD CYCLE CO. CHICAGO, ILL. 123C



PHILLIPS CODE

New and Revised Edition Ready June 1st.

PRICE, \$1.00.

THIS FAVORITE AND THOROUGHLY TESTED method of shorthand arranged for TELEGRAPHIC PURPOSES and for the rapid transmission of Press Reports, has been brought up-to-date and is pronounced complete in every particular. Better than ever this famous work will meet all requirements and be of indispensable value to every operator. Address:

J. B. TALTAVALL, TELEGRAPH AGE,

253 Broadway, New York.

MADE \$105 THE FIRST MONTH



writes **FRED. BLODGETT**, of N. Y. **J. I. BARRICK**, of La., writes: "Am making \$3.00 to \$8.00 every day I work." **Mrs. L. M. ANDERSON**, of Iowa, writes: "I made \$3.00 to \$6.50 a day." Hundreds doing likewise. So can you. \$5.00 to \$10.00 daily made plating jewelry, tableware, bicycles, metal goods with gold, silver, nickel, etc. Enormous demand. We teach you **FREE**. Write—offer free.

G. GRAY & CO., Plating Works, A Miami Bldg., Cincinnati, O.

Any Electrical or Telegraph Book published for sale by **TELEGRAPH AGE,** 253 Broadway, New York.

Standard Underground Cable Co.

**Wires,
Cables,
Accessories.**



**RAILWAY, ELECTRIC LIGHT,
TELEPHONE, TELEGRAPH,
For Aerial, Underground
and Submarine Use.**

**NEW YORK, PHILADELPHIA, CHICAGO,
PITTSBURGH, BOSTON, SAN FRANCISCO**

Taltavall's Telegraphers of To-day.

Descriptive, historical and biographical. 355 pages and 700 engravings of the prominent telegraph people. Price, \$5.00, expressage prepaid. Address **J. B. Taltavall, TELEGRAPH AGE,** 253 Broadway, New York.

THE TELEGRAPH AGE

No. 11.

NEW YORK, JUNE 1, 1902.

VOL. XIX.

CONTENTS.

Some Points on Electricity.....	221
Business Notices. The Cable. The Railroad.....	223
Resignations and Appointments. Wireless Telegraph.....	224
One of the "Old Guard." Trunk Underground Line.....	225
The Age Limit. Telephone at Your Car Seat.....	226
Professor Pupin and the Telegraph.....	227
Manager J. C. Smith of Chicago. Annual Meeting of the Publishers' Press. Telegraphing Through His Hat.....	228
Editorial. Refutation Refutes Itself.....	229
Wireless Telegraphy in Alaska. Presentation to T. A. Brooks... Philadelphia's New Superintendent. The Man Who Helped to Save the Punjab.....	230
Why the Government Should Not Operate the Telegraphs. Pupin Load Coils in Use Between Chicago and New York.....	231
W. H. Butler Made Manager at Denver. E. D. Edwards. New Manager at Cheyenne. William B. Gill. Australian Telegraphs. New York City's New Manager. The Western Union's Representative at London. Edward M. Mulford, Jr.....	232
Retirement of Superintendent Gifford. The New Head of the Time Service.....	233
Augusta, Postal; Gardner, Postal; Birmingham, Postal; Galveston, Western Union; Montreal, Gt. Northwestern.....	234
Montreal, Canadian Pacific; Washington, Postal; Chicago, Postal; Denver, Western Union.....	235
Chicago, Western Union; Philadelphia, Western Union; St. Louis, Western Union.....	236
Philadelphia, Postal; New York, Western Union; New York, Postal.....	237
Personal Mention. Election of Officers. New York Visitors.... The Morse Club. Telegrapher and Business Man. Cuba's Telegraph Lines.....	238
Obituary. Municipal Electricians. General Mention.....	239
	240
	241
	242

SOME POINTS ON ELECTRICITY.

BY WILLIS H. JONES.

(Storage Battery—Continued.)

[In a few weeks hence this series, together with the most valuable of the articles appertaining to the duplex, the quadruplex, storage battery and other telegraph matters, which have appeared in this journal during the past three years under the caption of "Some Points on Electricity," will be published, and the book substituted for "Pocket Editions of Diagrams," by Willis H. Jones. Those desiring a copy of this superior new work, indispensable to every telegrapher, should send in their names at once.—Editor.]

We have already shown how simple a matter it is to charge a single cell of storage battery for the purpose of utilizing it for feeding sounders in a local circuit, at practically no additional expense to the usual monthly bill for lighting the office with electric lights.

When it comes to charging a number of cells in series, however, as is frequently necessary with main line batteries, the conditions are such that practically the entire energy derived from the charging source is absorbed in the row of jars, and of course cannot play the double part of charging the battery and lighting an electric lamp at the same time, as obtains when but one cell is being renewed. Electric energy thus expended is a clear gain to the power company from which

it is derived. Nevertheless experience has shown that, compared with the expense of maintaining a bluestone battery system, a change to the storage arrangement, even when compelled to buy the charging current outright, is much cheaper than the old method and gives better results in every way.

In figuring on the value of the electromotive force necessary to charge a row of storage cells in series, it must be remembered that although the normal electrical pressure of a cell is but two volts while discharging within its prescribed working range, it requires at least 2.5 volts from the charging power to bring the said cell up to its greatest efficiency. When this point has been reached, the electromotive force of the cell itself will be 2.5 volts also, although it drops to about 2 volts as soon as the charging current is switched off. From this it will be seen that the minimum value of the charging electromotive is found by the formula, "number of cells in series multiplied by 2.5."

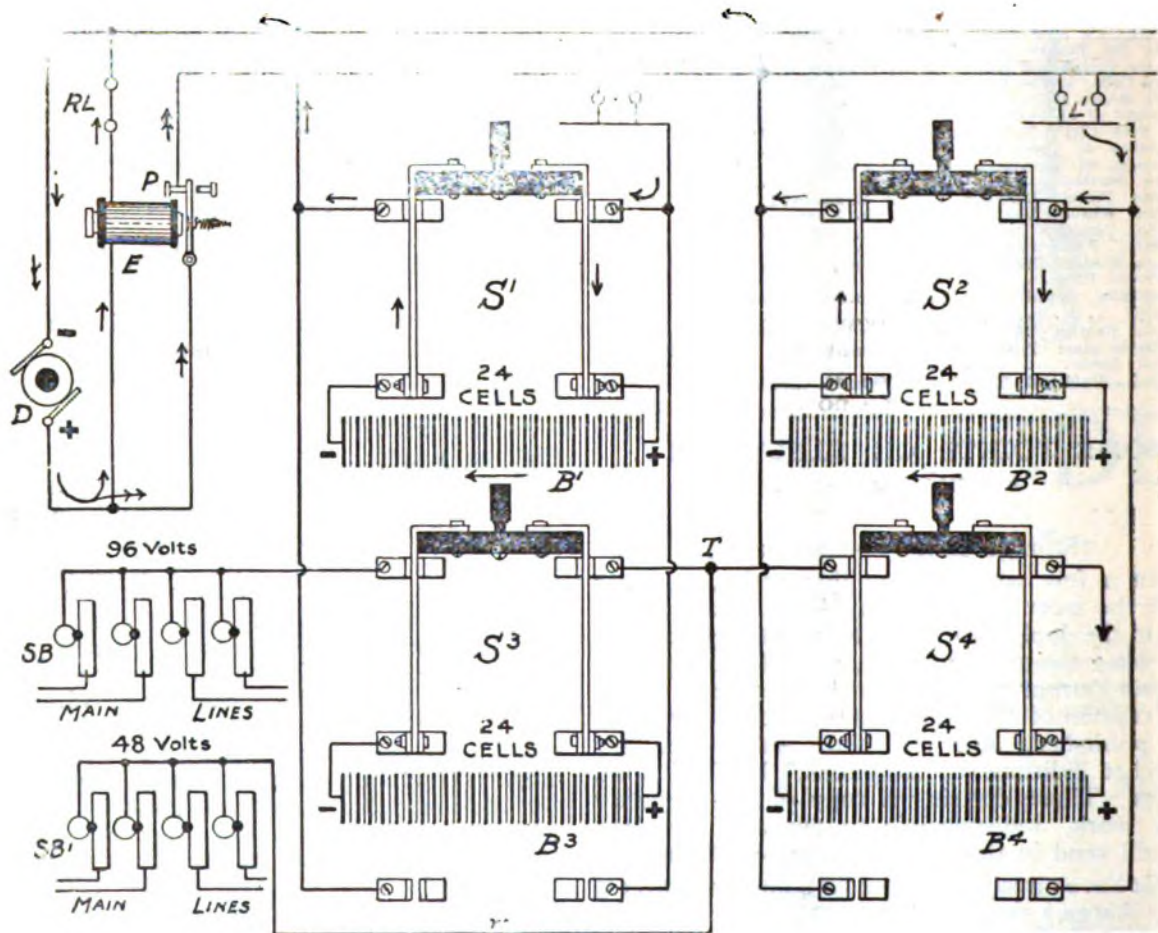
As the internal resistance of a storage cell is practically negligible, and the probable electromotive force of the cells to be renewed is at first about 1.8 volts each, it is customary to add a few ohms artificial resistance to the cells in series and increase the charging pressure obtained by the above formula by 10 or 15 volts, in order to regulate, by ohms law, the rate of charging the series. Thus, if added resistance be, say, 5 ohms, and the excess of electromotive force over and above that of the back pressure be 15 volts, counting the internal resistance of the battery as nought, the charging rate would be $15E \div 5R = 3$ amperes. With 3 ohms it would be 5 amperes. By altering either or both of these factors to fit the requirements any desired rate of charging current may be obtained. As the back pressure or electromotive force of the renewing cells gradually increases from 1.8 volts to 2.5 volts when fully charged, it is evident that the strength of the charging current, without proper precaution, will decrease in like proportion. In order to maintain a constant charging rate, therefore, the said artificial resistance should be in the form of an adjustable rheostat and connected in the charging circuit in series with the cells and an ammeter. By means of these accessories alterations in the rate are quickly made and the exact rate indicated by the dial of the meter before you. The accompanying diagram shows the actual connections of a main wire storage battery plant in an important telegraph office not far from New York City.

The rheostats are not shown in the cut, but they belong properly in the places here occupied by lamps, L and L', respectively, one rheostat for each group of cells charged. The 48 cells of battery in series, herewith shown, is divided in half and charged in two divisions for the reason that with the charging electromotive of 116 volts available for that purpose there is no alternative. Forty-eight storage cells in series means a back pressure of $48 + 2.5 = 118$ volts—two volts stronger than the charging power, hence in order to utilize the electric light pressure the row of cells is divided in two groups of 24 cells each and then charged in parallel.

Twenty-four cells means 48 volts, and requires

values, a tap is extended from middle of the row to certain bars of the main switchboard where a pressure of 48 volts is delivered for the purpose of feeding the short circuits. The last cell in the series is connected in like manner to another row of disks and, of course, yields 96 volts for the longer wires, because it adds its own 48 volts pressure to that of its companion group, the entire lot being in series.

The relay shown in the electric light circuit is placed there to prevent the storage battery from discharging into that circuit and possibly overheating the armature of the dynamo in case the revolutions of the latter were stopped from any cause. Under these conditions the discharging



at least $24 + 2.5 = 60$ volts charging power. This leaves an excess of $116 - 60 = 56$ volts in favor of the charging source, which value may be reduced by means of lamp or rheostat resistance to give any desired rate or strength of charging current.

If the reader will trace the connections between the electric light mains and the double knife throw switches, he will readily see how the two storage "gangs" are alternately switched back and forth between the charging and the discharging circuits.

In order to obtain two potentials of different

current would certainly tend to make a motor out of the machine until it was turned off. The relay performs this service instantly by opening the charging circuit at the local contact points the moment the magnet becomes demagnetized. As long as the dynamo is running, part of its current holds the relay points "closed," but when that current ceases the relay is immediately demagnetized, and its lever, as previously stated, shuts off the rush of current by opening one of the leads of the charging circuit.

There are other means of performing this ser-

vice but the method here shows the idea and necessity therefor.

(To be Continued.)

Business Notices.

Lake Hopatcong is in the highlands of New Jersey, 1,000 feet above sea level; eighty minutes from New York; reached by fast express trains over the Lackawanna Railroad. A good place to remember for a summer vacation; splendid sites for camping; excellent hotels and boarding houses. Send for "Mountain and Lake Resorts," a beautifully illustrated book of information about Lackawanna Railroad resorts. This book contains a full list of hotels and boarding houses, together with a series of vacation stories entitled "Experiences of Pa." Write to-day to T. W. Lee, General Passenger Agent, Lackawanna Railroad, New York city, enclosing five cents in stamps.

One of the best climbers for linemen ever devised is that manufactured by J. Donnelly of Branford, Conn., and of which J. J. Reidy & Co., of 311-319 East street, New Haven, Conn., are the selling agents. This device is of steel construction, thoroughly well made in every part, and for years has been extensively used, giving general satisfaction, and being recognized as a standard climber. Linemen needing climbers should write to Messrs. Reidy & Company at New Haven, and if they do so now, sending a postal money order for \$2, they will not only receive promptly the climbers, but also a set of straps with pads, valued at \$1.00. This offer may be read in the firm's advertisement published in another column.

The Dome electric massage battery for home use is one of the best and most convenient forms of battery ever produced. Its currents are smooth and even, and their strength can be graded from the mildest perceptible to a power that few can endure. The complete battery is contained in an elegant, highly ornamental aluminum case, about seven inches long and two inches in diameter, constructed so that it can be carried in a satchel, or pocket, and has all modern attachments, including a massage roller, and a very fine sponge electrode for use in conveying the currents to any part of the body, and the case serves as a foot-plate for general electrization. The outfit also includes a wrist clamp, an effective device for use in cases of writers' cramp. The price of this battery is \$5, express charges prepaid to any point in the United States. Address, J. B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York.

The Railroad.

The Association of Railway Telegraph Superintendents will meet in annual session at the Stratford House, formerly the Leland House, Chicago, Ill., on June 18, 19 and 20. Many interesting papers bearing on the railroad telegraph will be read and discussed.

The Cable.

We are advised that in view of renewed eruptions at Martinique it is very doubtful if messages for Fort de France or any part of that island can be delivered. They will be forwarded by mail from neighboring islands when an opportunity offers, but entirely at sender's risk.

In the past two weeks hundreds of cablegrams have been sent from this country and Europe, mostly by relatives, to residents of Martinique, but only a very small proportion of them have been delivered. At Fort de France these messages have accumulated in large numbers for the pathetic reason that the persons to whom they were sent are either dead or cannot be found.

It is asserted that if the Island of Martinique is to be destroyed the operators at the island end of the cable will remain on duty until the land is entirely submerged.

The conditions on both the islands of Martinique and St. Vincent are much the same as reported in our previous number. The telegraph force, together with their families, about forty in number, at Martinique were killed outright at the time of the first volcanic explosion which was also reported in the last issue.

The direct cable connecting New York and St. Pierre, Martinique, via Hayti, is still interrupted near the scene of the disturbance. The cable steamer Pouyer-Quertier, belonging to the French Cable Company, which operates this cable, has been engaged in missions of mercy since the outbreak of the volcanic disturbances.

When this steamer started on her relief work she had to pass through clouds of burning cinders at the risk of catching fire, in order to reach the terror stricken people ashore. She succeeded in bringing to the port of Fort de France 450 people. Since then this cable steamer, as the result of other daring trips, has succeeded in bringing many other persons to Fort de France. On May 11 she rescued 923 persons, and piloted the French cruiser Suchet and the Danish cruiser Valkyrien, who took on board 1,500 persons. The Pouyer-Quertier has distributed to the sufferers large quantities of biscuits, milk, wine and cheese.

The conditions on the island of St. Vincent are equally deplorable. Cable communication is entirely cut off with the island, and vessels are unable to approach the shore owing to the deathly atmosphere and terrific heat, with any degree of safety. It is thought that the loss of life on this island, which is an English possession, will number thousands.

The New Zealand Government has appointed Mr. C. L. Hertslett to be superintendent in that country of the Pacific Cable Company, which connects Australasia and Vancouver, B. C.

A Berlin dispatch says that the cable ship Podbielski has been ordered to take soundings in the Atlantic for a new German cable from Emden to the Azores.

Resignations and Appointments.

Mr. Charles F. Ames, manager of the Western Union Telegraph Company at Des Moines, Ia., has been appointed manager of the same interests at Boston, Mass.

Mr. F. E. Horton has been appointed manager of the Western Union time service with headquarters at Omaha, Neb., vice C. H. Murphy, transferred from Denver to New York.

Mr. W. H. Butler, for the past ten years manager of the Western Union Telegraph Company, Cheyenne, Wyo., has been appointed manager of the same interests at Denver, Col., vice J. P. Altberger, promoted.

Mr. Daniel Le Rougetel, superintendent of the Western Union Telegraph Company, London, Eng., has been promoted to be general superintendent for Europe, at London, vice George von Chauvin, resigned.

The fifth district, Eastern division, of the Western Union Telegraph Company, presided over by Mr. S. B. Gifford, of Syracuse, N. Y., has been abolished, and the offices comprising the district have been added to the first district.

Mr. A. Carlson, cashier of the Western Union Telegraph Company, Denver, Col., has been appointed assistant traveling accountant to Mr. Leonard Cox, the traveling accountant of the same company, with headquarters in New York.

Mr. Charles H. Erwin, recently appointed superintendent of the first district of the Western Union Telegraph Company, New York, resigned his position on May 22 and the vacancy was filled by the appointment of Mr. E. M. Mulford.

Mr. A. A. Brown, of the Western Union Telegraph Company, Cincinnati, O., has been appointed manager at Pittsburg, Pa., of the same interests. Heretofore Mr. J. D. Flynn, superintendent at that point, also filled the position of manager.

Mr. William B. Gill, superintendent of the Western Union Telegraph Company, Philadelphia, Pa., has resigned, and his place has been filled by the appointment of J. P. Altberger, whose picture and sketch appears elsewhere in this issue.

Mr. A. M. Fisher, formerly manager of the Western Union Telegraph office at Salt Lake City, Utah, who has lately been acting as traveling auditor of the district, has been appointed cashier of the Denver, Col., office of the same company, vice A. Carlson.

Mr. Herbert Smith, of New York, for many years chief clerk of the Western Union Telegraph Company in Superintendent Humstone's office, has been appointed assistant to Superintendent E. M. Mulford, who presides over the first and fifth districts of the Eastern division of the company.

Mr. Wm. Gellatly, manager of the Self-Wind-

ing Clock Company, New York, has resigned his position to accept the general superintendency of the Gamewell Fire Alarm Telegraph Company, with headquarters in New York. Mr. J. R. Clark, secretary of the Self-Winding Clock Company, will hereafter attend to the duties performed by Mr. Gellatly.

Mr. Henry C. Sherman, chief clerk in the office of the third district, Western Union Telegraph Company, Boston, Mass., a military telegraph operator in the Civil War, has resigned after forty years continuous service in the telegraph business, to become the vice-president and general manager of the Commonwealth Oil Company in that city.

Mr. Charles G. Sholes, for many years past superintendent of telegraph of the Santa Fé Railroad System, with headquarters at Topeka, Kan., has been appointed assistant superintendent of the fifth district of the Western Union Telegraph Company, with headquarters at Buffalo, N. Y. Mr. Sholes is an old-time commercial operator and is a man of valuable railroad experience.

Mr. C. Dougherty, for the past nineteen years manager of the Postal Telegraph-Cable Company, St. Louis, Mo., has resigned to accept a position that will take him to the Philippine Islands. Mr. S. H. Mudge, present chief clerk to Superintendent G. E. Paine, has been appointed to fill the managership; Mr. E. Altemus has been appointed assistant manager; Mr. A. P. McDonald, as manager of the exchange office, vice Altemus, while F. W. Rothery takes Mr. McDonald's place as chief clerk in the district superintendent's office.

Wireless Telegraph.

The first vessel to sail from Philadelphia equipped with the Marconi wireless telegraph system is the schooner Pleiades, which started for Cape Cod last week in command of Captain Oren Cobb. The plant is the most powerful yet placed on any vessel. The Pleiades is to be stationed permanently off the coast of Cape Cod, some 300 miles to the eastward, and directly in the track of vessels bound from Europe to New York and Philadelphia. The vessel will be used to report all craft carrying the same system. Communication will also be maintained with two steel steamers, now being equipped with the same system which will lie along the Atlantic coast line to the south, one being stationed near Cape Hatteras.

The main office of the Direct United States Cable Company, Arthur C. Frost, superintendent, so long located at 40 Broadway, New York, has been removed to 60 New street, the change being necessitated to make room for the erection of a modern structure on the old site.

Subscribe for TELEGRAPH AGE, \$1.50 a year.

One of the "Old Guard."

The death of Assistant Secretary Pruden of the White House staff has reduced the President's "Old Guard," so called, to four. They are Captain Montgomery, the well-known old time telegrapher; Executive Clerk and Disbursing Officer Crook; Captain Loeffler, whose duty it is to keep undesirable persons out, and Thomas F. Pendle, usher, and known best of all the White House attachés to the visiting public.

The youngest member of the "Old Guard" in years and point of service is Captain Benjamin F. Montgomery, U. S. A. He was in the signal corps of the army as a young man, and in March, 1877, was detailed for duty at the White House, when President Hayes felt the need of a larger organization. Being a telegrapher, Montgomery immediately began the installation of what has



CAPTAIN BENJAMIN F. MONTGOMERY,

Who has charge of the Telegraph Department at the White House, Washington, D. C.

grown into perhaps the most complete bureau of confidential communication in the world. He started with a single instrument—the first ever used in the White House—looped to the regular commercial system, and personally sent and received the President's messages. Gradually the value of this service demonstrated itself; the connection with the telegraphic system of the world was made closer. In 1878 Mr. Montgomery was offered a lieutenant's commission in the signal corps, but declined it to remain at the White House. He has filled every position in the office, having acted as secretary in charge at times during the absence of others.

Foreseeing the coming of the Spanish war, he organized and equipped the bureau so completely that during that struggle the President received reports from the Cuban battlefields and from the naval operations half around the globe in record

time. In some instances the executive was immediately in communication with the firing line of the army in Cuba. At the outbreak of the war Mr. Montgomery volunteered his services, and, on the recommendation of Gen. Greeley, chief signal officer, was appointed a captain in the regular army. He was afterward commissioned as lieutenant colonel of volunteers, from which rank he was honorably discharged.

The history of that telegraphic office in the White House has been the history of the United States for the past twenty-five years. During the riots of 1877 the President was kept in touch with every phase of the trouble, and he sent orders and proclamations through the medium of Montgomery's key. The Chicago railroad riots likewise found the President at Montgomery's elbow, wiring orders to and receiving reports from General Miles.

When disaster occurs, as at Johnstown or Galveston, the President is placed in direct communication. When elections are being held the White House feels the pulse of the people. With twenty-five wires it is possible to make direct connection with the cables. Thus the world is girdled and the office never closes.

Captain Montgomery has now a staff under his command, tried and expert operators. Great secrets have been confided to him. No man can truthfully assert that he has ever broken faith. Not the least whisper of scandal has ever breathed upon him. No living man would dare suggest to him the possibility of a corrupt bargain. Repeatedly he has worked through the night at the White House key, with a President at one elbow and a Secretary of State at the other, manipulating the nerves of the world. For twenty-five years he has been, in effect, the President's eyes and ears.

Captain Montgomery, learned telegraphy when a boy attending school, and he has been connected with the Western Union, the Old Franklin and the Atlantic Telegraph companies, and finally drifting into the United States signal service, with which he has since been identified.—From the Washington, D. C. Evening Star.

Trunk Underground Line.

It is announced that the construction of an underground telegraph line in extension of the existing line from London to Birmingham, Eng., is about to be taken in hand by the postal authorities, and is to be continued on to Manchester, Liverpool and, finally, to Edinburgh and Glasgow, Scotland. The distance between London and Glasgow is over four hundred miles, and much speculation is indulged in by telegraph engineers as to the carrying capacity of such long underground circuits.

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

The Age Limit.

There are limits of age and age limits. Two phases of this question are presented. There are a multitude of items for consideration in the discussion of one, while in the other little ground for a difference of opinion exists. The first problem deals with that particular age when the usefulness of the employee is on the wane—but what is the limit? The other proposition decides the question, Before what age shall employment not be given? Disposing of these questions in reverse order, no debatable ground is presented when the subject deals with the employment of children below given age limits in factories, etc. Salutory laws against it have been promulgated by many States. Beyond even the limits of childhood to an age before man's majority is reached there are good reasons why employment should not be given in those avenues where the acts of the agent involve the principal—where the individual possesses no legal responsibility. Transportation companies as well as the Government, enforce the under age limit. In the one case, motives of humanity prevail, while in the other case considerations of business expediency and principles of safety govern.

The main feature of the age question deals with the limitation of age. When—beyond what age—shall ineligibility ensue? A certain railroad of national importance has issued its fiat. Employment shall not be given to an applicant over thirty-five years of age. A statement made at a meeting in Chicago of a labor organization, to the effect that all men over forty-five should be shot for the benefit of the army of younger men for whom employment must be secured, may seem astounding, and yet be a logical deduction when taken in connection with the idea that at that age man has ceased to be fit for employment, and not being fit therefor is, per se, an incubus to the bodies social, politic and economic. Employment comprehends too vast a field; the field embraces too many occupations requiring power from different sources—principally brain or brawn—to be waived aside with the mere statement that a man at thirty-five, or forty-five, is unfit to serve.

The vigor and activity of youth are said to be grossly overestimated against the experience of age. It is charged that youth often wins in the competition because, having fewer responsibilities, it is content with smaller pay. The boy makes a present sacrifice expecting that he will reap his reward in the future. The man is done with sacrifices, and thinks it is time that the reward was forthcoming. The matter of making sacrifices or that of a willingness to perform a task or assume a burden for less emolument does not solve the question of fitness to serve, nor does it carry with it the remotest suggestion of benefit to the business of the employer, while that particular business may be vitally affected by the quality of the service rendered.

If, however, there is an arbitrary age limit, it

is irrational. Age may raise a presumption one way or the other, but it can never determine the value of the individual. One man at forty-five may be active, energetic, progressive, interested in his work and in the life about him. Another at twenty-five may be inactive, and lack both energy and interest. One man may be really young at forty-five and another old at twenty-five. Intelligence may increase with age, or, laying aside the question of mental growth, this person may have both years and intelligence, and that person may lack both years and intelligence.

The most reasonable conception of eligibility, from an age limit standpoint, must always be had from a contemplation of the nature of the employment, and what is expected of the person used to perform its duties. For instance, it would manifestly be as ridiculous to employ a man sixty years of age to perform a manual task requiring the vigor and endurance of one of twenty-five, as it would be to expect the same satisfactory results from the judgment of an inexperienced mind of twenty-five, where the requirements of the occasion demanded the acumen, the matured judgment, the experienced and trained perceptive qualities of a man of fifty.

Limit or no limit, the individual factor can hardly be left out of consideration, and, of course, it will not be when the individual superiority is marked. The persons who suffer the most cruelly and with the greatest seeming injustice are those who, being competent, but no more than competent, are obliged to give way in the contest. But it is a great deal easier to note the fact than to discover a way by which they may be assured a better fate.—Express Gazette.

Telephone at Your Car Seat.

Some day we may be able to telephone from express trains moving at the rate of a mile a minute without the speed interfering with the operation at all. Tests have been made on moving trolley cars in several Michigan towns with some degree of success. In time, it is believed, there will be no difficulty at all about calling up the next town and arranging about hotel accommodations in advance while speeding along a steam railroad.

But this is in the future. Meantime two Western railroads running out of Chicago are adapting the telephone to their business in a degree never attempted before. From the observation car of the new Overland Limited train, just put into commission at a cost of many thousands of dollars, passengers can now telephone—except when the train is actually moving—to home, office or distant friends without leaving their seats.

All that is necessary is to raise the telephone to the ear. From the time the train is made up, three-quarters of an hour before departure, the telephone service is at the disposal of passengers and it is in great demand.

Do what good thou canst unknown.—William Penn.

Professor Pupin and the Telegraph.

In answer to Professor Pupin's sweeping charges that the telegraph is becoming antiquated, and that the Western Union Telegraph Company does not spend ten cents a year for improvement, so far as he can learn, and that a man who offers them an improvement is treated like a book agent, we are in receipt of the following statement from Mr. J. C. Barclay, electrical engineer of the Western Union Telegraph Company, New York, explaining the telegraph company's position:

"Referring to Professor Pupin's criticism of the Western Union Telegraph Company in their slowness in adopting new methods, the Professor displays a wonderful lack of knowledge of the telegraph, which is not surprising, knowing that the gentleman has had no practical experience whatever in the field of telegraphy. For the benefit of those who read Prof. Pupin's criticism and are unfamiliar with the practical working of the telegraph, I desire to make reply to the criticism from a practical stand-point.

"At the time when Prof. Morse erected his first telegraph wire between Washington and Baltimore, a distance of forty-one miles, under adverse circumstances, and over which he sent his first message, he did not realize that he had invented the best, quickest and cheapest system of telegraphy that has been introduced up to the present time. It is true that this first message was reproduced embossed on paper, on what was then known as the receiving register. This method of receiving telegrams was in vogue for a number of years, until the young American with his quick ear for music soon after learned to receive messages by sound. The old registers have long since become obsolete, and the modern operator with nimble fingers now transmits messages over the wires, not only a distance of forty-one miles, but thousands of miles, as rapidly as the receiver can write them on a typewriter, and as distinctly and simple as A B C. And in this connection I will say that this transmission is done more distinctly than the letters and figures can be talked over the telephone lines, for there is no similarity between the Morse characters forming the letters (B) and (V), and other similar letters, that are so confusing to transmit over the telephone.

"Since the telegraph was invented, the improvements in the apparatus have kept pace with the demands of the American people, and to-day, the telegraph systems in America, according to the admissions of experts that have been sent here by all the foreign countries to investigate our systems, are years in advance of most all other nations. This is shown in the improved apparatus, namely, the multi-plex systems, automatic repeaters, switchboards, copper wires insulation and conductivity, motor dynamos, storage batteries, etc. To illustrate the quickness of this wonderful system, it is not uncommon for a broker to file his message in New York, Boston, Chicago, Philadelphia or other cities in the United States, and to

have the same transmitted to his broker on the floor of one of the Exchanges, the order filled and to have received the reply notifying him that it had been executed, within the short space of fifty-five seconds. Messages of this description are not only transmitted between Chicago and New York, a distance of 984 miles, but the same applies to the direct working wires of this company between San Francisco and New York, a distance of 3,300 miles. The American people have been educated up to this quick service, which as I have said before, is the most rapid that has been introduced up to the present time.

"Prof. Pupin refers particularly to the automatic rapid system of telegraphy, and in order to compare one of these systems with the former, it will be necessary to explain the 'modus operandi' necessary to transmit and receive a message. In the first place one of the most rapid systems was given a practical test by the writer over the Western Union lines between New York and Chicago within the past two years. In point of working satisfactorily it was an absolute failure, and not adaptable to use in this country on account of its slowness. In the system referred to, the message is handed into the office of the telegraph company, and is placed before an employee known as a 'puncher' who perforates the message on a strip of paper, an act which consumes more time than it would require for an expert operator to transmit the message from New York to San Francisco by the Morse system. The message is afterwards run through what is known as a wheatstone transmitter, at the same time the receiver is in operation, at the distant end of the line which is composed of a cylinder containing sensitized paper. After the message has been reproduced on this paper, it is necessary to carry it into a dark room, where it is developed the same as a photographer develops his negative. It is then placed in the hands of an employee known as a 'copyist.' The message is then copied on a typewriter, which again consumes more time than it would require an expert telegrapher to receive the message transmitted by the Morse system.

"If an error is discovered in the message as received on the sensitized paper, which frequently occurs, it is not possible to correct it at the time it is being received, as it would be if telegraphed by the Morse system, and it consumes too much time to make such corrections.

"A number of automatic systems have been tested by the telegraph companies of this country, but up to the present time every one of them have been found lacking, except for emergency service, and they are not only slower than the Morse system, but more expensive to operate. A corps of expert electricians are constantly in our employ experimenting with new devices and testing automatic and machine telegraphic systems, with a view of securing something better than the Morse, and while some of the automatics will transmit very rapidly, the time wasted in preparing the message for transmission and recopying makes

the service slower and more expensive than the Morse.

"To show the growth of the Western Union Telegraph Company, in 1867 it operated 46,000 miles of poles and cables, 85,000 miles of wire, and handled 5,000,000 messages with 2,000 offices. In 1901 it operated 194,000 miles of poles and cables, 673,000 miles of wire, and handled 66,000,000 messages with 23,000 offices. The greatest length of one continuous circuit operated by this company is from New York to San Francisco, 3,300 miles. The longest telephone circuit operated by the telephone company is from New York to Omaha, 1,466 miles."

Manager J. C. Smith of Chicago.

Mr. Judson Cary Smith, the new manager who has lately taken charge of the Western Union Telegraph office at Chicago, was transferred to that city from the managership at Galveston, Tex., a position he had held for twelve years past.

Mr. Smith was born at Springford, Ont., in 1855, his father, however, being a native of New York. He entered the telegraph service in 1871 at Vittoria, Ont., where he became joint clerk and operator. He entered the employ of the Domin-



JUDSON C. SMITH,

The New Manager of the Western Union Telegraph Company at Chicago, Ill.

ion Telegraph Company, first at Sarnia and afterwards at Hamilton, Ont., later coming to the United States and finding a position with the Western Union at St. Louis, Mo. Going South he was for a brief time engaged in the hardware business, but returned to telegraphing at Galveston, Tex., in 1879. After working for a short time he was promoted to night chief and later to day chief of the local office. In 1884 he left the Western Union and went with the Baltimore and Ohio Telegraph Company as manager of the Gal-

veston office. Here he remained until the consolidation of that company with the Western Union, when he entered the service of the Santa Fé Railroad, but soon thereafter accepted a position with the Western Union at Tyler, Tex., and in 1890 he was appointed manager of the Galveston office and has served in that capacity with credit up to the present time.

Annual Meeting of the Publishers' Press.

The annual meeting of the Publisher's Press was held in New York, on May 13.

The session, which was a brief one, was principally devoted to listening to the reports of President Shale, Secretary Keenan and Treasurer Bryant, and the election of three new directors, the board consisting of nine members, three being elected each year.

The new directors elected were J. B. Shale, McKeesport, Pa., Daily News, and president of the Publishers' Press; W. L. Baldwin, Syracuse, N. Y., Journal, and T. J. Keenan, Pittsburg.

The old officers of the association were re-elected as follows: J. B. Shale, president; Andrew McLean, Brooklyn Citizen, vice-president; T. J. Keenan, Pittsburg, secretary; William C. Bryant, Brooklyn Times, treasurer.

The annual report of the treasurer showed that the association is in a most flourishing condition, and that forty-nine papers had become members during the year.

During the year the main office in the Park Row Building has been enlarged and the telegraphic department increased.

Telegraphing Through His Hat.

In the fight conducted by the Dwyers against the poolroom several years ago, Joseph W. Frost, a Washington, D. C., telegrapher, was arrested on the grounds of the club during the races for signalling the results of the races to alleged poolroom confederates upon the roof of a house opposite the track. The signalling was done by means of an electric light bulb placed in Frost's high hat, in the top of which there was a hole, enabling those on the roof of the house to see the flashes of light.

After his arrest, Frost brought a suit against the Brooklyn Jockey Club and Robert Pinkerton, the head of the detective agency which guards the track and grounds, to recover \$50,000 damages for false arrest and imprisonment. The first trial or the suit resulted in a verdict for \$5,000 in favor of Frost. The case was carried into the higher courts, and the verdict set aside and a new trial ordered. The second trial has been commenced. Frost's wife, who was also arrested, has also brought a suit to recover damages.

The telegraph department of Uruguay, South America, has become a member of the International Telegraph Bureau.

TYPEWRITER EXCHANGES

**SELL GOOD MACHINES
AND ALL TITLES ARE GUARANTEED.**

EIGHT STORES

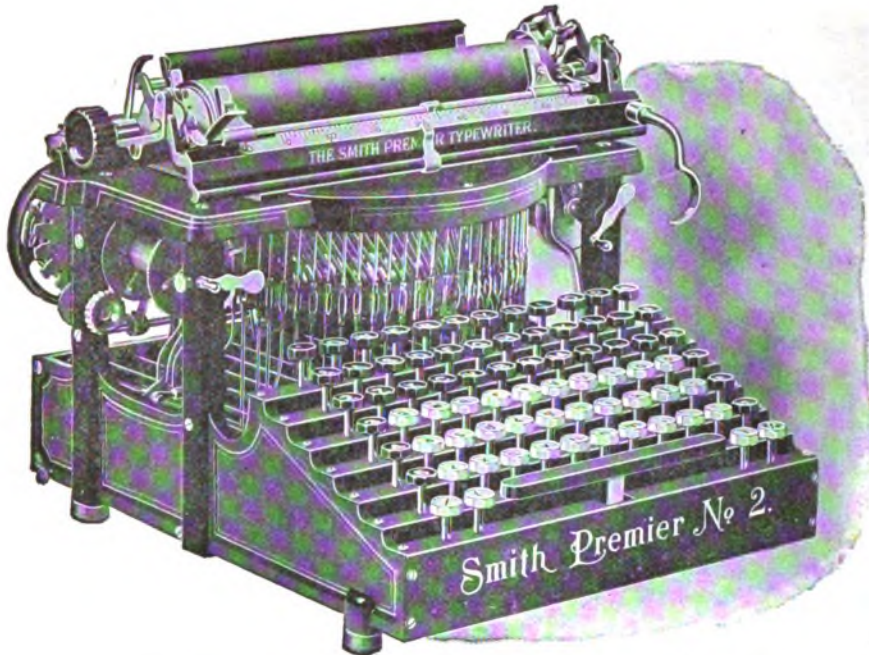
- NEW YORK - 1 1/2 BARCLAY ST.
- BOSTON - 38 BROMFIELD ST.
- BALTIMORE - 5 NO CALVERT ST.
- CHICAGO - 124 LA SALLE ST.
- KANSAS CITY - 818 WYANDOTTE ST.
- PITTSBURG - 432 DIAMOND ST.
- ST. LOUIS - 208 NORTH 9TH ST.
- SAN FRANCISCO - 536 CALIFORNIA ST.




W.A.V.O.



The Smith Premier Typewriter



GRAND PRIX, 
PARIS, 1900.
HIGHEST AWARD
POSSIBLE.



Favorite of operators on
Press wires. Complete
Keyboard. Always ready.
Never out of order.



Simple, Durable,
Light Touch,
Strong Manifold.

THE SMITH PREMIER TYPEWRITER COMPANY

SYRACUSE, N. Y., U. S. A.

THE GAMEWELL FIRE ALARM TEL. CO.

19 BARCLAY ST., NEW YORK.
Gold Medal awarded at Berlin, Germany. Ex-
position of Appliances for Fire Pre-
vention and Fire Extinguishment.

**FIRE ALARM and POLICE
SIGNAL TELEGRAPHS
For Cities and Towns.**

Over 1,000 Plants in Actual Service.

SELLING AGENTS:

Frank C. Stover,
161-163 Randolph Street, Chicago, Ill.
A. J. Coffee,
230 Kearney Street, San Francisco, Cal.
Oliver P. Crocker, Atlanta, Ga.
Wm. E. Decrow,
178 Devonshire Street, Boston, Mass.
Southern Electric Co.,
Hoen Building, Baltimore, Md.
Webb Chandler, Richmond, Ind.
Utica Fire-Alarm Telegraph Co., Utica, N. Y.

To Railway Telegraph Superintendents.

You are interested in saving time and money by
telephoning and telegraphing over the same
wire. We can help you to accomplish this
if you will write to us. We make tele-
phones for long or short distance, indoor
or outdoor use. Write for particulars.



ERICSSON TELEPHONE CO.,

296 BROADWAY,

NEW YORK CITY.

JUST OUT.

SMALL PRICE
ACCUMULATORS. **50c.**

HOW TO MAKE AND USE THEM.
With Numerous Illustrations.

BY P. MARSHALL.

Mailed postpaid to any address on receipt
of price.

J. B. TALTAVALL, Telegraph Age,
253 Broadway, - - - New York.

DYNAMOTORS FOR TELEGRAPH WORK

By reason of superior design and construction our
apparatus gives the best possible commercial value
under all conditions of service.

SPRAGUE ELECTRIC CO.

General Offices: 527-531 West 34th Street, New York.

The Telegraph Age.

Entered as second-class matter at the New York, N. Y., Post Office.

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

TERMS OF SUBSCRIPTION:

One Copy, One Year, - - - -	\$1.50
One Copy, Six Months, - - - -	.75
Foreign Countries, - - - -	2.00

ADDRESS ALL COMMUNICATIONS TO

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

E. H. BOWEN, MANAGER ADVERTISING DEPARTMENT

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

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

CHANGES OF ADDRESS.—The address of a subscriber will be changed as often as desired. In ordering a change of address the old as well as the new address must be given.

REMITTANCES to *Telegraph Age* should be made invariably by draft on New York, postal or express order, and never by cash loosely enclosed in an envelope. By the latter method money is liable to be lost, and if so remitted is at the risk of the sender.

NEW YORK, June 1, 1902.

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

Refutation Refutes Itself.

Professor M. I. Pupin, of Columbia University, New York, is reported to have made the statement, which has received considerable publicity, to the effect that the telegraph in America was becoming antiquated in its methods, and that the Western Union Telegraph Company, so far as he could learn, spent nothing in the way of improvements, and that in fact a man who offered them an improvement was apt to be treated like a book agent.

It is disappointing, to say the least, to find a man like Prof. Pupin, who stands deservedly high as a scientist, stooping to utter such a defamatory and sweeping misstatement as this. He apparently has not taken the trouble to investigate the telegraphic situation, to get at the facts concerning its real condition and progress, easily obtainable, and so to inform himself correctly regarding tele-

graphy in general and the Western Union Telegraph Company in particular, of which he assumes to speak so confidently. A university professor, accustomed presumably to carefulness and sobriety of speech, should hesitate before giving flippant expression, unjust as it is untrue, concerning a subject and of a great corporation regarding both of which, judged by his utterances, we must assume he knows but little.

Mr. J. C. Barclay, the electrical engineer of the Western Union Telegraph Company, in a dignified and comprehensive statement made in reply to Prof. Pupin's charges, and published elsewhere in this issue, shows clearly the utter fallacy of the professor's arraignment.

It is frequently considered quite the right thing to do by would-be-critics to censure the telegraph for various short-comings, slowness, inferiority to foreign methods, neglect to introduce improvements (an unfavorable comparison in this respect being made with the progressive telephone) being some of the stock assertions more or less freely indulged in. Mr. Barclay effectually disposes of all such declarations.

To the everlasting glory and honor of the discoverer of the telegraph, it should be remembered that Prof. Morse gave to the world a well-nigh perfect system when his great brain evolved the entire theory, principle and practice of telegraphy.

While there are many automatic systems on the market, one of them at least, possessing genuine merit, yet it is the increased number of times that a message has to be handled by automatic process, and the consequent delay in transmission involved therein, that has barred the adoption of these so-called improvements. By the generally excellent facilities afforded by the telegraph companies the public has been educated up to an almost instantaneous service, and to now adopt an automatic system would be a step backwards, which the business public would not tolerate even though the service were cheapened by its use. The telegraph companies are experimenting continually and at considerable cost with new systems all calculated to expedite and cheapen the present telegraph service, but nothing has yet been devised that equals, much less to supercede in any way, the original Morse form of telegraphing substantially as first given to us.

The telegraph is the simplest and most complete of all electrical arrangements ever devised, and its further improvement in America means really its expansion. The simple Morse circuit is declared by all telegraph engineers to be the best to meet the requirements of the public from whom a quick service is demanded. An increase in wire facilities alone affords the normal development, a fact which is too often not taken into consideration by critics like Prof. Pupin.

In this connection it may be remarked, however, that the time seems auspicious when the telegraph companies might with propriety divide their business into two classes, one including all rush or higher grade matter, the same as at present handled, the other comprising a cheaper grade

permissive of slower dispatch, involving, say, from three to five hours in delivery. Were this division to be made business of the latter class which might be in the form of lengthy communications, would perhaps be handled advantageously by the adoption of some form of an automatic system.

The charge is frequently made that but sixty odd million messages are transmitted in this country yearly, while in England, a similar number of telegrams are sent with only half the population. As a matter of fact, sixty-six million messages represents the number handled by the Western Union Telegraph Company alone last year. The Postal Company handle many millions more, while The Associated Press, railroad companies and thousands of bankers and brokers and newspapers, which control extended lines of leased wires, also send millions of messages unrecorded in the grand total. To arrive at a true understanding of the aggregate telegraph business done in this country, every message sent from all sources should be properly included in an undivided count, and would be were the conditions the same here as in England where the entire service is under single control and with no leased wires except a few cable circuits.

Wireless Telegraphy in Alaska.

Systems of wireless telegraphy invented by Prof. Fessenden and Signor Marconi, have been selected by Brigadier-General Greely, chief signal officer, for installation in Alaska.

General Greely states that the Board of Signal Officers has recommended and he had approved that the installation of wireless telegraph stations between Nome and St. Michaels be awarded to Prof. Fessenden. He also decided to establish between Fort Gibbon and the Tanana River, near Bates Rapids, the Marconi system, provided that satisfactory arrangements can be made.

The distance between Nome and St. Michaels is 108 nautical miles and that between Fort Gibbon and Tanana River is 165 miles. The Fessenden people have agreed to deliver two sets of instruments for \$13,000. This bid includes the cost of supplying a battery charging apparatus.

The instruments will be ready within sixty days and the system will be installed by October 1. A minimum speed of from twenty-five to thirty words per minute, to be received by means of a telephonic apparatus, is guaranteed.

Marconi proposed to supply two sets of instruments for operating between Fort Gibbon and Tanana River for \$22,010. After the first year the Government must pay a royalty of \$500.

The route will be equipped by October 1 and a speed of twelve words per minute is guaranteed. Should commercial messages be sent over the system the Government must pay the company one-half of whatever is received for them.

Character is higher than intellect. A great soul will be strong to live as well as strong to think.—Emerson.

Presentation to T. A. Brooks.

Mr. Titus A. Brooks, for many years chairman of the entertainment committee of the Magnetic Club, was presented with a handsome gold watch by a few of his friends at a dinner given by Mr. F. W. Jones, president, at the Press Club rooms Tuesday evening, May 21. Mr. W. J. Dealy was chosen chairman of the meeting and the presentation speech was made by Mr. Charles P. Bruch, who stated that on account of the earnest efforts Mr. Brooks had always made to secure entertainers for the Magnetic Club meetings, his friends had seen fit to present this testimonial of their appreciation. Mr. Brooks happily responded. Other speeches were made by Walter C. Burton, W. H. Baker, M. J. O'Leary, Theodore L. Cuyler, Jr., and M. H. Kerner. All highly commended Mr. Brooks and expressed thanks to Mr. Jones for his generosity in providing a repast worthy of the occasion. Those present were: T. A. Brooks, C. P. Bruch, F. D. Murphy, M. H. Kerner, D. W. Mc Aneeny, Reuben Fagan, John Riley, C. A. Benton, John Brant, W. C. Burton, T. L. Cuyler, Jr., W. D. Francis, M. M. Davis, W. D. Schramm, George F. Fagan, R. J. Murphy, M. J. O'Leary, W. H. Baker, F. W. Jones, Colonel A. B. De Frece, A. E. Pearsall and W. J. Dealy. Mr. Pearsall gave a short recitation and sang the Press Club song "Scatter Seeds of Kindness," the assemblage joining in the chorus.

"A B C of Electrical Experiments," by Prof. W. J. Clark, has just been published. As the initial letters of the title indicate this is an elementary book adapted to the needs of beginners and students. It is written in simple language, free from all technical terms, has 146 illustrations and gives plain instructions for the making of batteries, magnets, electric bells, induction coils, X-rays, dynamos, motors, static machines, and the telegraph, telephone and wireless telegraphy, the latter written from an American standpoint. As any student can procure for himself the materials mentioned therein and can make for himself the instruments, or work out any of the experiments given in this book, its value will be apparent. The price is \$1 and it will be sent post paid upon receipt of this amount. Address orders to J. B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York.

T. M. B. Association.—Assessment No. 304 has been levied by the Telegraphers' Mutual Benefit Association, to meet the claims arising from the deaths of Robert L. DeAkers, at Brooklyn, N. Y.; George W. Sheetz, at Richmond, Va.; George P. McAlvey, at Little Rock, Ark.; Peter Grant, at New Westminster, B. C.; Rose Currier, at Philadelphia, Pa.

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

Philadelphia's New Superintendent.

Mr. John Philip Altberger for nearly three years past, manager of the Western Union Telegraph Company, Denver, Col., and who has been promoted to the position of superintendent at Philadelphia, Pa., is like many of those who have recently been called to executive positions, of Eastern birth, having been born at College Point, Long Island, on April 2, 1864.

He entered the telegraph service as operator and ticket agent for the New York City and Northern Railroad at 155th street, New York, where he remained about six months. From there he went first to Southport, Conn., and afterwards to Milford, Conn., in the employ of the New York, New Haven and Hartford Railroad Com-



JOHN P. ALTBERGER,

Superintendent of the Western Union Telegraph Company, Philadelphia, Pa.

pany, later being made relief operator along this line of the road from Hartford to the Harlem River, New York.

In 1886 he went to Kansas City, Mo., and was there employed as operator in the Union Depot for about a year, when he was promoted to the office of manager, a position he retained for fourteen years.

In the fall of 1899 he was transferred to Denver, Col., as manager of the Western Union office under the tutelage of Belvidere Brooks, now general superintendent at New York, and whom he now follows East.

Mr. Altberger is one of the best equipped telegraph men in America, and while naturally pleased with his appointment, and says that coming East is like going home, yet his long associa-

tion with Denver and the Far West, with which he has become thoroughly identified, has caused him a pang of regret at separation with men and scenes with which he has become so familiar.

The Man Who Helped to Save the Punjab.

William Brendish, lately retired from the Indian telegraph service, is the only living man whose name is connected with one of the most notable incidents of the Indian mutiny. When the Sepoys interrupted telegraphic communication between Delhi and Meerut, on the afternoon of Sunday, May 11, 1866, the telegraph office in the former city was in charge of a man named Todd, assisted by Brendish and another youth named Pilkington. On Monday, Todd was killed while trying to effect repairs in the line and the care of the office devolved upon Brendish, who remained at his post until 2 o'clock in the afternoon, when the increasing disorder in the city made it advisable for him to take refuge with other Europeans in the Flagstaff Tower. But before seeking that asylum, Brendish, without any authority from military or civil officers, had sent to Umballa the full details of what was taking place in the old Mogul capital, and it was this information which enabled the authorities throughout the Punjab to disarm the Sepoys before the latter knew what had happened at Meerut and Delhi. To these messages Sir Robert Montgomery and Sir Herbert Edwardes, as well as others equally conversant with the history of the great Mutiny, attribute the saving of the Punjab and through that possibly the saving of all India.

The heroic conduct of Brendish and Pilkington in sticking to their post while the murderous Sepoys were slaughtering Europeans in the streets near the telegraph office has appealed to many writers, some of whom, like Mrs. Steele, Edwardes and Holmes, have recorded that the operators were slain at their instruments after having sent a final message of warning. Todd was the only man to perish in the performance of his duty. Pilkington died in 1867, while Brendish, though advanced in years, is still in good health. He is said to have been present at Delhi when Lord Curzon, the viceroy, recently unveiled a monument erected to commemorate the gallantry of the Delhi telegraphic staff. Sir Robert Montgomery was not far wrong when he wrote, "The electric telegraph saved India."

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

Why the Government Should Not Own and Operate the Telegraphs.

BY GENERAL THOMAS L. JAMES.

I am distinctly opposed to the Government owning and controlling the telegraphs. It is difficult to see why the United States Government should finance and assume authority over an enterprise which has already been demonstrated by Great Britain's experiments not to be susceptible under governmental control of the best handling, either economic or in the service to the people.

England so far has operated her lines at a loss—a loss which the people must meet in some other form of taxation. The service is almost proverbial for its slowness and lack of mechanical facilities.

It is said she has cheap telegraph tolls. The charge is sixpence or twelve cents for twelve words, including the address and signature. If we take away six words for a full address and signature it leaves a rate of two cents a word for the message, to which there is still to be added the ratio of loss in governmental operation, paid in some form by the people.

Comparing our own country with this, we find that in New York city we may send ten words of actual message and make the address and signature as long as we please for 15 cents. In the State, to Washington, Baltimore, Philadelphia and Boston the same units cost 25 cents, so as a matter of fact in some instances we have cheaper tolls, and practically the same charges for distances as long as their greatest.

The active competition between our two great telegraph companies has been not only of economic advantage to our people, but it has assured them of the highest condition of efficiency. Every new labor-saving and time-saving device is promptly adopted, until we have admittedly today the finest and most expeditious electrical service in the world. The struggle for business supremacy between these organizations may still further lower the rate, when cheapening machinery is discovered.

To turn this service over to the United States Government means, judging from governmental machinery generally, that it will be invested with a ponderous clumsiness, increased cost of transmission from politically made salaries and sinecure positions, and a retardation of mechanical and inventive progress, for the Government is the slowest of institutions to adopt new ideas, new methods and new inventions.

It has been argued that if the United States can handle the mails successfully she should be interested with the telegrams, which are letters by wire. It must be remembered, however, that practical necessity demanded the governmental control of the mails, so as to give that crossroad distribution of mail demanded for the convenience of the people. No commercial organization would contemplate or undertake to put distributing offices at points where they must be run at a

loss, as hundreds of our smaller stations are. These losses are, of course, balanced by the profits taken in offices of the more densely populated regions, but to get private corporations to follow business along those lines would necessitate Government supervision at least, and if the Government must meddle at all it might and should properly control the enterprise entirely.

To control the telegraphs means that the Government must purchase the property of the present corporations. There is no doubt that their figures, as was the case in England, will be so far above the actual value as to involve the Government in more or less scandal.

While undoubtedly the companies will gladly sell for their price, there seems no legitimate reason or excuse why the United States should attempt to acquire and shoulder the responsibilities of a service so satisfactory under its present management to the great American public.

Pupin Load Coils in Use Between Chicago and New York.

Few people, perhaps, realize that the retardation or load coils, invented by Professor M. I. Pupin, for use in long-distance telephonic transmission, have been put to practical use on a line nearly 1,000 miles in length. It will be remembered, says the Western Electrician, that Professor Pupin sold his patents covering this invention to the American Telephone and Telegraph Company in January, 1901. At that time the system, which consists principally in placing impedance coils of specially designed winding at equal distances along a telephone line, had been tried experimentally on a line extending from New York to Pittsburg.

Within the last few months three long-distance lines of the American company between Chicago and New York have been fitted with the Pupin load coils, as they are called, and as a result it is stated that the loudness of transmission has been increased about 100 per cent. These lines consist of No. 8 Birmingham gauge hard-drawn copper wire (nearly equivalent to a No. 6 B. & S. gauge), and the load coils have been connected in circuit every two and one-half miles. As the distance is about 900 miles, this means the installation of 360 coils on each line. On two of the Chicago-New York circuits the coils are installed in wooden cases and on the other line in iron cases. The cases are mounted on the poles near the cross-arms, much as a transformer would be suspended on an electric lighting pole. At each pole the wire is dead-ended on transposition insulators, and the apparatus, which is embedded in the case in pitch, is connected in series with the line. The use of the two styles of cases was to ascertain the one best suited for the service, and while the wooden box has better insulating qualities, it is thought the iron case will come into more common use on account of its reliability and freedom from injury from the elements or from lawless marksmen.

W. H. Butler Made Manager at Denver.

The appointment of W. H. Butler, manager of the Cheyenne, Wyo., office of the Western Union Telegraph Company, to be manager and transfer agent at Denver to succeed John P. Altberger, advances to a more responsible position, another telegrapher in the long chain of recent promotions in the Western Union service, who has conspicuously proved his worth.

Mr. Butler was born in Niagara County, New



W. H. BUTLER,

The New Manager of the Western Union Telegraph Company, Denver, Col.

York, in December, 1864, and learned telegraphy in 1878 when in the employ of the New York Central Railroad Company. He went West in 1882 and has been long identified with the Western Union Company. Since 1892 he has been in charge of the Cheyenne office. Mr. Butler is a man of large experience, a proficient telegraph engineer and stands high as an executive and in the esteem of the officials of his company.

Australian Telegraphs.

It is estimated that a loss of \$225,000 will be made on the telegraph revenue of the State of South Australia if the proposed uniform telegraph rates are adopted, by which eight words are to be allowed free for name, address and signature to inland telegrams.

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.

E. D. Edwards, New Manager at Cheyenne.

Mr. E. D. Edwards, for the past four years an operator and all night chief in the Western Union Telegraph office at Cheyenne, Wyo., has been ap-



E. D. EDWARDS,

pointed manager, vice W. H. Butler, transferred to Denver. Mr. Edwards is a Tennessean by birth, is popular and is an electrician of ability. Mr. C. G. Smith is the all night chief.



WILLIAM B. GILL,

Whose Resignation as Superintendent of the Western Union Telegraph Company Has Been Accepted.

New York City's New Manager.

Mr. M. W. Hamblin, manager of the Western Union Telegraph Company, Milwaukee, Wis., has been appointed manager of the same interest in New York City.

He was born at Galesburg, Ill., where he learned the telegraph business. His first regular position was at Monmouth, Ill., in 1877, where he had charge of the Chicago, Burlington and Quincy



M. W. HAMBLIN,

The New Western Union Telegraph Company's Manager in New York.

Railroad and the Western Union Telegraph interests. He has since served the Western Union Company exclusively at St. Louis, Chicago and Cedar Rapids and at Janesville, Wis., Bloomington, Ill., and Davenport, Ia., at the three latter points as manager. His rise has been steady, and his appointment to the managership at New York was unexpected and unsolicited.

The Western Union's Representative at London.

Daniel Le Rougetel, superintendent of the Western Union Telegraph Company, London, Eng., has been promoted to be general superintendent, taking the place of George von Chauven, European representative of the company, resigned. While an Englishman, having been born on the Isle of Jersey on January 22, 1855, a brief residence in this country and a long service in the employ of the Western Union Company, has given him an extensive acquaintance among Americans. He became an operator at an early age, and entered the cable service with the Direct Cable Company at Chester, Eng., in March, 1876. Here for the four years following he acquired a very general and practical knowledge of cable methods and working, and in November, 1880, became assistant manager at New York of the

French Cable Company. Mr. Le Rougetel's energy and ability, and ready adaptation to American requirements, were soon noted, and in July, 1881, when the American Telegraph and Cable Company laid its two cables, which were



DANIEL LE ROUGETEL,

General Superintendent of the Western Union Telegraph Company, London, England.

leased in 1882 to the Western Union Telegraph Company, he was invited to its service as superintendent at Liverpool, a position he filled for fifteen years when he was transferred to a similar position in London, which he has held continuously up to the time of his present promotion.



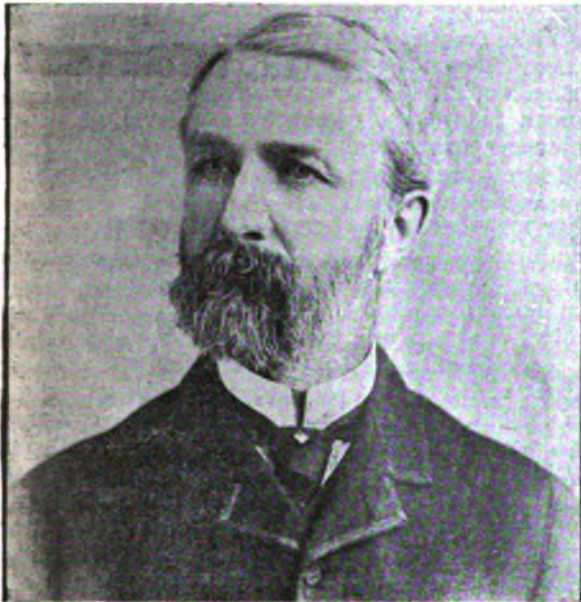
EDWARD M. MULFORD, JR., NEW YORK,

Superintendent of the First and Fifth Districts, Western Union Telegraph Company, a Sketch of Whose Life Appeared in Telegraph Age of May 16.

An effort made for the happiness of others lifts us above ourselves.—Mrs. L. M. Child.

Retirement of Superintendent Gifford.

The abolishment of the fifth district, Eastern division, of the Western Union Telegraph Company affords Superintendent Sidney B. Gifford, of Syracuse, the opportunity to retire, long desired by him. Mr. Gifford was born at Syracuse in 1836, and for more than fifty years has been in the telegraph service, since 1864, as superintendent, being with the single exception of John F. Wallick, of Indianapolis, Ind., who antedates him by but a few days, the senior superintendent in the service. No man probably was better versed in local telegraphic history than Mr. Gifford. Always a student, and gifted with considerable literary ability, he has been a generous contributor to



SIDNEY B. GIFFORD,

The Retiring Superintendent of the Western Union Telegraph Company, Syracuse, New York.

the literature of the subject, and his writings, embellished with reminiscence and anecdote of the past, have a flavor quaint and delightful and always acceptable.

A telegraph operator received an appointment as manager of a prominent summer hotel. One day he telegraphed to a meat packing house for twenty-five "poor telegraph operators." Not understanding the telegram the concern returned it to the manager for explanation. The latter on reading it smiled and said: "I guess your customer wishes twenty-five 'hams,' and the manager's interpretation of the message was correct."

Every telegrapher who loves his profession, who is determined to master its technicalities, and thus insure for himself the confidence and respect of his official superiors and place himself in the direct line of promotion, should subscribe for TELEGRAPH AGE.

The New Head of the Time Service.

Mr. Charles H. Murphy, who was clock inspector of the Western Union Telegraph Company at Denver, Col., and who has been called to assume the larger responsibilities of general inspector and superintendent of the clock service of the entire company, at New York, has been connected with the Western Union Telegraph Company since 1889, beginning his service as a lineman at Zanesville, O. In this capacity he was employed for about two and one-half years, when he was called to Chicago to enter the time service under Manager Brainerd. In less than a year's time he was transferred to the Iowa district as lineman and time service inspector. On January 1, 1896, he



CHARLES H. MURPHY,

The New Head of the Time Service of the Western Union Telegraph Company, New York.

became time inspector for the western part of the third district with headquarters at Denver, Col., and on September 1, 1899, he became the manager of the time service at Omaha, Neb., of the entire district. At the date of the latter appointment the time service of the third district was in its infancy. Under Mr. Murphy's skillful management it has become highly efficient and it is said he has brought this district up to the position of second in the United States.

Mr. Murphy's appointment is wholly due to his thorough and comprehensive knowledge of his work. He is popular in the West where he is best known, and leaves his district with the respect and best wishes of every employee.

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.

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.]

AUGUSTA, ME., POSTAL.

Mr. Arthur Harmon, for the past year manager of the Postal Telegraph-Cable Co. in Augusta, has resigned to accept a position with The Associated Press in that city. Mr. Ralph Morang, of the Western Union in Gardiner, Me., will fill the vacancy.

Mr. H. E. Webber has resigned to accept a position with the Western Union in Augusta, vice Miss Gertrude Hoyt, who takes a summer office.

GARDINER, ME., POSTAL.

Mrs. Cora A. Varney, manager, has resigned and is succeeded by Mr. A. E. Lucier of Lawrence, Mass.

BIRMINGHAM, ALA., POSTAL.

Manager Charles Irwin is a hustler and is justly proud of his new quarters. During the past six months he has caused the old office to be remodelled and changed into a very inviting and cozy affair. New counters, railings, telephone box, operating tables, switchboard, repeating tables and all kinds of new furniture has been installed without inconveniencing the large force of operators and clerks which are now employed here.

New Crocker-Wheeler dynamotors are being installed replacing the old style Edison belt and pulley system which has been in use here many years. This will complete the overhauling of the office which is now one of the most modern and up-to-date in the country.

General Superintendent C. C. Adams, Traffic Manager M. M. Davis and Superintendent of Construction B. S. Price, recently inspected the office and found everything in a satisfactory condition.

Mr. F. N. Andrews has resigned and is succeeded at the board by Mr. R. D. Burger, who in turn is succeeded by William C. Lloyd as night chief.

E. S. Heninger takes Mr. A. Klein's place as traffic chief and the latter is appointed to fill the position of chief operator.

G. G. Nordmark is all-night-chief and Mr. C. D. Hewlett is the early morning cable man. The bonus wires are manned as follows: New Orleans, C. H. Ward and B. B. Pierce; Chicago, J. D. Smith and E. E. Hyding; Memphis, A. G. Sullivan and Robert Cooney; W. O. Townsend and Mrs. W. A. Coley take care of the Memphis end of that bonus wire. This is probably the only instance where a lady holds down a bonus wire.

Our baseball fans are very numerous and enthusiastic. Several of the boys followed the local

team to Atlanta and Chattanooga recently. A baseball team will shortly be organized composed of Postal operators who will challenge the local Western Union team and any other amateur aggregation. They will lift their caps, however, to the professionals.

Chief Operator and Mrs. Klein visited Memphis recently.

Arrivals: J. S. Moffatt, J. E. Rowe, A. Nisonger, J. R. Rogers, W. H. Reynolds, C. M. Kirkland and F. S. Kinnard.

Departures: C. G. Atherton, D. A. Summers, W. E. Hagan, M. C. Keister, W. D. Allen, J. A. Caldwell, W. H. Thornton and Hubert Brannon.

On sick leave: Lee Brannon.

GALVESTON, TEX., WESTERN UNION.

Mr. Judson C. Smith, while manager of this office won the love and esteem of all those with whom he was associated. Prior to his departure to take charge of the Chicago office, to which he has been promoted, he was the recipient of a handsome present consisting of a set of solid silver tableware and a cut glass bowl, the gift being made by Chief Operator G. A. Clark in behalf of the assembled donors.

Mr. Clark spoke as follows: 'Mr. Smith, as you are about to sever your long connection with this office, the Western Union force, joined by Manager McCann of the Mexican and South American Cable Company, and his entire staff, have joined together to present to you this tribute of their respect and esteem. We hope you will go higher and higher, and that your name may yet adorn the company's stationary in the highest official capacity. You have been kind and generous to us and to the company a painstaking, conscientious and accurate official, and we all feel that your promotion came late. We wish you and your family health and prosperity in your new home and desire you to remember that each and every one of us will always have a warm place in his heart for you.'

Mr. Smith responded feelingly and in a few words expressed his heartfelt thanks and promised that he would always cherish the warmest affection for those who served with him in Galveston. He said he did not feel that he deserved any such recognition from the men who have contributed so much to the successful management of the office. He said he had always felt that he was but one of the force, and that this would always be his feeling, no matter how high his station may be in the management of the Western Union.

MONTREAL, QUE., GT. NORTHWESTERN

Resigned: William Burriss, who has gone to Banff, N. W. T.; George Gittus to Banff Springs Hotel, N. W. T.; W. J. Daley to Chicago; Miss Iva McCleve, retired; Miss A. Brunet to Ogdensburg, N. Y.; Mrs. McDermott, retired; Thomas Massey, to Chicago.

Arrivals: William McGilton; Mr. A. C. Clark; Mr. McGillivray from Halifax; Mr. Leroux from the Grand Trunk Railroad, city; Arthur Ross from a broker's office; Miss Manseau from Drum-

mondville. Clifford Swinburne has been promoted to head check.

Willie Pollock is the latest addition to the checkers.

Clifford Byrd, Herbert Keating, Frank Cochran and John Howard are on duty at the Montreal Stock Exchange.

MONTREAL, QUE., CANADIAN PACIFIC.

Arrivals: E. L. Herdman, from Halifax, N. S.; George Fitzpatrick, St. John, N. B.; H. S. Newson and H. Lewis, Hamilton, Ont.; A. P. O'Leary South Africa; W. Howard, Boston, Mass.; H. Amey, Sherbrooke, P. Q.; A. T. King, New York; F. Lee and H. K. Clark.

Extra List: Nelson Noble, Frank Spear, F. X. Senecal, W. P. Spence, J. W. Dunn, L. Van Every, D. P. McLaren. J. H. Mackay and A. W. McLaren have been transferred to day duty.

Mr. John E. Galey of The Associated Press wire has our heartfelt sympathies in the death of his infant son.

Some fifteen men have been added to the operating staff since the 1st of May. We now have the largest staff since the company started business.

Mr. W. S. Watts, who had been with us for the past year, has resigned to accept the superintendency of the ticker system at Toronto, Ont. for the Great Northwestern Telegraph Co. Mr. Watts was given a grand send off by the boys of the office.

Mr. A. T. King has returned from New York.

Among the recent callers were: Mr. F. J. Mahon manager at Quebec; M. Walter Graham, chief operator of the Great North Western, this city; Miss Ling and Miss May Howard, city; Mr. James Barclay, manager and Mr. Thomas Medley, night chief, Great North Western Telegraph Co., both of Quebec.

As usual the 24th of May was generally observed as a half holiday.

WASHINGTON, D. C., POSTAL.

In reading TELEGRAPH AGE, the news and names mustered on the rolls of telegraphic lore, from the principal cities of the country, I thought myself of the genial faces of the "knights of the key" who stand guard day and night at 1345 Pennsylvania avenue, Washington, D. C. So many changes have taken place in the personnel of this office in the past year, that a run over the roster will not seem out of place. We shall try to add a monthly or semi-monthly letter from Washington, which will not only be interesting to those locally concerned, but to the craft at large. Our office is strictly modern, and thoroughly up to date. Our officials in charge are all that could be desired in a first class telegraph office.

The personnel of this office includes the following: George W. Ribble, manager; W. J. Slater, chief operator; J. D. Prosser, traffic chief; J. G. Trunnell, assistant traffic chief; J. B. Mulloy, cashier; E. Y. Simmons, chief clerk; J. P. Gooch, night manager; J. S. Burruss, night traffic chief; C. F. Thompson, all night chief; George H. Frazier,

night receiving clerk, also a day operator, and P. A. Deffer, foreman line department.

Operators of the day force, include: R. S. Waters and H. H. Heard, George L. Peters, J. Chapple, Mrs. G. P. Gooch, W. C. Hospital, A. E. McKorell, C. H. Rugg, C. R. Hoyer, O. Hullings, T. A. Murphy, W. W. Beattie, A. E. Conner, E. D. Moore, C. A. Burck and J. H. Coleman who are in change of the corridor, United States Capitol.

Operators of the night force: G. W. McEntee, L. W. Carlton, W. R. Cole, Benjamin J. Beale, D. S. Gittings, G. M. Hardy.

Split Trick men are Messrs. Chapple, McEntee and Beale.

There are twenty-six branch offices in this city, not including the government offices and all are doing a flourishing business. Among the most important of these are: W. J. Maguire, Interior Department; C. S. White, Produce District; Miss E. M. Hall, Post Office; Miss Lucretia Morse, New Willard Hotel; H. C. Wooden, Howard House; S. H. Martin, Woodward and Lothrop; Miss Blanch Jackson, 14th street and Rhode Island avenue; Charles Lowe, Connecticut avenue, and an office at the Hotel Raleigh.


CHICAGO, ILL.

TELEGRAPHERS' TYPEWRITER CO.

**REBUILT
TYPEWRITERS**

LEADING MAKES

GOOD AS NEW.



SOLD AT
BARGAIN PRICES
ASK FOR
YOUR CHOICE OF
MACHINE.

122 LA SALLE ST. CHICAGO.

O. T. ANDERSON, MANAGER.

Wholesale Dealers in Platen and Parts.

Agency for Telegraph Age.

POSTAL.

Mr. B. P. Hancock, our traffic chief, is on the sick list.

E. M. Hearn resigned and went to St. Louis, but returned saying nothing doing in that place.

Mr. Long, who was working the Pittsburg bonus wire, has resigned and returned to St. Louis.

Miss Wana Paesler is now with the Western Union Telegraph Company.

F. H. Hatch, who spent a month with his parents in Ohio, passed through Chicago on his way to Los Angeles, Cal., where he has accepted a good position with the Santa Fé Railroad.

Mr. John Wandra, one of our finest operators, is now with the Western Union Telegraph Company at Decatur, Ill., taking report.

WESTERN UNION.

Friday evening, May 16, the annual ball held under the joint auspices of the Signal Corps, the Western Union and Postal boys took place. It

was a complimentary affair, and from an enjoyable point of view excelled the one given a year ago, both in numbers present and in the entertainment afforded. The boys left nothing undone to provide for all who came.

Among the conspicuous workers were Messrs. Deacon, Cosgrove, Sherwood, Williams, Chronister, Lynch, Brady and others. The Second Regiment band, Prof. Weldon, leader, supplied some fine dance music. The ball opened with a drill, by the Corps, which showed their splendid military training, also speaking well for the ability of Captain McConnell, the commander. The Captain made an address to the members, and was heartily encored by the large assemblage. The drill concluded with a presentation of medals by Colonel Fieldhouse, of the Governor's staff. Colonel Stewart, of the Second Regiment, also made an address. In part his remarks were based upon the conduct and gentlemanly deportment of the corps while on active duty at Porto Rico.

The grand march was led by Colonel Fieldhouse, several hundred couples participating. Among the guests occupying seats of honor, were Colonel Fieldhouse and wife; Colonel Stewart and wife; Major Stansfield, Major Garrity, Major Dusenberry and Lieutenant Allen. There were several other officers and their ladies and also a large number of telegraph people from both companies present. The L. K. Whitcomb waltz (named in compliment to the chief operator) was the favorite musical selection of the evening.

Manager Stewart, of Nashville, Tenn., was a recent visitor here.

Charles Case, night division chief has returned from a two weeks' vacation, passed at his old home in Nebraska. Mr. Julius Swartz filled Mr. Case's place during the latter's absence.

A. C. Swartz, who for several months was a day operator at Burlington, Iowa, returned a few days ago.

F. E. Watts has been appointed collector for Telegraphers' Aid Society for the night force in place of O. M. Olsen, resigned.

DENVER, COL., WESTERN UNION.

Arrivals: C. A. Park from Chattanooga; James F. Tobin and John W. Wood, Kansas City; Miss Mullen from Chicago; F. C. Schantz, Salt Lake; Howard Boulter, Kansas City; C. S. Raleigh from a broker's office Colorado Springs, Col.; C. E. Simpson, Old Mexico, and Mr. Lash, formerly all night chief at Dallas Tex.

W. B. Powell is now located with a broker in this city.

David Clamage of the night force is the delighted father of a son.

"Old Farmer" Lawton, our night chief, spent a couple of days at Canon City on a pleasure trip and for much needed rest. A history of the country is now expected from the "Old Farmer."

Mr. A. A. Gargan on May 1 received the appointment as chief clerk to Assistant Superintendent Charles B. Horton. The new appointee

has successfully worked his way up from a messenger boy, commencing with this company in August, 1892, in this city, where he was also clerk and operator; manager at Glenwood Springs for about one year, and cashier of the Denver office for three years. Mr. Gargan is very popular with the public, a favorite among the employees and his promotion is very gratifying to all.

Mr. J. H. Ryan handles the baseball wire at the park this summer.

Arthur McDonald has accepted service with The Associated Press at this point.

Mr. Fashbaugh, our wire chief, who has been laid up with rheumatism, has returned to duty.

BOSTON, MASS.

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

PHILADELPHIA, PA., WESTERN UNION.

Our congratulations and best wishes and those of many friends are herewith extended to the following who were married on May 15:

Mr. George Brenckman of this office to Miss Rhoda I. Green, of this city, formerly of Milesburg, Pa.; Mr. H. Sultzbach to Miss Ida Watson, manager of the Marietta, Pa., office.

Mr. John Berger of this office and W. Vance Compton, of Armour & Company, are both proud fathers of sons.

Mr. and Mrs. B. W. Longstroth, of Brooklyn, N. Y., both well known here, were recent visitors. Mrs. Longstroth was formerly Miss McClain.

Miss Collins, manager of the Coatesville, Pa., office, was suddenly summoned to Pittsburg, Pa., owing to the severe illness of her father. Mr. Beale of Downingtown, Pa., is the manager pro tem.

Resignations: A. M. Mintzer and Miss Winifred Collins.

ST. LOUIS, MO., WESTERN UNION.

Jennie Kelley and Alexander Burch have returned from Memphis, Tenn., where they went to help out during the races.

M. Crain has accepted a pool room job in Beaumont, Tex., and left for that point recently.

Miss Ida Scharge, who has been at Hot Springs during the busy season, has returned.

John White made a short trip to Indianapolis, Ind., recently.

Mr. Gross is acting assistant chief operator during Mr. Boone's absence and Charles Frey has charge of the first division.

Charles Lawrence, who went to New Orleans during the cold weather, has returned.

Henry Hornaday has recovered from his recent illness and is back on first Dallas.

Arrivals: Messrs. Harmon, Montgomery;

Goff, Flippen, McMahon, Rapp, Gilliam, Jacobson, Gadmer, Molony, Eidt.

Departures: Messrs. Livingston, Lee, Pennington and Newman.

PHILADELPHIA, PA., POSTAL.

A number of new faces have appeared with the annual spring rush of business. Among them are the Messrs. Frank Keene, H. A. Selin, W. E. Scholl, E. T. Dillon and John Duffy.

Mr. Roscoe Smith has relinquished a night position with the Western Union at the "North American" office to return here. Mr. W. J. Furman is another to return, taking a place with the extras.

Strawberries and early produce business has the call these days, causing great activity during the morning hours.

C. C. Figgs, manager of the Fifth and Market streets branch office, has the sympathy of all his friends on account of the death of his brother, killed by a railroad train, in front of which he thoughtlessly dashed while in pursuit of a baseball.

Owing to a change in the Camden, N. J., office, Mr. Charles T. McIntire has been temporarily relieved on the first Chicago wire and placed in charge of Camden pending further arrangements.

Mr. E. R. Henderson's spare time is fully occupied managing the interests of aspiring young pugilists.

Mr. William Burt, Jr., has resigned his position at the Bourse branch office to accept better inducements with the Western Union.

After spending a few years at a desirable location and in a comfortable office, manager C. E. Stump, of the fish district, is compelled to put up with meagre accommodations and unpleasant surroundings in the new locality to which he has been compelled to move on account of the owner's tearing down the building to make room for improvements.

NEW YORK CITY.

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

WESTERN UNION.

The recent extensive changes made in the executive personnel of the Western Union Telegraph

Company, has given rise to a wide spread feeling of uncertainty among the operators as to their own tenure of place. In view of this fact we are authorized to state that the management has no desire or intention to disturb existing conditions of employment with the operating force for whom, as should be expected, only the most cordial feeling of good will obtain, and that no removals in that branch of the service will be made except for cause. This announcement ought to set at rest all disquieting rumors that have unfortunately found currency, and restore to that great body of hard-working and deserving men the relief of mind that has needlessly been disturbed.

Fred O. Nourse, general traffic chief, resigned, to take effect June 1. In order to better his health, which has not been good for some time, he will take up his residence at his farm at Littleton, N. H. Mr. Nourse is recognized by all to be a very efficient telegraph man, and his departure will be greatly regretted by the officials as well as the force.

R. C. McDonald contemplates taking a trip to California for the purpose of permanently locating there if he finds things as represented.

Walter C. Burton gave an illustrated lecture on "A Trip Through Europe" at Lexington Hall, Brooklyn, Thursday evening, May 22. Mr. Burton was the telegraphers' representative at the unveiling of the Volta monument in Italy in 1899.

Robert Frothingham, not long since connected with the operating force, now with "Life" as its advertising manager, gave an historical lecture on "Masonry" at the Anglo-Saxon Lodge, Wednesday evening, May 23. He was recently elected master of a lodge at Bensonhurst, L. I.

Walter Stillman, timekeeper on the seventh floor, recently at "Clark's" desk, left the service May 31 to go into other business.

"Ham" Fitchett, who has undergone an operation for a serious trouble, is said to be greatly improved.

Robert Mattocks, one of the oldest operators in New York City, died suddenly May 15.

Mr. William Finn, of the quadruplex department, has returned from his business trip to Boston, Mass., and St. John, N. B.

POSTAL.

Edward Hodnett has resigned to accept a position in a broker's office. George W. McGill is filling Mr. Hodnett's place at the Boston "Herald" bureau.

Robert Mitchell has gone with The Associated Press at the "Herald" office.

Miss Lena Schrader, of the check department, has resigned.

Mr. C. F. Leonard, a well-known branch office manager has been appointed manager of the receiving and delivery departments of the main office during the absence of Mr. A. E. Chandler.

Cultivation to the mind is as necessary as food is to the body.—Cicero.

Personal Mention.

Mr. F. M. Ferrin, the cable manufacturer of Boston and New York, is confined to his home with a severe affliction of his eyes.

Colonel J. R. McIntosh, general counsel of the Postal Telegraph-Cable Company, Richmond, Va., has removed his headquarters to Atlanta, Ga.

Mr. Thomas E. Fleming, special agent of the Postal Telegraph-Cable Company, has returned to New York from a visit to the principal offices in the Southern division.

Capt. G. O. Squier, of the United States Cable-ship Burnside, who has been laying and repairing cable in the Philippines, is expected to return to New York early in June.

Mr. John W. Mackay, president of the Commercial Cable Company, New York, has returned from San Francisco, Cal., where he has been sojourning for the past five months.

Mr. Melville E. Stone, general manager of The Associated Press, New York, sailed for Europe May 22. He was accompanied by his wife and daughter and will be absent for a couple of months.

Mr. G. F. Porter, New York manager for W. R. Brixey, cable manufacturer, has gone to the Pacific Coast in the interest of Government cables, which he has laid during the past two years in Alaskan waters.

Mr. Stephen D. Field, the old-time telegrapher, and well-known electrical inventor and engineer, who has been engaged on electrical railway work for some years in Europe, with headquarters at Geneva, has just returned home to America.

Dr. A. E. Kennelly has been appointed professor of electrical engineering at Harvard University. For many years Dr. Kennelly has been well known as an electrical engineer of great originality and ability. He is a graduate from the English telegraph and submarine cable service.

The Chicago Society was organized in New York on May 15. Among the names of the prominent members we note those of Col. R. C. Clowry, president and general manager of the Western Union Telegraph Company, and Melville E. Stone, general manager of The Associated Press, New York.

Mr. F. W. Sabold, a well-known old-time telegrapher, prominent in telegraph circles up to ten years ago, since which time he has been identified with the telephone interests at Yonkers, N. Y., has just been appointed contract agent of the Hudson River Telephone Company, with headquarters at Albany, N. Y.

Col. A. B. de Frece, well-known in telegraph and press circles, and a prominent member of the Press Club, New York, has been added to the entertainment committee of the Magnetic Club. Col. de Frece has had a wide experience in club matters and his services and experience will be of great value to the Magnetics.

Election of Officers.

At a meeting of the Chicago and Northwestern Telegraph Company, held in New York May 20, William T. Noonan of Minneapolis was elected president, A. R. Brewer, secretary and treasurer, and I. McMichael, John B. Manning, George B. Manning and Thomas P. Scully, directors.

At the annual meeting of the Pacific and Atlantic Telegraph Company, held in Philadelphia, Pa., on May 20, in the offices of the Western Union Telegraph Company, these officers were elected: Robert C. Clowry, president; Robert C. Clowry, Thomas F. Clark, J. B. Van Every, G. W. E. Atkins, Belvidere Brooks, George H. Fearons, J. P. Altberger, directors.

At the annual meeting of the New York Telephone Company, held in New York on May 6 the following directors were elected: Charles F. Cutler, Union N. Bethell, John H. Cahill, Thomas F. Clark, Robert C. Clowry, Joseph P. Davis, Frederick P. Fish, George J. Gould, Edward J. Hall, James Merrihew, Charles Steele, John B. Van Every and William H. Woolverton.

The stockholders of the American District Telegraph Company of Philadelphia met on May 22 at the offices in the Postal Telegraph Building and elected officers as follows: John W. Mackay, president; William H. Baker, vice-president; L. Lemon, vice-president and general manager; J. N. Donaldson, secretary and treasurer, and directors, John W. Mackay, W. H. Baker, A. B. Chandler, E. C. Platt, E. C. Bradley, George G. Ward, L. Lemon, Y. G. Glenn and J. N. Donaldson.

New York Visitors.

Mr. J. W. Kates, superintendent Postal Telegraph-Cable Company, Richmond, Va.

Mr. J. B. Tree, superintendent of the Western Union Telegraph Company, Richmond, Va.

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

Mr. Frank Jaynes, superintendent of the Western Union Telegraph Company, San Francisco, Cal.

Mr. H. D. Jones, of the superintendent's office of the Western Union Telegraph Company, Cleveland, O.

Mr. Alexander Crow, an old New York City operator, claim agent for the New York Central Railroad, Corning, N. Y.

Mr. H. H. Hall, of Ashtabula, O., a well-known old-time telegrapher, now a banker in that prosperous city. Mr. Hall was accompanied by his wife.

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

The Morse Club.

The seventh annual dinner of the Morse Club was held at the Sturtevant House, New York, May 24, forty-two persons occupying places at the table. Gardner Irving, the president of the club, presided.

After the dinner, and when the cigars were lighted, the president introduced Major Robert B. Hoover, who delivered a brief address relating to the history of the Morse statue. He also read a very interesting letter bearing the autographic signature of Prof. Morse. This memento was passed around among those present for inspection. A pleasant musical feature of the evening was the singing of Mr. Alfred E. Pearsall and Miss Marie Budworth.

Mr. Walter C. Burton made a brief address, and then there were feats of magic performed by Mr. A. G. Waring, who concluded this part of the entertainment with a mysterious production of upwards of one hundred miniature flags of all nations bearing the name of the club and date of this annual celebration. These were freely distributed to all present as souvenirs of the occasion.

Mr. Francis W. Jones then addressed the club in his usually felicitous manner, his remarks being followed by the song "Awake Proud Spirit of My Youth" finely rendered by Marion H. Kerner. Mr. Kerner also showed upon a screen the "Album of Familiar Faces." The pictures presented were those of well-known individuals, and as each one came into view it was received with generous applause. Among those so shown were many of the officials of the Western Union and Postal Telegraph companies, including Col. R. C. Clowry, Gen Thomas T. Eckert, Col. A. B. Chandler, Mr. William H. Baker, Messrs. Humstone, Merrihew, Tinker, Andrew Carnegie, George J. Gould, Thomas Edison, and a host of well-known members of the craft. The words of the "Ode to Morse" were thrown upon the screen and heartily sung by the entire assemblage enthusiastically led by Mr. Kerner, thus concluding one of the most enjoyable anniversaries in the history of the club.

The following officers were elected to serve for the ensuing year: Gardner Irving, president; M. H. Kerner, vice-president; Charles J. Power, secretary; M. F. Gaffney, treasurer; W. A. Van Orden, historian. Governing committee: Walter C. Burton, F. W. Jones, M. R. Hulst.

New members elected as follows: Major Robert B. Hoover, J. E. Holland, Herbert T. Tomlinson, A. B. Palmer, Edward F. Dougherty, Edwin Albert Kane, Jr., James McKenzie, J. E. Albright, F. E. Wheeler, T. M. Woodford.

Among those present were: W. A. Van Orden, D. E. Van Orden, M. R. Hulst, C. E. Rafford, Mabel F. Irving, Alfred E. Pearsall, Marie Budworth, Isabelle F. Forson, C. D. Williams, A. E. Wilgus, D. Kinney and wife, G. M. Waring, A. G. Waring, T. F. Murphy, A. V. Waldron, D. P. Smith, A. P. Sterling, Mr. and Mrs. S. A. Seaman,

Mr. Lewis I. Root, Miss M. C. Sink, James McKenzie, Ivan B. Abernethy, Miss Lottie O'Donnell, T. A. Brooks, R. C. McDonald and wife, Joseph F. Ahearn, Charles J. Power, M. F. Gaffney and wife, Mrs. Helen Smith, W. C. McDonald, A. W. Waldron, Major R. B. Hoover, W. J. Dealy, F. W. Jones, Gardner Irving, Walter C. Burton, M. H. Kerner and wife and John Desmond.

Telegrapher and Business Man.

Mr. O. T. Anderson, a well-known telegrapher of Chicago, and manager of the Telegraphers' Typewriter Company, of 122 La Salle street, that city, was born at Bergen, Norway, on January 31, 1879. Coming at an early age to this country, he became a messenger boy for the Gold and Stock Telegraph Company, Chicago, in March, 1892, afterwards gaining a position as operator with the Western Union Telegraph Company, in that city, holding the same from May 30, 1896, to



O. T. ANDERSON.

November, 1897. He then went to Carroll, Ia., in the same service, but returned the following year to Chicago, yet once again going back to Iowa, locating at Cedar Falls, that State. For over a year he accepted a telegraphic and stenographic position with a private firm in which the Turkish and Belgian Consul was a member, when in September, 1900, he became an operator in the employ of the Postal Telegraph-Cable Company, at Chicago, where he now is. Mr. Anderson has shown excellent business capacity and has met with gratifying success in this direction in the Western metropolis, having built up a large trade in the sale of typewriters with which he appears to have an intimate and extended knowledge.

Cuba's Telegraph Lines.

The 5,000 miles of telegraph lines established by the United States Signal Corps in Cuba have been transferred to representatives of the new Republic. Gen. Greely, chief of the Signal Corps, said that the transfer was made a few days ago. The system has brought into the Cuban Treasury within the past year some \$100,000, and in addition has transmitted free official business for the entire island, which at the same rate would have cost more than \$200,000. The material alone has been very largely paid for out of the Cuban revenues, and a Cuban force has been gradually installed, so that the transfer was effected without any friction or deterioration of the service.

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

Obituary.

A. T. Terrell, aged seventy-seven years, an old-time telegrapher, died at Riverhead, Long Island, N. Y., on May 17.

Frank J. Temple, aged fifty years, chief operator of the Western Union Telegraph Company at Bangor, Me., died on May 15.

Mrs. Julia Abrams, who is said by many to have been the first woman in the United States to learn telegraphy, died recently at Niles, Mich., at the age of eight-five years.

Clarence E. Stump, assistant manager of the "Christian Herald," and for many years business manager of the "Electrical World," and well-known in telegraph and electrical circles, died at his home in Brooklyn, N. Y., on May 16.

Clinton D. Hill, aged sixty-three years, an old-time telegrapher and prominent figure in Memphis, and other Southern cities previous to the Civil War, died at Painesville, O., May 14. Mr. Hill retired from the telegraph service many years ago.

W. W. Carr, thirty-seven years of age, for many years with The Associated Press, Topeka, Kan., and one of the best known press operators in that section of the country, was accidentally shot and killed while hunting at Eudora, Kan., on April 26. Mr. Carr was extremely popular in the West and his untimely death is deeply regretted by a wide circle of friends.

Municipal Electricians.

Mr. J. B. Yeakle, a well-known old-time telegrapher of Baltimore, Md., has been appointed superintendent of fire alarm telegraphs of the Monument City.

David R. Walker, ex-chief of the city electrical bureau, Philadelphia, Pa., died suddenly of apoplexy on May 8. He was about seventy years of age. Chief Walker resigned a year ago after having been for twenty-five years at the head of the electrical bureau.

General Mention.

Miss C. J. R. Williams, for the past three years manager of the Postal Telegraph-Cable Company, Beloit, Wis., has resigned to enter other business in Rockford, Ill.

Mr. James Wesley Haygood, of the Postal Tele-

graph-Cable Company, Birmingham, Ala., will be married on June 4 to Miss Allie Nelson of Columbia, Ala. Mr. Haygood is one of the best known operators in the South, and a host of friends extend hearty congratulations.

Of the present Western Union staff at Albany, N. Y., there are three men who have been continuously with the local office since it was opened in the old Museum Building on December 19, 1863. They are M. L. Morgan, manager; S. C. Rice, chief operator, and John F. Collins, operator.

One of the telegraph wags writes: "A chief operator in our office has resigned, but as your columns are fully taken up recording the resignations and appointments of prominent officials, we presume the mention of these subordinate chaps will have to take a back seat for the more important news."

A patent recently granted to John A. Albertson, of White Haven, Penn., for an improvement in telegraph sounders, consists of placing a cushion on the end of the top brass screw, which the lever of the sounder strikes when the circuit opens, thereby deadening the sound. Besides reducing the volume of the sound fifty per cent., it is claimed that the signals are more clearly made, and consequently more easily read by the operator.

One of the New Jersey glass companies has received an order for glass insulators, the largest ever made in this country, which are to be used on the Power Transmission Line from Niagara Falls to Buffalo, N. Y. It is stated that they will be almost as large as a gallon measure.

Those outside of the Telegraphers' Mutual Benefit Association

(Insurance, \$500, \$1,000 or \$1,500)
are in no

MORE PERIL

than those who belong to it, but their families are. Established 35 years. Resources \$200,000, clear of all liabilities. Initiation fee \$2, and no other expense of any kind. Pamphlets and application blanks forwarded on request by any Agent, or by M. J. O'LEARY, Sec'y, P. O. Box, 510, NEW YORK

IMPORTANT TO YOU

J. S. TOWNSEND--The Telegraphers' Jeweler, 1654 Wabash Ave., Chicago, offers any article in his elegant stock at net wholesale prices. A rare opportunity. Any watches or jewelry advertised can be bought at a lower price from this well known firm. J. S. TOWNSEND, 1654 Wabash Ave., Chicago.

Our 400-page catalogue sent on application.
Agents wanted. Established 1877.

Any electrical or telegraph book published for sale by Telegraph Age, 253 Broadway, New York.



Typewriters of High Grade

We Handle All the Leading STANDARD
MAKES of Various Grades

RENT—SELL—RE-BUILD

them and Ship them Anywhere in the
U. S. to Reliable People

BARGAIN PRICES & EASY TERMS to TELEGRAPHERS

Write Us Mentioning Telegraph Age

Telegraphers' Typewriter Company

O. T. ANDERSON, Manager

122 LA SALLE ST., SUITE 5 CHICAGO

WE CAN TRAIN

YOU FOR ANY POSITION IN ELECTRICAL ENGINEERING

IF you are dissatisfied with your present position, change it. Don't waste your time worrying about it. We can train you for something better. Mark **X** before the position you want in the coupon below, fill in the blanks, and send to us. We will explain how we can train you to earn a higher salary.

DO IT TODAY

International Correspondence Schools
BOX 883, SCRANTON, PA.

Please explain how I can qualify for the position marked X below.

- Telegraph Engineer
- Telephone Engineer
- Electrical Engineer
- Designer of Electric Machinery
- Erector of Electric Apparatus
- Manager of Electric Railway
- Manager of Electric Light Plant
- Superintendent of Electric Plant
- Fire Underwriters' Inspector
- Interior Wireman
- Foreman of Dynamo Room
- Foreman of Electrical Repair Shop
- Dynamo Tender
- Electrical Lineman
- Motorman

Occupation _____
 Name _____
 No. _____ Street _____
 Town _____ State _____

THE EDISON PHONOPLEX SYSTEM OF TELEGRAPHY

INSURES CONSTANT COMMUNICATION.

It WORKS through all kinds of trouble and weather.
 Are you using it? If not, write to its patrons and ascertain their opinion of it.

SOME USERS OF THE PHONOPLEX SYSTEM:

- Western Union Telegraph Co.
- Illinois Central R. R. Co.
- Boston & Maine Railroad.
- New York, New Haven & Hartford R. R. Co.
- Lehigh Valley R. R. Co.
- Central Railroad of New Jersey.
- Baltimore & Ohio R. R. Co.
- Baltimore & Ohio & Southwestern R. R. Co.
- Pennsylvania R. R. Co.
- Union Pacific R. R. Co.
- Kansas City, Fort Scott & Memphis R. R. Co.
- Kansas City, Council Bluffs & Omaha R.R. Co.
- Colorado Midland R. R. Co.
- Central of Georgia R. R. Co.
- Chicago & Grand Trunk Railway.
- Standard Oil Co.
- Tide Water Pipe Line.
- Atchison, Topeka & Santa Fe R. R. Co.
- Southern California Railway Division.
- Atlantic & Pacific Division.

Catalogue and Further Information upon Application. **THOMAS A. EDISON, Orange, N. J.**



This Ad. is Worth \$1.00 to You
 If you mention this paper.
J. DONNELLY
 "Operators, Please Show to Your Linemen."
 If you will send a Postal Money Order for \$2.00 we will send you a pair of Donnelly's Steel Climbers and GIVE YOU a \$1.00 Set of Straps with Pads.
 Each Spur is Oil Tempered by the Wallace Barnes Company.

Testimonial of the Grand Treasurer of the International Brotherhood of Electrical Workers
 "I have always found the Donnelly Climbers satisfactory. I have used them and can recommend as second to none."
 F. J. SHEEHAN, New Britain, Conn.

J. J. REIDY & CO.,
 311-319 East Street, New Haven, Conn.

THE TELEGRAPH AGE deals in all kinds of electrical books. Send for price list.

PRICES REDUCED FOR 60 DAYS.

\$4.00 Vapor Bath Cabinet \$2.25 each
 \$5.00 Quaker " 3.50 each
 \$10.00 " " 6.10 each
 \$1.00 Face & Head Steam. Atch. 65c
 Quality best. Guaranteed. \$2. Book Free with all "Quakers."
 Write for our New Catalogue, special 60-Day offer. Don't miss it. Your last chance. New plan, new prices to agents, salesmen, managers. Wonderful sellers. Hustlers getting rich. Plenty territory. World Mfg Co., 97 World Bldg., Cincinnati, O.

The Telegraph Chronicle

is the only telegraph newspaper published in England. All who wish to know what is going on in the British Postal Telegraph Service and to keep abreast of the progress of technical improvements in telegraphic apparatus and methods, should subscribe to the

TELEGRAPH CHRONICLE

Published fortnightly at 129 Peeps Road, London, S. E. Subscription, post-free, Five Shillings per Annum. The TELEGRAPH CHRONICLE is the organ of the Postal Telegraph Clerks Association, the most powerful organization of telegraphers in the world.

TELEPHONES

For Long Lines
 Short Lines
 Private Lines
 Exchange Lines
 Toll Lines
 and All Lines of Business.



All Standard Instruments are equipped with the celebrated "Milde" transmitter, which for talking and lasting qualities has no equal, and is considered by all users and experts to be the best transmitter on the market.

THE STANDARD INSTRUMENTS ARE THE BEST.

Standard Telephone & Electric Co.,
 MADISON, WIS.

WRITE FOR PRICES.

GOODS SHIPPED PROMPTLY.

TRADE MARK STICKERS FROM FIVE BROTHERS' PIPE SMOKING TOBACCO ARE OF EQUAL VALUE WITH TAGS IN SECURING PRESENTS.

FREE FOR TOBACCO TAGS

NOV. 30TH 1902.

FROM

"STAR"

"HORSE SHOE"

"SPEARHEAD"

"STANDARD NAVY"

"J.T."

"PIPER HEIDSIECK"

"BOOT JACK"

"DRUMMOND" NATURAL LEAF

"OLD PEACH & HONEY"

"NOBBY SPUN ROLL"

"JOLLY TAR"

"E. RICE GREENVILLE"

"GRANGER TWIST"

2 Granger Twist Tags being equal to one of others mentioned.

"GOOD LUCK," "CROSS BOW," "OLD HONESTY,"

"MASTER WORKMAN," "SICKLE,"

"BRANDYWINE," "PLANET," "NEPTUNE,"

"RAZOR," "TENNESSEE CROSS TIE,"

"OLE VARGINY,"

Red Tin Tags from Tinsley's 16 oz. Natural Leaf and W.N. Tinsley's picture tin tags are also good for Presents. TAGS MAY BE ASSORTED IN SECURING PRESENTS.

OUR NEW ILLUSTRATED CATALOGUE OF PRESENTS FOR 1902

Includes many articles not shown here. It contains the most attractive List of Presents ever offered for Tags, and will be sent by mail on receipt of postage—2 cents.

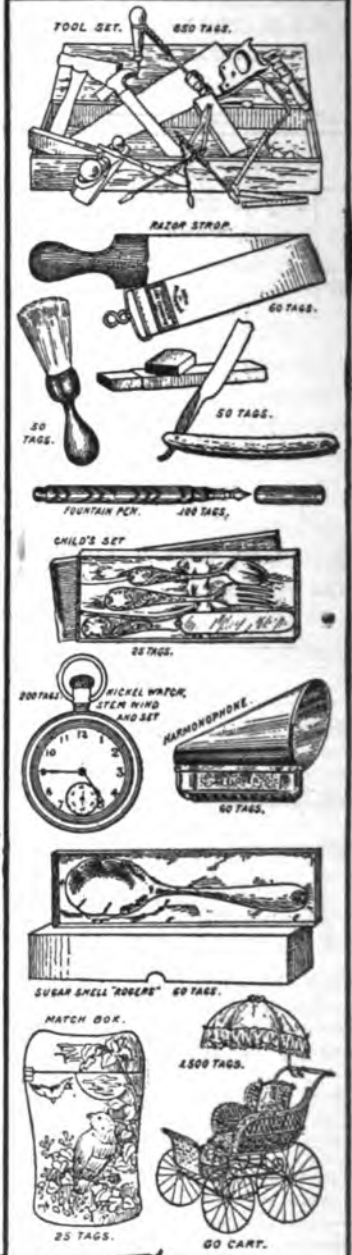
Our offer of Presents for Tags will expire Nov. 30th, 1902. CONTINENTAL TOBACCO CO.

Write your name and address plainly on outside of package containing tags, and forward tags by registered mail or express prepaid. Be sure to have your package securely wrapped, so that tags will not be lost in transit.

Send tags and requests for Presents (also requests for Catalogues) to

C. Hy. BROWN,
4241 Folsom Ave.,
ST. LOUIS, MO.

NOV. 30TH 1902.



Paper Bands from "Florodora" Cigars are of Equal Value With Tags in Securing Presents.



The Best Conductor of Comfort
PRESIDENT Suspenders

The genuine has "President" on the buckles. Trimmings are not fast. New model now ready for men of heavy work; also small size for youths. Sold everywhere, 50c, or by mail, postpaid.
 C. A. Edgerton Mfg. Co.,
 Box 200, Shirley, Mass.

BLOOD POISON

Primary, Secondary or Tertiary permanently cured in 15 to 35 days. We eliminate all poison from the system, so that there can never be a return of the disease in any form. Parties can be treated at home as well as here (for the same price and under the same guarantee), but with those who prefer to come here, we will contract to cure them or refund all money and pay entire expenses of coming, railroad fare and hotel bills.

OUR MAGIC REMEDY has been many years in use and never failed to cure. Since the history of medicine a true specific for Blood Poison has been sought for but never found, until our Magic Cyphilline was discovered. This disease has always baffled the skill of the most eminent physicians. We solicit the most obstinate cases and challenge the world for a case we cannot cure.

\$500,000 CAPITAL
 behind our unconditional guarantee. ABSOLUTE PROOFS sent sealed on application. 100-PAGE BOOK FREE.

HAVE YOU Sore Throat, Pimples, Copper Colored Spots, Aches, Old Sores, Ulcers in mouth, Hair Falling, write

COOK REMEDY CO.,
 1633 Masonic Temple, Chicago, Ill.

COOK REMEDY CO.

Headquarters **Established 1869**
Rogers Manifold and Carbon Paper Co.,
 MANUFACTURING STATIONERS,
 No. 75 PAIDEN LANE, NEW YORK.

MANUFACTURERS OF SUPERIOR
CARBON PAPER
 -----FOR-----
Stylus, Pencil, Pen and Typewriter Use.

All kinds, colors and sizes on thin, medium and heavy paper for all purposes. Large Stock. Large discount. Orders filled promptly.

ALSO MANUFACTURERS OF
TYPEWRITER RIBBONS
 FOR ALL MACHINES

Superior quality, woven edge, Gold Tips. Send for price lists. Also for Manifold Papers and Books, Stylus, Duplicating Books, Oil Boards, Train Order Books, etc.

\$1250 TO \$3600 Per Year & Expenses.
FOR HUSTLERS—BOTH MEN & WOMEN

At home or traveling. Let us start you. Our Puritan Water Still—a wonderful invention. Great seller—big money maker. Enormous demand. Over 50,000 already sold. Everybody buys. It purifies the foulest water by distillation—removes every impurity. Furnishes absolutely pure, aerated, delicious drinking water. Beats Filters. Saves lives—prevents fevers, sickness, doctor bills—cures disease. Write for **NEW PLAN AND OFFER.**

HARRISON MFG CO., 12 Harrison Bldg., Cincinnati, O.

Please mention the Telegraph Age in communicating with advertisers.

MENNEN'S
 BORATED TALCUM

TOILET POWDER

Delightful After Bathing
 A Luxury After Shaving

Beautifies and Preserves the Complexion
 A positive relief for PRICKLY HEAT, CHAFING and SUNBURNS, and all afflictions of the skin. For sore, blistered and sweaty feet it has no equal. Removes all odor of perspiration. Get MENNEN'S (the original, a little higher in price, perhaps, than worthless substitutes, but there is a reason for it. Sold everywhere, or mailed for 75c. Avoid harmful imitations. Complete.)
 GERHARD MENNEN CO.

1898 EDITION
 — or —

Experimental Science

By GEO. M. HOPKINS.
 20th Edition Revised and Enlarged.
 314 Pages, 820 Illustrations.
 Price \$4.00 in cloth; \$5.00 in half morocco, postpaid

THIS is a book full of interest and value for Teachers, Students, and others who desire to impart or obtain a practical knowledge of Physics. This splendid work gives young and old something worthy of thought. It has influenced thousands of men in the choice of a career. It will give anyone, young or old, information that will enable him to comprehend the great improvements of the day. It furnishes suggestions for hours of instructive recreation.



Address, **J. B. TALTAVALL,**
 253 Broadway, NEW YORK.

EVERY GOOD OPERATOR

SHOULD HAVE A GOOD WORD COUNTER
 THEY SAVE TIME AND TROUBLE

INVALUABLE BECAUSE THEY ARE RELIABLE

We Can Supply Either the Hudson or Alexander

They record the exact number of words written upon any writing machine. They are an ornament to any typewriter. Simple and durable. Cannot get out of order. Unlimited counting capacity. Can be instantly reset. Warranted accurate.

Mailed to any Address upon Receipt of \$3.00

In ordering state what machine you use, as attachments differ. Remit by express or post office money order to

JOHN B. TALTAVALL, Telegraph Age, 253 Broadway, N. Y.

Maver's American Telegraphy. A thorough Encyclopedia of the Telegraph. Over 800 pages, 450 illustrations. Price, \$3.50, express charges prepaid. Address J. B. Taltavall, 253 Broadway, New York.

Any electrical or telegraph book published for sale by
TELEGRAPH AGE,
 253 Broadway, New York.

NOW IS THE TIME TO SUBSCRIBE FOR :: :: **TELEGRAPH AGE**

TERMS: \$1.50 PER YEAR.

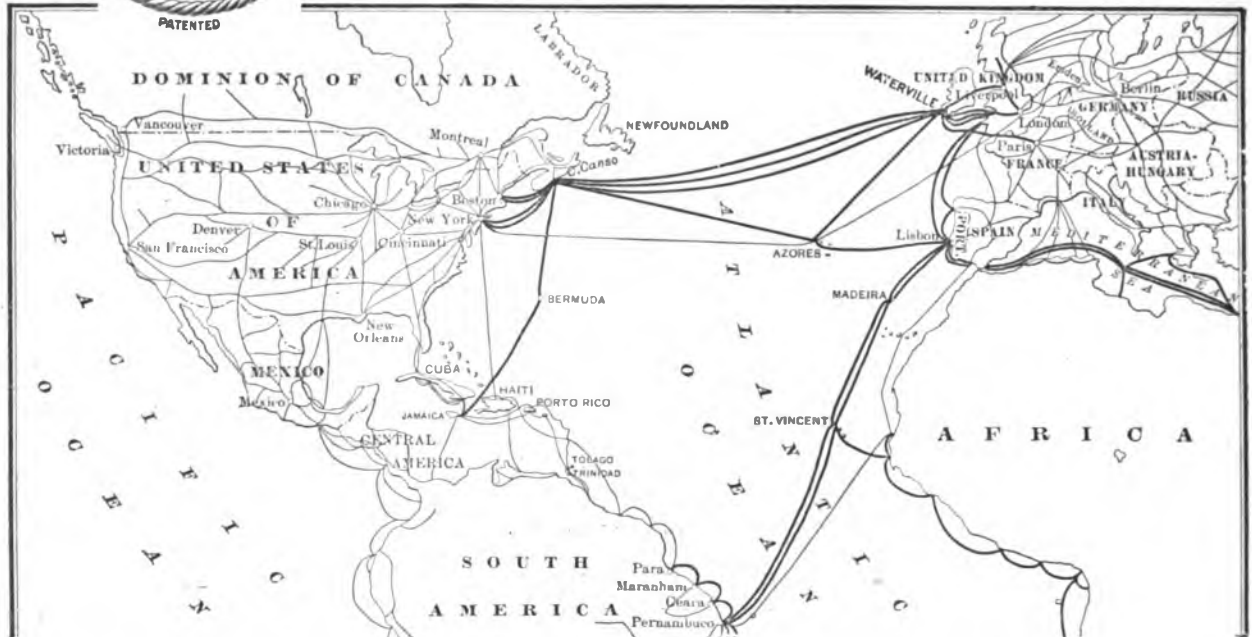
Address **J. B. TALTAVALL, Publisher, 253 BROADWAY, NEW YORK.**

Commercial Cable Co.



CONNECTIONS :

POSTAL TELEGRAPH-CABLE COMPANY,
CANADIAN PACIFIC RAILWAY TELEGRAPHS,
HALIFAX & BERMUDAS CABLE COMPANY,
DIRECT WEST INDIA CABLE COMPANY,
DEUTSCH-ATLANTISCHE TELEGRAPHEN-GESELLSCHAFT
(GERMAN ATLANTIC CABLE COMPANY).



EXECUTIVE OFFICES,
POSTAL TELEGRAPH BUILDING, N. Y.

JOHN W. MACKAY, PRESIDENT.
GEO. C. WARD, VICE-PRES. & GEN'L MANAGER.

POSTAL TELEGRAPH vs. WESTERN UNION. A FIGHT FOR THE PACIFIC.

The Postal Telegraph is laying a submarine cable from California to the Philippines, 8,000 miles, at a cost of \$12,000,000, without subsidy or guarantee of any kind.

The Western Union is asking the Government to prevent the Postal from carrying out the work, and is also asking the Government to lay a Pacific cable at Government expense for the benefit of the Western Union.

The Postal Telegraph (Commercial Pacific Cable Company) has agreed in writing with the Government to sell its cable to the Government, at any time, at the cable's appraised valuation.

If the cable does not work, or is a bad venture, the Government need not take it. The Company takes all the risk, and gives the Government all the chances of gain.

The Company can lay this cable as cheaply and as well and as successfully as any cable company in the world. The Company believes it can make the cable succeed commercially, and is entirely willing that the Government shall have the right to take it, at its appraised valuation, whenever the Government wants it, for any reasons, political, governmental, or commercial.

Is it not best for the United States Government to let the Postal do the work and put in its money and take all the risk of the cable not working, all the risk of the cable not paying, laid by the best expert cable talent in the world, laid economically, laid skillfully, laid to secure the greatest efficiency, and then if the cable succeeds for the Government to take it at its appraised valuation?

Rates reduced from \$2.35 to \$1.00 per word.

.....THE.....

Western Union Telegraph Co.

Executive Offices, 195 BROADWAY, :: :: :: :: NEW YORK

ROBERT C. CLOWRY, President and General Manager.

The Largest Telegraphic System in Existence

900,000 MILES OF WIRE. 22,500 OFFICES.

TWO AMERICAN ATLANTIC CABLES

From New York City to Penzance, England, direct. Both cables are duplexed. Connects also with FOUR ANGLO-AMERICAN and one DIRECT UNITED STATES CABLES. Direct communication with GERMANY and FRANCE. DIRECT WIRES to GALVESTON, TEXAS, connecting at that place with the Cables of the MEXICAN, the CENTRAL and SOUTH AMERICAN TELEGRAPH COMPANIES for

ALL POINTS IN MEXICO AND CENTRAL AND SOUTH AMERICA

DIRECT WIRES and CABLES to HAVANA, CUBA, connecting at that place with the CUBA SUBMARINE and WEST INDIA AND PANAMA TELEGRAPH COMPANIES for

ALL POINTS IN THE WEST INDIES

Exclusive Connection with the Great North-Western Tel. Co. of Canada

OFFICES IN GREAT BRITAIN

252 Gresham House, Old Broad Street, :: London, E. C.

40 Mark Lane, London, E. C.
21 Royal Exchange, London, E. C.
109 Fenchurch Street, London, E. C.
Effingham House, Arundel Street, Strand, London, W. C.
2 Northumberland Avenue, London, W. C.
A 5, Exchange Buildings, Liverpool.
Backhall Chambers, Baldwin Street, Bristol.

29 Gordon Street, Glasgow.
10 Forster Square, Bradford.
1 Panmure Street, Dundee.
106 George Street, Edinburgh.
Exchange Buildings, Leith.
7 Royal Exchange, Bank Street, Manchester.
1 Side, Newcastle-on-Tyne.



GOOD BUSINESS IF YOU USE OUR
150 OHM MAIN LINE TELEGRAPH SETS

It can be quickly adjusted to meet any line conditions in any kind of weather. If you want to use it outside for Line Testing, etc. order a leather carrying case with shoulder strap.

FOOTE, PIERSON & Co.
 NEW YORK
 Telegraph Instruments our Specialty

Gold and Stock Life Insurance Association

TWENTY-FIFTH YEAR

For Telegraphers and Others in Electrical Service.

INITIATION FEE, \$1.00; DUES, 50 Cents per Month; INSURANCE, \$500.00, in payments of \$50.00 per Month for Ten Consecutive Months.

WM. J. DEALY, Secretary, 195 BROADWAY, NEW YORK.

Received Only Medals Awarded World's Fair, Chicago, 1893.

COVERING INSULATED WIRES AND CABLES

FOR
 Aerial, Underground, - - -
 Submarine and Interior Use.



FOR
 Telephone, Telegraph, Power and Lighting.

W. R. BRIXEY,
 MANUFACTURER.

203 BROADWAY, NEW YORK.

CALIFORNIA ELECTRIC WORKS,
 San Francisco, Cal.

KERITE TAPE.

Catalogues, Samples and Prices on Application.



Telegraph Operators
 will find that the

NUMBER FOUR YOST LATEST MODEL - -

contains many improvements
 that are of special advantage
 in their work.

Yost Writing Machine Co.,

No. 316 Broadway, New York.
 No. 50 Holborn Viaduct, London.

THE WESTON STANDARD VOLTMETERS AND AMMETERS.



The Weston Standard Mill-Ammeters and Ammeters are infinitely superior to galvanometers for tests of current strength on lines and for tests of Relays, Sounders and other telegraphic Apparatus. They are direct-reading, dead-beat, and are practically uninfluenced by the earth's field. No constants are required, and with careful use there is no necessity for recalibration. The Weston Standard Voltmeters are the very best practical instruments obtainable for determining the electro-motive force of single cells, or series of cells, or for ascertaining the voltage on lines. By the proper use of these instruments all tests of resistance, current, strength and electro-motive force required in telegraphic practice can be made with great ease and accuracy. Correspondence solicited.

WESTON ELECTRICAL INSTRUMENT COMPANY,
 WAVERLY PARK, NEWARK, N. J.

BERLIN: European Weston Electrical Instrument Co., Ritterstrasse No. 88.
 LONDON: Elliott Bros., No. 101 St. Martin's Lane.

PLEASE MENTION
 THE TELEGRAPH AGE
 WHEN WRITING TO ADVERTISERS.

TELEGRAPH AGE.

A SEMI-MONTHLY JOURNAL DEVOTED TO TELEGRAPHY.

Single Copies, 10 cts.

ESTABLISHED 1883.

\$1.50 per year.

Vol. XIX.—No. 12.

NEW YORK, JUNE 16, 1902.

Whole No. 458.



NEW STANDARD DRY CELLS.

STANDARD
OF THE U. S. NAVY AND THE WORLD.

The price is as low as any; durability, FOUR to ONE over any other make. When you use them once you will want no other. NECKTIE PIN outfit by mail \$1.00.

WILLIAM ROCHE, Inventor and
Sole Manfr.,
42 Vesey St., New York.

Put Alexander's Word-Counter

on your machine to-day. You will be a better operator to-morrow. It will save you lots of work and worry, and silently demand a better salary for the improved service you will give.

JESSE ALEXANDER, 195 Broadway, New York

1889

PARIS EXPOSITION MEDAL FOR
RUBBER INSULATION.



1893

WORLD'S FAIR MEDAL FOR
RUBBER INSULATION

THE STANDARD FOR RUBBER INSULATION.

SOLE MANUFACTURERS OF Okonite Wires, Okonite Tape, Manson Tape, Candee Weatherproof Wires

THE OKONITE CO., LTD., 253 BROADWAY, NEW YORK.

WILLARD L. CANDEE, }
E. DURANT CHEEVER, } Managers.

WRITE FOR PRICES.

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

Good Work
Durability
Simplicity
Speed

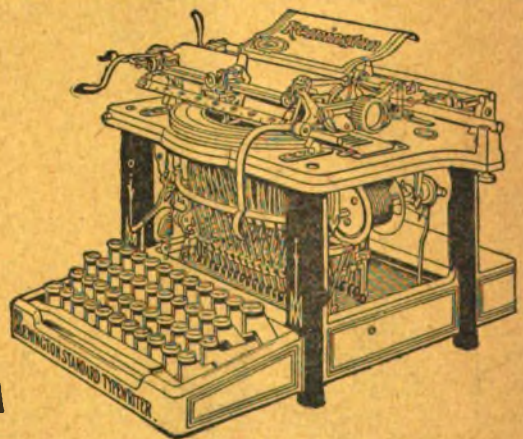
ARE THE

Four Pillars of Strength

which Support the

Remington Typewriter

YOU WILL FIND THEM IN EVERY REMINGTON
Wyckoff, Seamans & Benedict, 327 Broadway, New York.

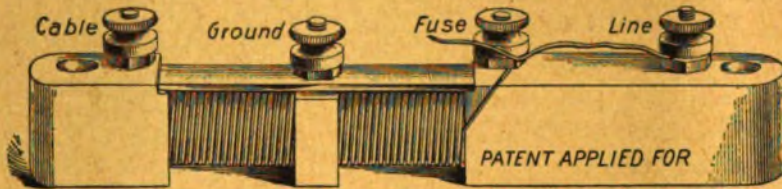


Foote, Pierson & Co.

A FEW OF OUR POPULAR TELEGRAPH SPECIALTIES

The Argus Lightning Arrester

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



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

Our Main Line Telegraph Combination Instrument

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



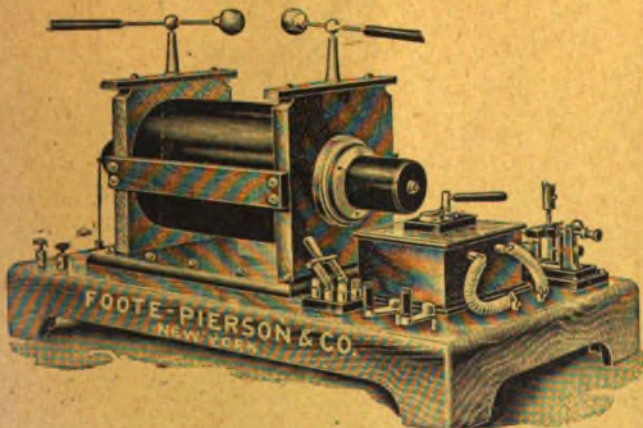
WITH KEY ON BASE.

MAGNETS 15 OHMS.

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

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

Coils for Wireless Telegraphy



WRITE FOR OUR NEW CATALOGUE.

THE DELTA Portable Testing Sets

A Full Line of Measuring and Testing Instruments in Stock.

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



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

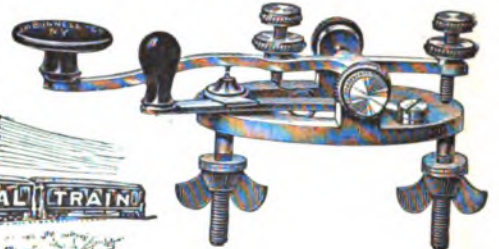
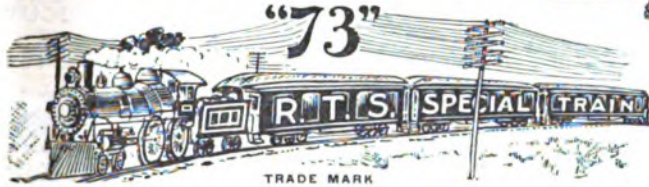
TRADE MARK
"Chloride Accumulator" SPECIAL TYPES OF THE
"Chloride Accumulator" for Telegraph Service
THE ELECTRIC STORAGE BATTERY CO. ALLEGHENY AVE. and 19th ST., PHILADELPHIA, PA.

SALES OFFICES: New York, 100 Broadway. Baltimore, Equitable Bldg. Cleveland, New England Bldg.
 Boston, 60 State St. St. Louis, Wainwright Bldg. Philadelphia, Allegheny Ave. and 19th St.
 Chicago, Marquette Bldg. San Francisco, Nevada Block. Detroit, Michigan Electric Co.

Established 1879 **J. H. BUNNELL & CO.** (Incorporated)

Telegraph Instruments and Electrical Supplies in General

MAIN OFFICE
 REMOVED TO
No. 20 PARK PL.
 Formerly
 106 and 108 Liberty St.
 and 76 Cortlandt St.



SOLE MANUFACTURERS OF THE GENUINE

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



Operators Wanted to act as agents for the sale of the **Audible Alphabet**
 the latest and best device for self instruction in learning telegraph operating. Send for circular.

Note well the exact name and address and make all Orders, Checks, Drafts, etc. payable to

J. H. BUNNELL & CO.

20 Park Place, New York.

THE AUDIBLE ALPHABET P. O. BOX 1286.

CATALOGUES FREE.

The Modern Service of Commercial and Railway Telegraphy (8th Edition, revised and enlarged) by J. P. Abernethy. The theory and practice, including railway station and express service. Arranged in questions and answers. 425 pages, 40 illustrations. Price \$2.00, expressage prepaid. Address John B. Taltavall, Telegraph Age, 253 Broadway, New York.

W. R. OSTRANDER & CO.

MANUFACTURERS
 ...OF...

Speaking-Tube Goods
 Electric Bells
 Annunciators
 General Electric Supplies

22 DEY STREET, NEW YORK

SEND FOR CATALOGUE

THE PHILLIPS CODE.

PRICE, \$1.00.

A thoroughly tested method of Shorthand, arranged for Telegraphic Purposes and contemplating the rapid transmission of press reports, also intended to be used as an easily acquired method for General Newspaper and Court Reporting.

Address,

J. B. TALTAVALL.

TELEGRAPH AGE, 253 BROADWAY
 NEW YORK.

Secret Sounders

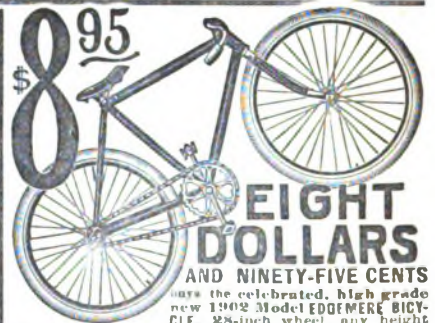
FOR TELEGRAPH WORK
 PRICE, \$5.00

Invaluable in newspaper and broker offices. Easily adjusted, strong, durable and simple.

ADDRESS,

JOHN B. TALTAVALL,

TELEGRAPH AGE, 253 B'way, N. Y.



EIGHT DOLLARS AND NINETY-FIVE CENTS

...the celebrated, high grade new 1902 Model EDGEMERE BICYCLE, 28-inch wheel, any height frame, high grade equipment, including high grade guaranteed pneumatic tires, adjustable handle bars, fine leather covered grips, padded saddle, four ball bearing pedals, nickel trimmings, BEAUTIFULLY FINISHED THROUGHOUT, ANY COLOR ENAMEL. STRONGEST GUARANTEE.
 \$10.95 for the celebrated 1902 Kenward Bicycle.
 \$12.75 for the celebrated 1902 Plain Flag or Flag Queen.
 \$15.75 for the highest grade 1902 bicycle made, our three or two nickel Joint, Napoleon or Josephine, complete with the very finest equipment, including MORGAN & WRIGHT HIGHEST GRADE PNEUMATIC TIRES, A REGULAR \$60.00 BICYCLE, on any bicycle ordered.
10 DAYS FREE TRIAL For the most wonderful bicycle offer ever heard of, WRITE FOR OUR FREE 1902 BICYCLE CATALOGUE. Address,
SEARS, ROEBUCK & CO., CHICAGO, ILL.

Thom & Jones' Telegraphic Connections; 300 pages, illustrated by 20 plates, with circuits distinguished by three different colors. Price, \$1.50, postage prepaid. Address J. B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York.

NOW READY FOR DELIVERY

Pocket Edition of Diagrams

AND
 COMPLETE INFORMATION FOR TELEGRAPH ENGINEERS
 AND STUDENTS

By **WILLIS H. JONES**
 The Electrical Editor of Telegraph Age



BOUND IN FLEXIBLE LEATHER;
 ABOUT 250 PAGES

A Telegraphic Classic; The Standard of the World

THIS VOLUME will be the finest, most complete and comprehensive book on the telegraph ever published. It is colloquial, simple and clear in style, copious in the amount and diversity of practical information furnished.

IT IS SPLENDIDLY ILLUSTRATED

and will be welcomed by every student, operator, official and engineer.

There is Sure to be a Big Demand

FOR THIS GREAT AND TIMELY WORK, AND OUR AGENTS AND FRIENDS EVERYWHERE SHOULD LOSE NO TIME IN FILING THEIR ORDERS.

Price, \$1.50



ADDRESS

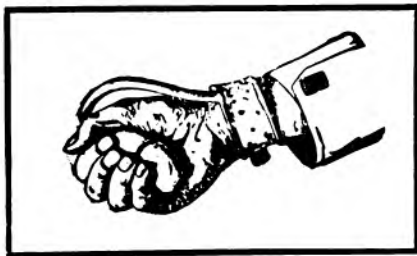
J. B. TALTAVALL, TELEGRAPH AGE

EXPRESS CHARGES PREPAID

253 BROADWAY, NEW YORK

IF OPERATORS

would avoid and cure
 that dreaded affliction



Telegraphers' and Writers' Cramp

They should use



Barclay's Paralysis Exerciser

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

No Telegrapher Should be without One.

This simple and durable device is the only one that is reliable and trustworthy, and has always done all that has been claimed for it. There are no complicated parts to get out of order, and with ordinary usage it will last a lifetime.

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

THE PRICE OF THESE EXERCISERS IS \$3.00.

Address: J. B. TALTAVALL, Telegraph Age, 253 Broadway, New York City, N. Y.

Satin Finish
Typewriter Ribbons.
Something new.

Satin Finish
Carbon Paper.
Known everywhere.

Cobweb Carbon
Used once,
Used always.

A. P. LITTLE, Mfr.,
Rochester, N. Y.

Also,
261 Broadway, New York.
161 La Salle St., Chicago.
665 The Bourse, Philadelphia.
413 Wood St., Pittsburgh.
28 Basinghall St., London.
45 Adelaide St., E., Toronto.

Barclay's Paralysis Cure

Strengthens the relaxed cords of the hand, wrist and arm. Cures Telegraphers' and other Writers' Paralysis and Cramps of many years' standing. Stiff joints caused by accident cured. All Telegraphers and Writers should have one.



THIS IS ONE OF MANY TESTIMONIALS NOW ON HAND.

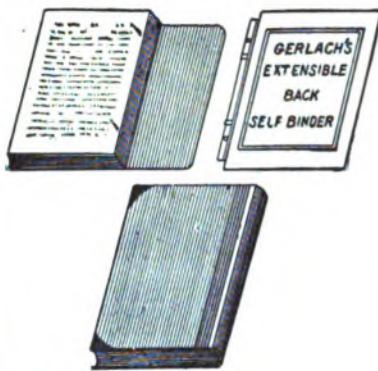
Ft. Atkinson, Wis., July 18, '95.

H. Barclay:
Dear Sir:—I commenced using your valuable Exerciser about two months ago, and have received such great benefit from its use that I consider it necessary to write you and say what it has done for me. If I had not used this instrument, I would have been obliged to give up the telegraph service, as I was in such a condition that nearly every one complained of my sending. I can heartily recommend your valuable remedy to all afflicted with paralysis, and if I know of any one in need of it I shall do all I can and persuade their trying it. Yours very truly,
OTTO REHM, Opr. C. & N. W. R'y.
Sent to any address, postage prepaid, together with full instructions, \$3.15. Address
ROBERT BARCLAY, Green Bay, Wis.



HUDSON'S WORD REGISTER
A simple, accurate device for counting the words written upon the typewriter. It is easily read, instantly set, and covers both message and special work. Price by mail, with full directions for attaching and operating, \$3.00. State what machine you use. Circular free. Address
GEO. E. HUDSON,
Sheridanville, Pa.

BIND YOUR PAPERS.



This Binder is superior to all others, as it is intended to be a permanent or temporary covering for **THE AGE**. It is worth many times its cost for keeping and preserving all copies of the paper in convenient and compact form. This Binder differs from all others in not having a looseness at the back of the cover, as is the case with other binders.
Price, \$1.00, Postage Prepaid.

JOHN B. TALTAVALL,
Telegraph Age,
253 Broadway, New York

Two MARVELOUS IMPROVEMENTS make the EDISON

PHONOGRAPH
Perfect.



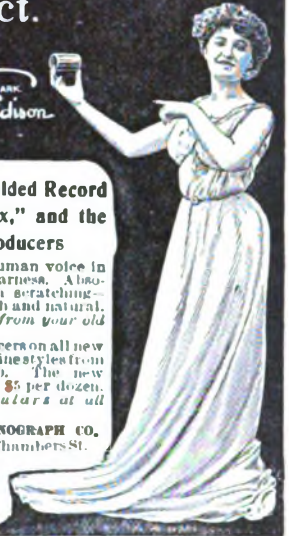
The New Moulded Record "Hard Wax," and the New Reproducers

duplicate the human voice in volume and clearness. Absolutely free from scratching—perfectly smooth and natural.

A new result from your old phonograph. New Reproducers on all new phonographs. Nine styles from \$10.00 to \$100.00. The new Records, 10 cts., \$5 per dozen. Full particulars at all dealers.

NATIONAL PHONOGRAPH CO.
N. Y. Office 83 Chambers St.

Chicago Office:
141 Wabash Avenue.



My Old Virginia Home upon the Farm.

By BARRINGTON L. BRANNAN.

Try this Chorus on your Piano.

CHORUS.

The NEW CENTURY TYPEWRITER

is especially desirable for all kinds of work because of its



Complete Key-board
Thorough Construction
Ease of Operation
Superior Mechanical
Principles

"THE BOOK OF THE NEW CENTURY"
aims to give a full description of these
and many other excellencies. Write for it.

AMERICAN WRITING MACHINE COMPANY.
343 Broadway, New York.

MARSHALL'S ELECTRICAL CONDENSERS



MULTIPLE SERIES STANDARD CONDENSER.
STANDARD CONDENSERS A SPECIALTY.

Condensers for Telegraph, Telephone, Electric Light and Experimental purposes. These condensers are used in all telegraph offices in America where standard and ordinary condensers are required. Send for catalogue.

Address WM. MARSHALL,
719 Lexington Ave., near 57th St., New York.

TEN DAYS FREE TRIAL
allowed on every bicycle purchased of us.
We ship on approval to any one in U.S. or Canada, without a cent deposit.

1902 Models, \$9 to \$15
1900 & '01 Models, best makes, \$7 to \$11

500 Second-hand Wheels
all makes and models, good as new, \$3 to \$5. Great Factory Clearing Sale at half factory cost. Tires, equipment, & sundries, all kinds, 1/2 regular price.

RIDER AGENTS WANTED
in every town to ride & exhibit sample 1902 model. Agents make money fast.

A BICYCLE FREE distributing catalogues in your town. Write of one for agents' net prices and our special offer.

MEAD CYCLE CO. Dept. 1230, CHICAGO, ILL.

PHILLIPS CODE

New and Revised Edition Now Ready.

PRICE, \$1.00.

THIS FAVORITE AND THOROUGHLY TESTED method of shorthand arranged for TELEGRAPHIC PURPOSES and for the rapid transmission of Press Reports, has been brought up-to-date and is pronounced complete in every particular. Better than ever this famous work will meet all requirements and be of indispensable value to every operator. Address

J. B. TALTAVALL, TELEGRAPH AGE,

253 Broadway, New York.

MADE \$105 THE FIRST MONTH



G. GRAY & CO., Plating Works, 4 Miami Bldg., Cincinnati, O.

Taltavall's Telegraphers of To-day.

Descriptive, historical and biographical. 355 pages and 700 engravings of the prominent telegraph people. Price, \$5.00, expressage prepaid. Address J. B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York.

Any Electrical or Telegraph Book published for sale by TELEGRAPH AGE, 253 Broadway, New York.

Standard Underground Cable Co.,

Wires,
Cables,
Accessories.



RAILWAY, ELECTRIC LIGHT,
TELEPHONE, TELEGRAPH,
For Aerial, Underground
and Submarine Use.

NEW YORK, PHILADELPHIA, CHICAGO,
PITTSBURGH, BOSTON, SAN FRANCISCO

THE TELEGRAPH AGE

No. 12.

NEW YORK, JUNE 16, 1902.

VOL. XIX.

CONTENTS.

Some Points on Electricity.....	243
Business Notices. Recent New York Visitors.....	245
Resignations and Appointments. General Mention.....	246
Prof. Pupin and the Telegraph.....	247
The Carnegie Medal. The New Manager at Boston, Mass. Telegraph in Alaska. A Cable-Laying Plow.....	250
The Western Union Telegraph Situation.....	251
A Popular New Publication. Personal Mention.....	252
To Prevent Strikes in Canada. How England Sends Telegrams. Frogs and Telegraphs. The Crossting of Poles.....	x
A Presentation to Fred O. Nourse. Poems by Jerry Newton.....	253
A Few Notes and Reminiscences of Martinique.....	254
Improvements in Perforators. The New Western Union Manager at Milwaukee. Magnetic Club Summer Outing.....	255
Charles H. Gaunt. The Telegraphone.....	256
An Early Defender of Prof. Morse. Morse Code in a Flat. Submarine Cables in War.....	257
Washington, Postal; Cincinnati, Western Union; Philadelphia, Western Union; Lancaster, Postal; Philadelphia, Postal.....	258
Indianapolis, Western Union; Los Angeles, Postal; Birmingham, Postal.....	259
New York City, Western Union.....	260
Montreal, Canadian Pacific Railroad. Directory of Telegraph Organizations.....	261
The Convention of Railroad Telegraph Superintendents. Superintendent of Leased Wire Service.....	262
Obituary. The Cable. Wireless Telegraphy.....	263
Items. The Scripps. McRae Press Association. Pacific Cable Bill Dead. Recent Telegraph Patents.....	264

Some Points on Electricity.

BY WILLIS H. JONES.

(Storage Batteries Continued.)

Up to this point attention has been devoted almost solely to the manner in which storage plants are charged from electric light and other external sources of power, whence the energy must be purchased outright. In all such arrangements great pains is taken to eliminate all unnecessary "dead" resistance in the charging circuit, for the reason that the power companies charge for all the energy that is used, whether it is usefully employed by the consumer or not; hence a previous statement, that the initial value of the electromotive force of the charging battery should always be as near the desired pressure as possible when it can be procured, in order to avoid the addition of dead material for the purpose of so reducing it.

In the actual arrangements of telegraph circuits, however, there are many circuits where such artificial resistance is purposely inserted, not because it is economical—for here also it must be paid for somehow—but as a necessary means to an end. Its presence, however, enables us to devise a method of charging a storage battery actually without additional cost, and of obtaining an electric charge which may be substituted for many jars of gravity battery employed for local circuits. The principal of the method is to ex-

change part of the "dead" resistance for an equivalent in something that will retain and afterwards return the energy expended within it in a useful form.

The idea and application thereof was conceived and successfully carried out by Mr. W. E. Athearn, the pioneer of the storage battery system for telegraphic purposes. He early noted the fact that large quantities of electric currents were being constantly dumped uselessly into the ground at the terminals of many conductors in which a great proportion of the electrical energy was wasted heating dead material, and immediately set about to devise a means of turning both to useful purposes.

Four ohm sounder circuits naturally carry the greatest volume of current each, and such sounders, in the Western Union plant, New York, are employed principally on duplex or grounded loop circuits, while best of all, such loops are uniformly "built up" with artificial or "dead" resistance. Here, then, was all the material required for making possible the employment and operation of a practically costless storage battery system for local circuits.

The accompanying diagram illustrates the method Mr. Athearn first employed in a large branch office in New York City, and one which is quite closely followed wherever the conditions will permit thereof.

The conductors chosen for conveying the charging current were the uniformly built up duplex grounded loops, or legs to branch offices, which contain each a total of ninety-two ohms, counting that of the instruments, conductors and artificial resistance combined.

The electromotive force necessary to force the required 250 milliamperes, or one-quarter of an ampere of current through them is twenty-three volts. As four ohm sounders require one-quarter of an ampere of current for their operation it is evident that this value must be maintained in the branch conductor regardless of any alteration in the value of the total resistance of the circuit, or in the electromotive force feeding it.

Hence, if a cell of storage battery be inserted in such a circuit for the purpose of charging it, its two volts of electromotive force will oppose two volts of the twenty-three volts at the main office. As the effect is the same as if more resistance had been added to the circuit the twenty-three volts will necessarily then furnish less than the original volume of current; or, to put the facts in other words, the now reduced pressure of twenty-one effective volts cannot furnish as much current

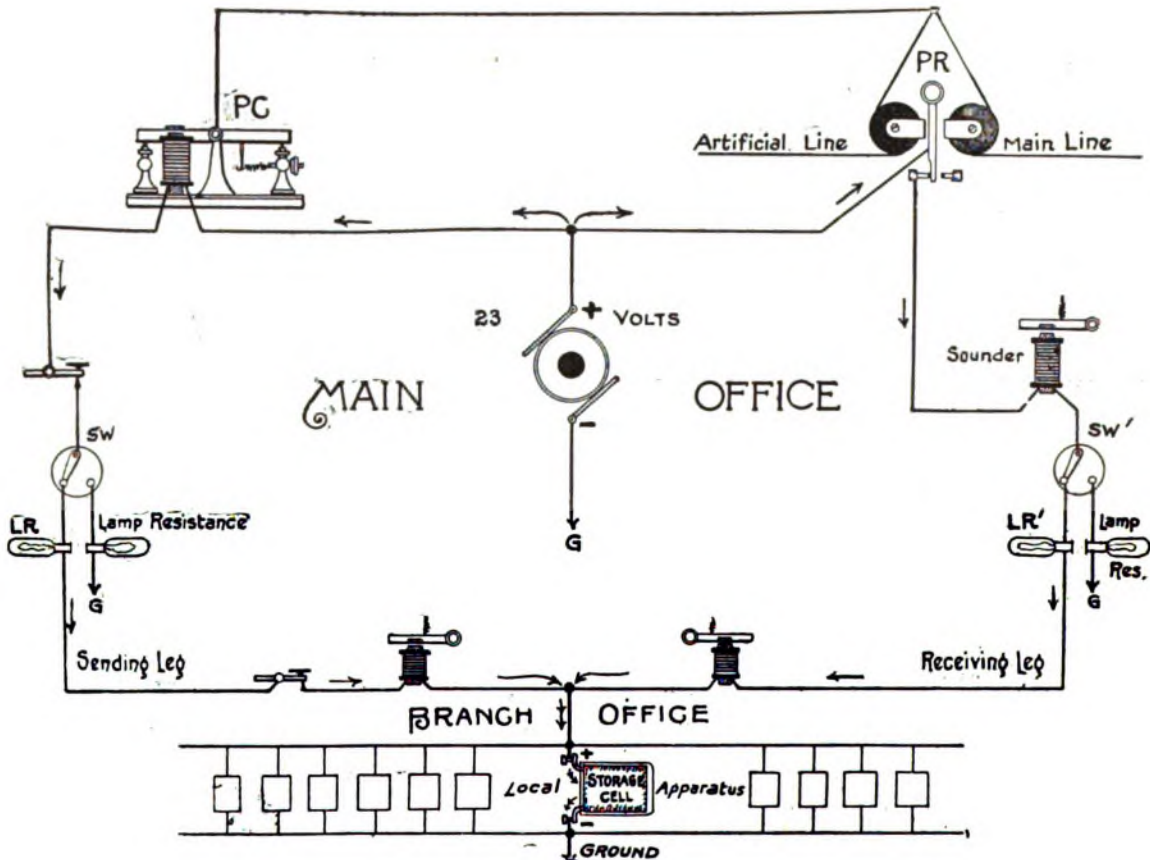
in the circuit as when it was two volts stronger. But if we give the twenty-one volts less work to do it will still be able to furnish the normal one-quarter ampere of current in the conductor. Here is where we get our charging energy, as previously stated, actually without additional cost. We simply remove a sufficiency of the useless artificial resistance in the conductor to reduce the total to a value which will not be too high for the twenty-one volts.

Thus, twenty-one volts will furnish the normal one-quarter of an ampere of current, with a total of eighty-four ohms in the branch conductor, as effectively as twenty-three volts does in a ninety-two ohm circuit; hence, where a storage cell is

minimal of the cell. The twenty-three volt dynamo and the multiplex instruments shown are supposed to be located in the main office. The negative terminal of the storage cell is, of course, grounded, and that connection serves as a common ground terminal for all branch legs.

As the internal resistance of a storage cell is not less than two-thousandths of an ohm, all the loop currents entering the upper parallel conductor of the ladder-like arrangement of the local sounder circuit shown, pass directly through the cell and charges it, instead of dividing between the sounders, for the reason that a current of electricity always follows the path of least resistance.

Each loop or leg attached to the upper parallel



inserted in such conductors, it is necessary to remove eight ohms artificial resistance in order to maintain the same strength of current that was flowing before the cell was cut in. Such alterations are usually made by means of lamp resistance which come in all degrees of ohmic value, and are easily unscrewed from their sockets.

The illustration here given shows two such branch office legs connected to, and emptying one-quarter of an ampere of current each into a common storage cell battery; or, perhaps it would be better to say, into the positive binding post ter-

adds one-quarter of an ampere of current to the volume that enters the storage cell, hence the rate at which the cell is being charged depends upon how many single loop conductors are connected to the common terminal.

Theoretically the rate would be found by multiplying one-quarter ampere by the number of branch legs delivering current, but this product would only be a correct estimate when all of the loop circuits were actually closed—that is to say idle.

When the circuits are busy, the currents obvi-

ously cease to flow during the period one's key is open while making the Morse alphabet, hence allowance must be made for time lost in that manner. On a very busy circuit the current actually flows but little more than half the time, while on others it may be traversing the conductor four-fifths or more of the day.

These are little points that each office contemplating such an installation must figure out separately according to the existing conditions of the charging circuits. The same rule holds good in estimating the currents demands of the local sounders to be fed by the storage cell.

However, a safe rule is to endeavor to keep as much current flowing into the cell as the sounders drain from it, and when the arrangement is such as the one shown in the accompanying diagram, the cell may be charged and discharged at the same time. In other words, when the charging and discharging rate is approximately equal the cell will require no attention whatever for months at a time other than to keep the jar filled with water in case of evaporation.

The sounders fed by the storage cell should be arranged in multiple as shown in the diagram, and a four-ohm fuse inserted in series with each sounder. The fuse serves the double purpose of a safety device and a resistance for reducing the strength of the current. The electromotive force of the cell being two volts, eight ohms in all—four in the fuse, and four in the sounder—is required in each local circuit.

(To be Continued.)

Business Notices.

The Lackawanna Railroad has just issued a handsomely illustrated book describing the various lake and mountain resorts reached by its line. If you are looking for a place to spend the summer this book will tell you where to go, how to go and cost of board. Send five cents in stamps, to cover cost of mailing, to T. W. Lee, General Passenger Agent, Lackawanna Railroad, New York city.

The Railroad Telegraph Superintendents who will assemble in convention at Chicago, on the 18th, 19th and 20th of June, are cordially invited by the Stromberg-Carlson Telephone Manufacturing Company, 70 to 86 West Jackson Boulevard, that city, to inspect the latter's extensive works with a view of becoming better acquainted with their telephone apparatus, particularly in regard to its especial adaptability to meet all railroad requirements.

In another column may be read the advertising announcement of the music publishing firm of Florant & Hall, of 25 East Fourteenth street, New York. This house has recently brought out a charming song entitled "Just a Country Maid." It is written in waltz time, and is bright, catchy and pleasing, and has already been sung before pleased audiences. Mr. Chester Hall, of this

firm, and who is the author of the words, is an old telegrapher, formerly being employed by the Postal Telegraph-Cable Company as night chief operator.

The Eureka Electric Company, of 143 to 149 South Clinton street, Chicago, Ill., will exhibit a full line of their telephones at the Convention of the Railway Telegraph Superintendents at the Stratford House, in that city, on the days of Wednesday, Thursday and Friday, June 18, 19 and 20. This company is desirous to further extend the sale of its telephones among the railways and is prompted to take advantage of the meeting in Chicago in order to both cultivate a wider personal acquaintance among the superintendents and to afford the latter the opportunity of inspecting without trouble a working exhibit of the system offered.

The Commonwealth Oil Company, whose offices are in the Paddock Building, 101 Tremont street, Boston, Mass., is under the general management of Henry C. Sherman, vice-president of the company, whom all telegraphers will remember as being the late chief clerk in the office of the Western Union Telegraph Company at Boston, for he was a telegrapher of forty years' standing. The Commonwealth Oil Company controls extensive oil lands in Tennessee and Kentucky, and has been incorporated under the laws of the State of Maine with a capital stock of \$350,000 divided into 350,000 shares of the par value of \$1 each. Mr. Sherman invites the attention of the telegraph fraternity to this enterprise and will be pleased to act for any as their agent in placing subscriptions for stock with the company, and solicits correspondence on the subject.

Recent New York Visitors.

Mr. G. R. Johnston, treasurer American District Telegraph Company, Chicago, Ill.

Mr. H. J. Pettengill, general manager of the Erie Telephone Company, Boston, Mass.

Mr. Philip J. Faulkner, manager of the Long Distance Telephone Company, Phoneton, O.

Mr. S. H. Mosher, chief engineer of the Western Union Telegraph Building, Chicago, Ill.

Mr. D. J. Hern, superintendent of the Mutual District Telegraph Company, Boston, Mass.

Mr. J. Levin, assistant superintendent Western Union Telegraph Company, Minneapolis, Minn.

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

Mr. J. S. Robinson, general foreman of the Western Union Telegraph Company, Chicago, Ill.

Mr. H. G. Haddon, general manager Martha's Vineyard Telegraph Company, Woods Hole, Mass.

Resignations and Appointments.

Mr. Gurney, manager for ten years past of the Western Union Telegraph Company at North Adams, Mass., has resigned.

Mr. C. L. Zcliff, chief operator of the Western Union Telegraph Company, Newark, N. J., has been promoted to the managership of the office, vice J. A. Hill.

Mr. F. A. Moore, manager of the Western Union Telegraph Company at Davenport, Ia., has accepted the managership at Sioux City, Ia., vice F. V. Moffitt.

Mr. C. E. Clark, formerly in Manager Paige's office, Western Union Telegraph Company, Cincinnati, O., has been appointed cashier of the Pittsburg, Pa., office, vice N. E. Church, resigned.

Mr. William Durgin, for the past two years manager of the Postal Telegraph-Cable Company at Waterville, Me., has resigned and is succeeded by Mrs. Heminger, who formerly managed the office.

Mr. A. T. Gould, formerly night chief operator of the Western Union Telegraph Company, Cincinnati, O., has been appointed chief operator of the same interests at Pittsburg, Pa., vice L. G. Lobaugh, resigned.

Mr. H. H. Arthur has been appointed wire chief of the Pittsburg, Pa., Western Union office, vice W. H. Maize, resigned. Mr. Maize retires from active service after twenty-eight years of constant and efficient work.

Mr. W. H. Dolbear, manager of the Western Union Telegraph Company, Keokuk, Ia., has been transferred to the Des Moines, Ia., managership to succeed Charles F. Ames, transferred to Boston, in a similar capacity.

Mr. Frank V. Moffitt, manager of the Western Union Telegraph Company, Sioux City, Ia., has been appointed manager of the same interests at Milwaukee, Wis., vice M. W. Hamblin, transferred to New York in a similar capacity.

Mr. Charles O. Stager, who has served as manager of the Postal Telegraph-Cable office at Pottsville, Pa., since it was first established, a little over a year ago, was transferred to Allentown May 15, there succeeding D. E. Lerch.

Mr. Harry E. Upton, manager of the Postal Telegraph-Cable Company at Manchester, N. H., has resigned to accept service with the New England Telephone and Telegraph Company. L. A. Brown has been appointed to fill the vacancy.

Mr. D. E. Lerch, who has lately resigned as manager of the Postal Telegraph-Cable Company's office at Allentown, Pa., after a service of twelve years, to enter the insurance field, has witnessed the trebling of the company's business during that time. It now has a force of two operators and five messengers, besides a number of specials, whereas at first Mr. Lerch himself was the only operator.

Mr. John Simmonds, for the past twenty years manager of the 122 Front street office, of the Western Union Telegraph Company, New York, has been appointed assistant to Manager M. W. Hamblin, of the main office at 195 Broadway, New York.

Mr. Robert W. Vaughan, manager of the Western Union Telegraph Company at Houston, Tex., has resigned his position to go to California, where he will hereafter reside. Mr. Frank Hughes, of Texarkana, Tex., has been appointed to fill Mr. Vaughan's place at Houston.

Mr. J. A. Hill, for the past ten years manager of the Western Union Telegraph Company, Newark, N. J., has been appointed chief clerk in Superintendent Mulford's office, New York, vice Herbert Smith, promoted to be assistant superintendent. Mr. Hill is one of the brightest young men of the profession.

General Mention.

Messrs. C. E. Cox and J. J. Fourney, formerly of the Postal Telegraph-Cable Company, Philadelphia, Pa., and now with the Northern Pacific Railway Company, Helena, Mont.

Mr. C. W. Douglass, chief clerk to the superintendent of the Western Union Telegraph Company, Cleveland, O., for the past thirty years, will shortly leave for Europe, on a three months' leave of absence.

The Morse statue, located at the East Seventy-second street entrance of Central Park, New York, was appropriately decorated on Decoration Day, by Marion H. Kerner, secretary of the Morse Club of New York. Mr. Kerner has attended to this duty in behalf of the telegraph profession for the past ten years.

It will pain many of the friends of Mr. Guy A. Johnson, now residing at Holliday, Mo., to learn that he is very ill with consumption. Mr. Johnson is a well-known operator, both in commercial and railroad telegraph circles, his last employment being with the Postal Telegraph-Cable Company at Kansas City, Mo.

Albert A. Lohr, the Washington, D. C., operator for the Chicago "Record-Herald," has invented a new attachment for telegraph keys. Its object is to lengthen the contact of the points automatically, giving the sending operator greater control of his work. It is in use in all offices on the "Record-Herald's" Washington-New York-Chicago leased wire. The time of contact can be lengthened or reduced in an instant. It is claimed that the device has carried from Chicago to New Orleans and from Chicago to Portland, Ore., in actual work, when the regular keys on those wires could not get the characters through.

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.

Prof. Pupin and the Telegraph.

Incident to the controversy that has been raised by Prof. Pupin's remarks relative to the refusal of the telegraph companies to consider so-called improved methods in telegraphy, the occasion has served to call forth a number of important and timely opinions bearing on the subject. We reprint two of these from the *Electrical World and Engineer*, the first by Mr. Francis W. Jones, the electrical engineer of the Postal Telegraph-Cable Company, New York, and the other by Mr. Patrick B. Delany, the well-known electrical expert, old-time telegrapher and the inventor of the Delany Automatic Telegraph System.

Mr. Jones writes: "In responding to your request for comments upon charges made in your issue of 24th inst., that the American telegraph systems are antiquated, I can only give my personal views, as I have no client to defend. The subject must necessarily be considered with reference to existing conditions. The great demand by the public for telegraph facilities is between the hours of 8 A. M. and 5 P. M. A very large number of private wires are used by brokers and others between all principal cities, mainly between 10 A. M. and 3 P. M., New York time, during business days. The difference of time between London and New York and between New York, Chicago, Denver and San Francisco, introduces some shifting backwards and forwards of heavy service at far west points to other hours of the day, but nearly all the United States commercial cities have to adapt their communications to New York City's business hours. So that outside of the hours mentioned the two great telegraph companies have a large surplusage of wires (including brokers' private wires) for which I believe the companies would be delighted to have profitable business. Sundays and holidays these wires are nearly all idle, and nearly all the expense of the maintenance and operation, including rents, taxes, management, etc., has to be borne by the traffic during business hours of business days.

"The operation of wires at night is more expensive than during the day, as operators cannot stand so long hours of labor, nor work to as good advantage, and expense for light is added. The hundreds of thousands of miles of wires used upon the single Morse system by private parties during the day can all be duplexed and quadruplexed nights and holidays by the telegraph companies leasing the wires, thus more than doubling the carrying capacities of such wires.

"The telegraph companies for many years have had their offices open to receive and transmit at reduced rates the very class of messages you refer to in your editorial of 24th inst., and they have actually differentiated between telegrams 'demanding most rapid haste' and those 'that may as well be delivered some hours later,' and I believe that the companies can prove, if they care to do so, that the latter class of telegrams and press service do not pay the expense of operation, and that, as before stated, the whole burden of ex-

pense rests upon the day traffic. This deferred traffic at reduced rates is naturally limited to very small proportions by reason of the splendid mail facilities between our principal cities, enjoyed by the business public, which alone has any use for such a convenience. Communications that will stand a few hours delay are more conveniently committed to the mails, which not only insure sufficient dispatch but secrecy as well, not to mention the small cost of transmission. I know of no automatic system that can be satisfactorily employed to move the great daily telegraph traffic of the country so expeditiously and economically as is done by the present Morse. I believe I have already made an accurate comparison of the systems in a discussion of the subject before the American Institute of Electrical Engineers and printed in its transactions, commencing page 130, Vol. 14, May 18th, 1897. If customers' messages could be thrown into a hopper in New York and come out of a machine in Chicago at the rate of 500 or 1,000 words a minute correctly printed upon blanks and ready for delivery, then the charge of old fogyism could be justly made against the proprietors of the telegraph in not adopting such a system and giving the public the advantage of lower rates. In fact the proprietors would be foolish to persist in investing millions of dollars in pure copper wires when an automatic system would do so much better. But no automatic system of sufficient carrying capacity over one wire has yet been invented that obviates the expensive and slow preparation of the telegrams by special codification and manual manipulation at the sending end and the special translation and manual transcription at the receiving end, with machinery more complicated than Morse, and at an expense for labor quite as great all told, as Morse, other things being equal, not to mention, as to each message, a delay to which the business public will never submit so far as the telegrams which 'demand the most rapid haste' are concerned. At the same time I do not pretend to shut the gate in the face of improvements which are bound to come in all departments of industry, and there is very great room for them in the operation of the telegraph.

"If these things are true then the question arises, is there any method of transmitting telegrams that will enable the telegraph companies to handle the traffic, either cheaper or better, or both?

"I attach hereto a record of a quadruplex circuit operated by the Postal Telegraph-Cable Company between New York and Boston, 250 miles, for 21 days, 9 hours daily, showing an average of 1.485½ telegrams per day, or 41.26 per sender per hour. On April 21st the highest record shows 1,699 telegrams in 9 hours—47.2 per sender per hour, or a total of 188.8 telegrams transmitted hourly over this circuit, all of which miscellaneous telegrams, including cablegrams, stock orders and quotations, were beautifully copied as received by sound, without an error, by the receiving opera-

tors at both end of the circuit upon typewriters and were instantly started to their destinations.

"The business public is not finding fault with the present Morse system of transmission. Mr. Barclay accords to an automatic system its only value to meet emergencies, which I infer are incident to shortage of facilities by collapse of structures and wires during storms, which may be likened to the 'half loaf being better than no bread.' It will be found more satisfactory to erect trunk lines that cannot be disarranged nearly every day in the year. The telegraph has attained a public importance which demands between large cities a more substantial structure and wires of greater strength to be available to their full limit at all times. There should be two very stout, short poles side by side, instead of one pole to support the cross arms and wires, and when necessary other similar poles should be erected alongside to extend the system laterally. If private companies are to be allowed to continue the telegraph service of the country, they should be protected by the various State Legislatures, and be permitted to secure and maintain suitable rights of way, the same as railways. It is only after erecting such substantial lines that we could rely upon any automatic system which utilized a single wire for a large volume of traffic. A basket containing many eggs should not be liable to fall, and an automatic system must be produced which is as satisfactory, and cheaper to operate than the Morse.

"Regular telegrams averaging thirty words each transmitted on our quadruplex circuit between New York and Boston, from April 14 to May 7th, 1902, twenty-one days exclusive of Sundays, during hours from 8 a. m. to 5 p. m., nine hours daily. The 19th of April a holiday in Boston. April 26th and 30th weather very wet. May 3d and 6th business dull on the circuit and very light every day between 8 a. m. and 9 a. m.

April 14th 1585	April 22d 1578	April 30th 1549
April 15th 1410	April 23d 1562	May 1st 1557
April 16th 1576	April 24th 1475	May 2d 1425
April 17th 1471	April 25th 1493	May 3d 1343
April 18th 1443	April 26th 1550	May 5th 1476
April 19th 1012	April 28th 1565	May 6th 1414
April 21st 1699	April 29th 1507	May 7th 1505"

Mr. Delany's letter is as follows: "Although Mr. Barclay's communication in your last issue, reviewing a criticism by Prof. Pupin on the slowness of the Western Union Telegraph Company in adopting news methods, is, as he himself states, 'for the benefit of those unfamiliar with the practical workings of the telegraph.' I, while confessing a limited knowledge of the subject, find warrant for intruding in the controversy, in view of Mr. Barclay's strongly expressed views on automatic telegraphy, which he assumes Dr. Pupin had in mind when he made his criticisms. At all events, it seems to be the crux of Mr. Barclay's action. As Mr. Barclay presumably writes in his official capacity as electrical engineer of the Western Union Company, and cites with pride its

position in the march of events in the past, it is but fair to follow him through the different stages of progress from the beginning.

"He says that when Prof. Morse built the first telegraph line—Washington to Baltimore—he did not realize that he had invented the best, cheapest and quickest system of telegraphy that has been introduced up to the present time.' I think Prof. Morse lived long enough afterward to be fairly well satisfied that under the management in control of the telegraphs at his death, no other system would be introduced in their day.

"Mr. Barclay says that his company has kept pace with the demands of the people, and that foreign experts sent here to investigate admit that American telegraphy is years in advance of those of 'most all other nations.' So far as the writer is aware these admissions have never appeared in print, which leads to the suspicion that their private expression may have been in the nature of the tribute that polite insincerity frequently pays to bumptious conceit.

"Mr. Barclay enumerates the steps of advance made by his company as follows: Abandonment of the Morse register for the sounder, multiplex systems, automatic repeaters, switchboards, copper line wires, insulation and conductivity, motor dynamos and storage batteries. Let us see about this formidable exhibit.

"When operators began to read by sound it was forbidden by Western Union under pain of dismissal. Stearns duplex was opposed and derided by the Western Union Company for several years, while in operation on an opposition line—the Franklin. Edison's quadruplex was jeered at for a long time, although in successful operation on another opposition line—the Bankers and Brokers.

"The synchronous multiplex system was at first denounced as a laboratory experiment, and when the owners built a line and put the system in operation between Boston and Providence, the Western Union claimed it would not work any further. This system, sending six messages simultaneously over a single wire, by Morse, has been in successful operation in England for seventeen years. It is not used in this country.

"Automatic repeaters and switchboards have been in use all over the world for nearly forty years. Insulation as good or superior to the Western Union's has been used everywhere from the beginning of the telegraph. The American make of cheap glass is greatly inferior to the porcelain insulators used abroad. Copper wires were first used by the Bell Telephone Company, several years before the Western Union adopted them.

"Motor-dynamos and storage batteries were articles of commerce, the latter at least being used abroad in advance of their use here. To go outside of this list, the Western Union ridiculed the telephone, and called it a toy for the amusement of women and children. They could have bought it for the price of a good automobile.

"For years Germany and France have had underground wires as well as overhead lines over all

important routes. England has had a magnificent underground cable containing seventy-six wires in operation between London and Birmingham for two years past, and is extending the service. The Pennsylvania Railroad and a telephone company are now considering underground communication between New York and Philadelphia. The Western Union was forced to bury its wires in the City of New York, but has shown no disposition to extend the work since, notwithstanding that during the sleet effects last winter it used the trains as a telegraphic medium for nearly a week.

"Mr. Barclay's trial of the foreign automatic system referred to is small credit to the foresight and understanding of a telegraph engineer of his ability and prominence, and the selection of such a system as a representative of the automatic type looks very much as though the trial was for the purpose of exploiting a failure to support a fallacy. Every telegrapher knew from the first that such a system was impracticable, involving, as it does, photography and an apparatus so sensitive as to render it as useless for telegraphy over ordinary wires as a seismograph would be for tracing earthquakes when mounted on the Elevated Railway structure.

"It requires for its operation less than one-half the voltage usually found vagrant on every wire within twenty miles of a trolley line, which would, of course, render its operation as erratic as a Thompson recorder would be on a circuit with leakage intakes varying from zero to sixty volts, not uncommon in these days. How any practical telegrapher could seriously entertain the idea of using a photographic record for commercial purposes must be a mystery to many besides myself; and the fact that this trial of a system, manifestly unhit, made two years ago, is now put forward as an evidence of the up-to-date alertness of the Western Union, does not seem to me a very strong point in the company's behalf.

"Mr. Barclay uses the old argument that a Morse operator can send a message in the time that it is being perforated or prepared for transmission. No one has ever denied this, but he sidesteps the well-aimed fact that if there are fifty messages to be sent they can all be transmitted by automatic over one wire in the time of two messages by Morse. I do not care to go into the latest developments in automatic telegraphy, but it is now pretty generally understood that its opponents, to be fair, should shift their ground and abandon objections which belong to a past age. With the automatic system, affording at all times surplus carrying capacity, the average delay in transmission of telegrams would be very much reduced. To send the first message within a minute, and delay the twentieth message an hour, makes an average delay of thirty minutes, which is rather below the average time that messages now hang on the operator's file.

"Mr. Barclay points to telegraphic transactions between stock exchanges in fifty-five seconds as an example of the efficiency of the present service. Such deals were made twenty years ago in fifteen

seconds between Philadelphia and New York Exchanges over the Bankers and Merchants lines, and have been done between London and New York in fifty-five seconds, land lines and cables included; but the record of 'Cresceus' is not a fair rating for 'the old gray Dobbin.'

"Mr. Barclay objects to automatic on account of errors and the difficulty of correcting them. Seven years ago a Morse sounder was operated over an Atlantic cable, and the inventor, after many years of hard work and large expense, thought that his reward would be great; but the scope of his expectations was as nothing compared to the degree of his disappointment on being informed that though he could work a sounder at forty words a minute, the company would not use it, on account of the superior accuracy of automatic transmission and recording. With the exception of those operated by the Western Union, all the Atlantic cables are equipped with automatic apparatus and everybody knows that owing to coding and cipher, cable telegrams are the most difficult of all, and at the same time the most correct. A cipher cablegram from New York to Nagasaki, Japan, goes more correctly than a message in plain English from New York to Newark, New Jersey, and, generally in quicker time.

"The broker business between exchanges is the only branch of telegraphy that has 'kept pace with the demands of the American people.' If broker messages had to take their turn with those of the general public, the brokers would quickly see to it that the general average was raised. Before the ordinary citizen has a chance, the stock and other exchange wires, sporting news wires, Associated Press wires and newspaper private lines must all be provided, so that a summons to a death-bed must hang on the hooks for hours to make way for the stock transaction 'in fifty-five seconds.'

"Mr. Barclay says that a number of automatic systems have been tried by his company, 'but they have all been found lacking except for "emergency" service.' It would be interesting to know what constitutes an 'emergency' in the Western Union. It cannot be the accumulation of business on the files for an hour or two, since the average time of the ordinary telegram throughout the country is more than two hours, against half an hour in the United Kingdom, where automatic is extensively used. Lying on the writer's desk is a telegram from a point 500 miles distant, which took over twenty-five hours in coming, and this in good weather. This would probably be considered an 'emergency' warranting an automatic system.

If the Western Union was honest with the public it would put on each delivered telegram the time at which it was filed at its place of origin; but this, it will never do, unless compelled by legislation, and the company is not disturbed on this point. Ohm's law does not apply to the 'frank.' Its motive force is not divisible by any resistance — on the part of the legislators. The telegraph company hood-winks the public by putting the

time of arrival on each message, thereby checking the movements of the much abused messenger boy, whose speed is, after all, as a winged son of Jupiter compared with the modus operandi of the telegram before it reaches the messenger's pocket.

"The boast of nearly a million miles of wire and 66,000,000 messages in 1901 is a lamentable admission of mismanagement and stale engineering. With the speeds ranging from ten to sixty words per minute, and thirty cents for ten words, it is no wonder that the number of messages fall below one per head per year. A modern conception of a telegraph plant for this country would be 100,000 miles of wire, automatic transmission yielding speeds of 100 to 2,000 words per minute, twenty words for fifteen cents, and a business of 600,000,000 messages per year.

"If Mr. Barclay will point out a single improvement in telegraphy originating on the outside that his company has not hampered, discouraged and discredited; or a single instance in which its encouragement has been extended for the development of an idea, whether for its own protection or the public benefit, the writer, who may not, and many who do not, 'understand the workings of the telegraph' would be enlightened."

The Carnegie Medal.

The illustration presented herewith shows the handsome Carnegie medal, valued at \$500, won by Fred M. McClintic, chief operator of The Associated Press at Dallas, Tex., at the Atlanta, Ga., telegraph tournament held March 1 last, for turn-



THE CARNEGIE MEDAL, WON BY MR. McCLINTIC.

ing out the cleanest press copy, and for the fastest ten minutes Morse receiving and sending. A full description of the tournament was published in TELEGRAPH AGE in the March 16 issue; and in the April 1 number, a picture and sketch of Mr. McClintic appeared.

The New Manager at Boston, Mass.

Mr. Charles F. Ames, who was lately appointed manager of the Western Union Telegraph Company at Boston, Mass., being transferred to that point from Des Moines, Iowa, was born at Brewerton, N. Y., May 11, 1865. He first entered the telegraph service in the employ of the Chicago, Milwaukee & St. Paul Railway, at Dixon, Iowa, in July, 1881, and thereafter for seven years continued in the employ of different railway companies. Later he became the chief operator in the Western Union office at Des Moines, Iowa, a position he held for four years, going thence as manager of the same interests to Cedar Rapids, Ia., where after a term of three years he returned to the Des



CHARLES F. AMES.

Manager Western Union Telegraph Co., Boston, Mass.

Moines office as manager. This office he has conducted for the past seven years, and with what success is evidenced by his recent transfer east.

Telegraph in Alaska.

A detachment of twenty-two men of the United States signal corps arrived in Seattle, Wash., a few days since, on their way to stations in Alaska. They are ordered north to aid in the construction work of the government telegraph line. Of the detachment fifteen will report at St. Michael and the remaining seven at Fort Liscum. They will remain in Seattle until their departure for Alaska on the next boat sailing for Bering Sea.

A Cable-Laying Plow.

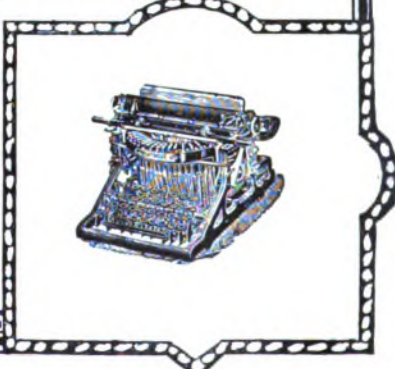
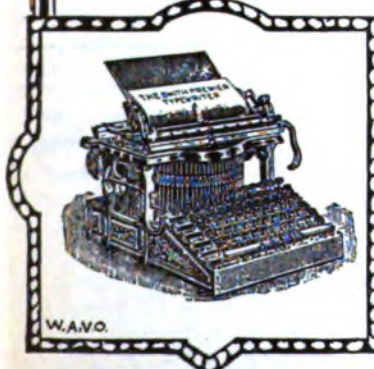
A most extraordinary engine is illustrated in a French contemporary. It consists of a plow for burying an armored telegraph or telephone cable to a depth of two to three feet below the surface of the ground without the necessity for digging a trench.

**TYPEWRITER
EXCHANGES**

**SELL GOOD MACHINES
AND ALL TITLES ARE GUARANTEED.**


EIGHT STORES

- NEW YORK ~ 1 1/2 BARCLAY ST.
- BOSTON ~ 38 BROMFIELD ST.
- BALTIMORE ~ 5 NO CALVERT ST.
- CHICAGO ~ 124 LA SALLE ST.
- KANSAS CITY ~ 818 WYANDOTTE ST.
- PITTSBURG ~ 432 DIAMOND ST.
- ST. LOUIS ~ 208 NORTH 9TH ST.
- SAN FRANCISCO ~ 536 CALIFORNIA ST.



The Smith Premier Typewriter



GRAND PRIX, 
PARIS, 1900.
HIGHEST AWARD
POSSIBLE.



Favorite of operators on
Press wires. Complete
Keyboard. Always ready.
Never out of order.



Simple, Durable,
Light Touch,
Strong Manifold.

THE SMITH PREMIER TYPEWRITER COMPANY

SYRACUSE, N. Y., U. S. A.

THE GAMEWELL FIRE ALARM TEL. CO.

109 BARCLAY ST., NEW YORK.

Gold Medal awarded at Berlin, Germany. Ex-
position of Appliances for Fire Pre-
vention and Fire Extinguishment.

**FIRE ALARM and POLICE
SIGNAL TELEGRAPHS**
For Cities and Towns.

Over 1,000 Plants in Actual Service.

SELLING AGENTS:

Frank C. Stover,
161-163 Randolph Street, Chicago, Ill.
A. J. Coffey,
230 Kearney Street, San Francisco, Cal.
Oliver P. Crocker, Atlanta, Ga.
Wm. E. Decrow,
178 Devonshire Street, Boston, Mass.
Southern Electric Co.,
Hoen Building, Baltimore, Md.
Webb Chandler, Richmond, Ind.
Utica Fire-Alarm Telegraph Co., Utica, N. Y.

To Railway Telegraph Superintendents.

You are interested in saving time and money by
telephoning and telegraphing over the same
wire. We can help you to accomplish this
if you will write to us. We make tele-
phones for long or short distance, indoor
or outdoor use. Write for particulars.



ERICSSON TELEPHONE CO.,

296 BROADWAY,

NEW YORK CITY.

JUST OUT.

SMALL  **PRICE**
ACCUMULATORS. **50c.**

HOW TO MAKE AND USE THEM.
With Numerous Illustrations.

BY P. MARSHALL.

Mailed postpaid to any address on receipt
of price.

J. B. TALTAVAL, Telegraph Age,
253 Broadway, - - - New York.

DYNAMOTORS FOR TELEGRAPH WORK

By reason of superior design and construction our
apparatus gives the best possible commercial value
under all conditions of service.

SPRAGUE ELECTRIC CO.

General Offices: 527-531 West 34th Street, New York.

The Telegraph Age.

Entered as second-class matter at the New York, N. Y., Post Office.

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

TERMS OF SUBSCRIPTION:

One Copy, One Year, - - - -	\$1.50
One Copy, Six Months, - - - -	.75
Foreign Countries, - - - -	2.00

ADDRESS ALL COMMUNICATIONS TO

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

E. H. BOWEN, MANAGER ADVERTISING DEPARTMENT

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

CABLE ADDRESS: "Telogage," New York.
Telephone, 4148—Cortlandt.

CHANGES OF ADDRESS.—The address of a subscriber will be changed as often as desired. In ordering a change of address the old as well as the new address must be given.

REMITTANCES to *Telegraph Age* should be made invariably by draft on New York, postal or express order, and never by cash loosely enclosed in an envelope. By the latter method money is liable to be lost, and if so remitted is at the risk of the sender.

NEW YORK, June 16, 1902.

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

The Western Union Telegraph Situation.

The changes in the executive departments of the New York city and other offices in the Eastern division of the Western Union Telegraph Company that have been made since the retirement of General Eckert, the former president, and the advent of Col. Clowry, the present head of the company, have given rise to an ill-defined fear, traceable to no authentic source, though apparently no less real on that account, on the part of the operating staff that their ranks, too, would soon become the objective point for a weeding out process on the part of the company.

Incident to new management it was natural, perhaps, to expect that some removals would follow the incoming of a fresh administration, but augmented partly by reason of some officials retiring at this time, an action decided upon long prior to Col. Clowry's coming, the general

shake-up seems to accentuate as well as to magnify rumors that still further and wholesale changes are contemplated.

This apprehension on the part of the operators, maintained despite the verbal assurances given by Col. Clowry, Mr. Brooks, Mr. Barclay, Mr. Mulford and others that the operating force would not be disturbed, has been further intensified and kept alive by the reports printed in the daily press of New York and other cities vaguely referring to grievances of the telegraphers as related by "well-known" yet always nameless authorities.

The effect of all these sensational events of the past few weeks has been to produce a deplorable state of nervous anxiety on the part of the operators, managers and others in many parts of the country, the origin of which may be traced mainly to the dread of what might possibly happen to them, certainly not because of what has been done.

In view of these facts this development of fear among the operators as to the future tenure or condition of their own terms of service, seemingly unwarranted and absurd as it is, would be considered more in the light of comedy, perhaps, were it not that the mental suffering of the individual is so genuine as to lend a pathetic side to the situation, and sincere and profound sympathy for the great body of telegraphers in this strange conjuncture cannot be repressed.

In the further consideration of the changes that have occurred in the executive personnel of the Western Union Telegraph Company, including the retirement of such well-known men as Charles A. Tinker, general superintendent of the Eastern division; W. C. Humstone, superintendent; A. S. Brown, electrical engineer; Charles H. Erwin, superintendent, and S. B. Gifford, of Syracuse, superintendent, men who have been long associated with the company, and whose going out at this time has been construed by many as virtual dismissal, it should be distinctly stated that the resignation of each was an act voluntarily made, the culmination of a desire to be excused from further service frequently expressed by nearly all of them to General Eckert during the past two years. So, too, in the case of George Von Chauvin, the European representative of the company at London; his resignation was received two years ago, but was not acted upon until Col. Clowry took office. Thus, far from inaugurating a general Western Union housecleaning, an opinion so freely expressed as being the present purpose, many of the changes above referred to coming at this time must be acknowledged to be but a singular coincident. Yet to show how strong is the trend of belief contrary to facts, in the fraternal mind regarding Western Union affairs, one of the resigning officials, named above, stated to us a few days ago that it was out of the question to get even his personal friends to believe that he had not been "kicked out of the telegraph service." It may

be further stated in this connection as a matter of fact that Col. Clowry offered to promote at least two of the officials named if they would but consent to remain.

In explanation of and vindictory of the company's course in the making of recent appointments, the management claims that in all it has done it has acted in perfect good faith having the best interests of the company in view, calling simply to its support in a time of emergency the services of available men wherever found without regard to locality and without detriment, implied or otherwise, to the standing of any one in the service, East or West or South.

A close inspection of the general situation as it stands to-day reveals, we regret to say, an unfortunate and lamentable state of affairs, and an absence of that esprit du corps on the part of employees without which no corporation can expect to reach its highest degree of efficiency. To continue these strained relations is fraught with peril—a peril that may and should be averted by the exercise of a wise judgment, a spirit of conciliation and of mutual forbearance between both the company and the men; and the men in a spirit of fairness and justice should not allow themselves to be swayed or swerved from conscientiously working for the best interest of the company.

We have received positive assurances from the executive officers of the Western Union Telegraph Company, which we are authorized to publish as broadly as may be, that the operating forces will not be disturbed; that no removals are contemplated, and that only the most kindly feelings prevail toward the great body of men from whom the officials themselves sprung and from whom they are but comparatively recent graduates. A statement of this character coming as it does directly from those in authority, should do much to dispel all doubts and misapprehensions now existing, and restore confidence and repose of mind among the operators, a condition absolutely essential to the future welfare of all concerned.

A Popular New Publication.

The "Pocket Edition of Diagrams and Complete Information for Telegraph Engineers and Students," now ready for delivery, is the title of the new work by Willis H. Jones, the well-known telegraph engineer of New York, and published by TELEGRAPH AGE. This is the book that has been long expected, and now that it has made its appearance, a careful inspection reveals that it more than fulfills all expectations. It is a handy-sized volume, of nearly 300 well printed pages, bound in flexible leather, and divided into forty-one chapters splendidly illustrated by ninety-five cuts. The index of contents and of diagrams being given in detail, offers a great help to the reader in his search for any subject or part thereof in which he may be especially interested. Written by a man, himself a practical telegraph-

er, in close touch with and in sympathy with the operator who desires information on the subject treated, the book is not a purely technical, coldly-expressed work, but with a strongly marked originality, it is colloquial, simple and clear in style, bright and sparkling and as full of interest as a well told story, and will hold the attention of the telegraphic reader to the end. It presents such a copious amount and diversity of practical information covering the telegraph, that it evidently is bound to take its place as a standard work of reference. In fact it is just such a helpful book as operators everywhere have long needed and vaguely hoped that some day might be brought out. It is easily the leading work on telegraphy. The price of this book is \$1.50 and copies may be obtained by addressing J. B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York.

Personal Mention.

Mr. John W. Mackay, president of the Commercial Cable Company and of the Postal Telegraph-Cable Company, New York, sailed for England on the steamer Celtic on June 6.

Mr. William H. Allen formerly, and for fourteen years, manager of the Postal Telegraph-Cable Company at Washington, D. C., is now with the New England Telephone and Telegraph Company as special agent at Boston.

Mr. C. H. Bristol, general superintendent of construction of the Western Union Telegraph Company, New York, has returned from a brief trip to St. Louis, accompanied by his wife. Mr. and Mrs. Bristol will hereafter make New York their permanent home.

A bronze statue has been unveiled in Brooklyn, at Fort Greene Park, of Gen. E. B. Fowler, the war commander of the Fourteenth Regiment, who was afterwards auditor of the Commercial Cable Company up to the time of his death. Gen. Fowler was the father-in-law of Mr. W. H. Baker, the general manager of the Postal Telegraph-Cable Company.

Mr. E. C. Bradley, vice-president of the Postal Telegraph-Cable Company, New York, has been elected a director of the Iowa Central Railway Company. Several weeks ago John W. Mackay, who is president of the Postal Telegraph and of the Commercial Cable Company, entered the board of the Minneapolis and St. Louis Railroad Company, which company, like the Iowa Central, is controlled by the Hawley-Crocker interests.

In remitting to cover his subscription to TELEGRAPH AGE Mr. J. B. Dillon, of Louisville, Ky., writes: "This is my thirteenth year with you. Contrasting your paper with those representing a particular field, or business, I must say that the AGE holds its own from every standpoint. May the good work go on. Your efforts deserve consideration from all sides, for a telegraph man without the AGE is like a miner with his lamp extinguished—in the dark."

A Presentation to Fred O. Nourse.

Mr. Fred O. Nourse, who recently resigned his connection with the Western Union Telegraph Company, New York, has been the recipient of a parting gift tendered by his late associates, by all of whom he was held in high esteem. The presentation, which was made on May 29, was accompanied by the following resolutions:

"Whereas, Mr. Fred O. Nourse, who has been associated with us for fifteen years as the general traffic chief of the main office of the Western Union Telegraph Company, at 195 Broadway, New York City, has resigned that position and is about to retire from the service of the company, and,

"Whereas, It is a privilege to express in some more substantial manner than words the sincerity



FRED O. NOURSE.

Retiring General Traffic Chief, Western Union Telegraph Company, New York.

of our regret at the departure of one who has endeared himself to us by virtues that make his name a synonym for all that is agreeable, equitable and just as an office superior, and,

"Whereas, In the present unsettled state of affairs, consequent upon a complete change in the general officers of the company, it is thought advisable not to make this testimonial general but confine it to a few in each division of the office; therefore, be it

"Resolved, That in signing this testimonial, we present to Mr. Nourse a watch-chain and charm, as a reminder to him of this occasion for all future time and the fact that he carries away with him the good will of all and the heartfelt wish that his future sphere in life may be full of happiness and success."

Mr. Nourse comes of sturdy New England stock, having been born at Littleton, N. H., on October 3, 1859. His entire business life, dating from his seventeenth year, beginning with coun-

try service and ending in the metropolis, has been devoted to the telegraph, in the employ of the railroad, the cable, the Baltimore and Ohio Railroad Telegraph and the Western Union Telegraph companies. His career has been an honorable one, marked with a high degree of manly integrity and steadfastness of purpose, and now that he retires in middle life in the fullness of his powers to conduct a summer hotel in his native town, a favorite place of summer resort, the well wishes of hosts of friends will go with him.

Poems by Jerry Newton.

Those who know Jerry L. Newton, manager of the Western Union Telegraph Company of San Antonio, Tex., only in his official capacity and who meet him only in a business way would hardly credit him with possessing the divine afflatus. He does not look like a poet. However, in this he does not differ from others of the cult. No poet ever looked like a poet according to the general estimate of the poetry maker's personal appearance.

When we need the pretty conceits, the tender sentiments and those touches of nature which appeal to the higher nature, to the finer feelings, we are apt to etherialize their exponent, to picture him as of frail physique, with soft, liquid eyes, with "fine frenzy rolling;" as one cast in a finer mold than the ordinary mortal—not of the earth, earthy; but of the empyrean, dreamy and sad-eyed.

That picture would not fit Jerry Newton. No more would it fit Joaquin Miller or James Russell Lowell or John G. Saxe or William Cullen Bryant or any other of our big-framed, muscular votaries of the muse. Jerry Newton, though intensely poetic, is likewise eminently practical. He has been manager of the Western Union Telegraph Company at San Antonio, Tex., for a score of years, and the fact that he has been so long in that position attests the capabilities he has displayed in filling it.

The poet Fitzgreen Halleck wrote his immortal "Marco Bozzaris" and other delightful poems while engaged in the counting house of John Jacob Astor, and the poet Lamb availed himself of the leisure hours which the counting house accorded him to court the muses. Mr. Newton likewise takes advantage of the leisure moments when the tick, tick, tick of the telegraph instruments do not interrupt his train of thought, to soar in the realms of poesy and give play to his fancy.

The neat little volume which has just been published by Mr. Newton (bound in leather at \$1.50; cloth \$1.00) contains a number of songs in all keys, from grave to gay, many of them written for special occasions and for personal friends.

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.

A Few Notes and Reminiscences of Martinique.

BY H. ALSBURY PIRIE.

Now of the Commercial Cable Company, New York.

Having passed eight years in the Island of Martinique in the employ of the West India and Panama Telegraph Company, principally in St. Pierre, it seems impossible to believe that that pretty and lively little town is no more, and that a wave of death from the formally peaceful Mont Pelée has swept the town of its inhabitants and wrecked the land of its picturesque and beautiful appearance. Yet, this dreadful catastrophe seems but the last link to a chain of disasters that has visited this unfortunate but flourishing little island within the last few years.

Plague, fire and cyclone, have followed each other in rapid succession and the people have emerged from each successive calamity bright and cheerful as ever. During the first sixteen months of my stay we were quarantined from the outside world. At that time an epidemic of smallpox brought to Fort de France (the official capital of the island), by passengers from Cayenne, developed rapidly into what was called the Black Plague, carrying off many hundreds of the inhabitants. The officers of the West India and Panama Telegraph Company, and the French Cable Company, were situated in the "Marie" (City Hall). A bowl containing a strong solution of carbolic acid was kept at the counter and all messages or money handed in, were treated to a thorough sprinkling of that fluid before being handled. Needless to say "rush" work is a thing unknown in the West Indies. In the court-yard surrounding the building, and indeed at every street corner, huge caldrons or barrels of pitch and tar were kept burning for disinfecting purposes, and at night the spectacle was a weird one.

Not long after occurred the great fire of Fort de France by which almost the entire city was destroyed through lack of water supply. The inflammable nature of the majority of the buildings, built chiefly of wood, and a strong wind prevailing at the time, the flames were carried from street to street with amazing rapidity. Whole blocks were blown up by the troops in order to arrest the progress of the conflagration which was of incendiary origin, as it broke out simultaneously in four distinct quarters.

The cyclone of 1892 was probably the worst experience of my recollection. All day the weather had been threatening but nothing indicated the approach of a storm of unusual violence until 6 P. M. when the barometer commenced to fall so rapidly that everybody scurried home carrying with them nails and bars of wood with which to make windows and doors fast. At 8 o'clock, the storm broke on us in full fury. The terrible roaring of the wind, the crashing of timbers and roofs, the drenching of salt spray and brine, borne in through rents made in the walls; the thud and shock and quiver of the shelter over us which was expected every moment to go; and beyond all, and above the frightful near horror

and uproar, the agonizing cry of some poor creature struck down or swept away by the flood in the street, is a memory never to be effaced. About 9 o'clock, the vortex of the cyclone passed over the city creating a vacuum. The barometer refused to register and the needle simply shivered violently in an aimless manner. For the space of probably two minutes a deathlike stillness prevailed accompanied with a frightful feeling of suffocation, then came two sharp shocks of earthquake, which rocked and rent the houses and then the hurricane continued with increased violence. At 10 o'clock the wind was nearly spent but the rain still poured in torrents.

The next morning the sight that met our view beggars all description. Every house had been either unroofed, seriously damaged or destroyed.

The streets were filled with wreckage and debris of all kinds and here and there dead bodies were lying. There were thirty-three vessels in the harbor at the time, including three steamers, all of which had foundered or been blown ashore. Over three thousand lives were lost and the next few days the dead were buried by the wholesale.

Cable communication was of course interrupted. Mr. H. Burrowes the manager, (now in charge of St. Thomas D. W. I.), and the writer made their way with great difficulty, carrying instruments, to the hut at "Fond Coré," about two miles from St. Pierre there to find the cable ends exposed for yards, and the cable hut, blown many feet away lying on its side. We got in through the bottom only to find a "Fer de Lance", the deadly snake which infests the island, snugly ensconced in the battery-box. The reptile was nearly five feet long and with much excitement we chased it out and killed it with sticks and stones. We then held a council of war as to who should enter the hut first, it being not unlikely that another snake might also have taken shelter inside.

I held, that as Mr. Burrowes was the manager it was plainly his duty to lead the way, but was coolly informed it was my duty to obey orders and not to advance arguments. As neither of us were aspirants for the "Victoria Cross", not being military men, we compromised and entered cautiously together. Fortunately nothing else occurred to interfere with the work and we fixed up a temporary connection with the cable ends thus restoring communication with Dominica and St. Lucia, the neighboring islands to the North and South. During the following week assistance poured in from all quarters and such is the quick resource and energy of the people that eight months later a visitor to the island would not have known anything unusual had occurred.

And now has occurred the crowning disaster and from a source entirely unlooked for. I have ascended Mont Pelée twice, and can vouch for the fact that during my residence on the island there was not the slightest sign of activity anywhere visible. The waters of the little lake in the crater, across which I swam in order to reach the highest peak, were icy cold. Two-thirds of the way up the mountain a split in the earth about three feet

wide, and called by the natives "La Terre Fond" (the crack in the earth), extended along the side of the elevation, facing St. Pierre. Its depth was unknown but smoke or heat never issued from it. Everybody firmly believed the old volcano to be extinct and the only precautions taken during a portion of the ascent was too keep a sharp lookout for the dreaded "Fer de Lance" snake.

I am informed by a survivor on the "Korona" that the cable ship "Grappler" of the West India and Panama Telegraph Company, which was lying off the city, simply disappeared on that fatal morning, with her whole complement of fifty-three souls, as though dragged down by an unseen force. Her captain, A. J. Boreham, and purser, A. Meggs, were both personal friends of mine and had only been married recently. From her worthy captain, down to the humblest in her gallant crew all were by birth, or otherwise, connected with St. Thomas, D. W. I., the headquarters of the company in the archipelago, therefore the disaster is regarded there as a domestic calamity and calls forth the deepest sympathy of friends and acquaintances. Mr. Morrell, the general manager was down the island at the time and had either been, or was shortly to go to St. Pierre, and his escape was therefore narrow. Both the employees of the company in St. Pierre, also personally known to me, are among the dead. Mr. Jallabert, the general manager of the French Cable Company, at Fort de France, a highly educated and polished gentleman, left that city on the 7th of May for St. Pierre and was also killed. His widow and children are in Paris.

I cannot pretend to imagine the results of the eruption, for it is too colossal. Picture to yourself some place where you have lived continuously for nearly a decade, with the inhabitants of which you are most intimately associated in business and pleasure, and then let some one tell you that that place, and those people, no longer exist but have disappeared from the face of the earth. Does it appeal readily to your imagination?

Much more could I write regarding this portion of my life but space will not permit. In spite of everything, my life in Martinique was a happy one. The hospitality, courtesy and kindness extended to me, a foreigner, during my sojourn there, shall ever be a treasured recollection, and my heart goes out to those who have lost their nearest and dearest, amongst whom I counted my best friends.

Improvement in Perforators.

By a recent modification of his Morse key perforator, Mr. P. B. Delany has adapted it to the perforation of the cable tape by use of the ordinary cable key, the change from one system to the other being effected by simply moving a switch, and, as with the Morse, the cable tape may be perforated at a distance over any circuit that can be worked by a relay.

Subscribe for TELEGRAPH AGE, \$1.50 a year.

The New Western Union Manager at Milwaukee.

Mr. Frank V. Moffitt who has lately been appointed manager of the Western Union Telegraph Company at Milwaukee, Wis., succeeding M. W. Hamblin, now manager at New York, has been the manager at Sioux City, Ia., from which place he was transferred, since 1889. For twenty-eight years Mr. Moffitt has continuously served the Western Union Company, dividing that time between the Iowa City, Davenport and Sioux City offices, respectively. Since he took charge of the latter office, thirteen years ago, twenty-five wires have been added, and that office has developed into the largest in Iowa as all of the South Dakota, Northwestern Iowa, Northeastern Nebraska and



FRANK V. MOFFITT.

Manager Western Union Telegraph Co., Milwaukee, Wis. Southwestern Minnesota business is "relayed" there. Mr. Moffitt is an affable, courteous man and has been especially valuable to the company in many ways.

Magnetic Club Summer Outing.

The Magnetic Club's annual outing will be held on Tuesday, June 24, at Cove Hotel, near Livingston Station, Staten Island. Through the courtesy of the Western Union Telegraph Company, and General Superintendent of Construction C. H. Bristol, the Western Union tug will leave foot of Dey street for the convenience of those who wish to attend at 1.45 and 3.45 p. m. on that date. The usual athletic games and entertainment will be features of the occasion. It is hoped the attendance will be large. Lunch will be served on the arrival of the boat at the hotel. A game of baseball will take place between the Postal Telegraph nines and a club made up of Missouri Pacific employees headed by Mr. D. J. Gallagher. Valuable prizes for general distribution will be contributed by members and friends of the club.

Charles H. Gaunt.

Mr. Charles H. Gaunt who on March 1, last, became superintendent of telegraph of the Atchison, Topeka and Santa Fé Railway Company, with headquarters at Topeka, Kan., has had a versatile telegraphic career, especially for one who has not yet reached his thirty-fifth year, he having been born in Steuben County, New York, on August 29, 1867. His first experience as an operator was in a Western Union branch office in Jersey City, N. J., in August, 1884. He next became identified with the commercial service of the Baltimore and Ohio Telegraph Company at Red Bank and Long Branch, N. J., and in New York City, until that interest was consolidated with the Western Union Telegraph Company. During the period from 1884 to 1889 Mr. Gaunt was mainly connected with the Postal Telegraph-Cable Company in New York, then at 187 Broadway. Then came employment in the Northern Pacific Railway service, and for over a year, ending in September,



CHARLES H. GAUNT.

Superintendent of Telegraph Santa Fé Railroad System,
Topeka, Kan.

1890, he was manager of the relay office at Helena, Mont., when he was transferred to St. Paul, Minn., as telegraph manager of the general office. During the six years from the spring of 1891 to the early part of 1897, he was wire chief at Helena of the Western Union and of the Northern Pacific Railroad. Once more going East the succeeding three years were passed at Philadelphia, Pa., as telegraph manager of the main office of the Philadelphia and Reading Railroad. Again he sought the West, going back to Helena in his former capacity in which he remained until January 16, 1900, when he was made assistant superintendent of telegraph of the Northern Pacific Railway, a position he held until his promotion to be superintendent of telegraph in the Santa Fé system as stated above.

Mr. Gaunt has been identified with various electrical engineering enterprises in Montana, and has shown ability as an electrician in these undertakings. He has devised an improved method by which simultaneous telegraphy and telephony which was adopted by, and is now in operation on the line of the Northern Pacific Railway. He was also, it is said, the first to call attention to the method of winding multiple relays so as to prevent the lightning trouble susceptible to the ordinary multiple-connected series-relay. Since Mr. Gaunt's induction into his present office he has established a number of quadruplex circuits from Chicago to the Pacific coast and to Galveston, Tex., and he has in contemplation the placing of a number of long distance copper telephone circuits, one of them from Topeka to Chicago, covering 524 miles.

The Telephphone.

A patent just issued to Peder Oluf Pedersen, of Copenhagen, covers a method of using the Poulsen telephphone in such a way as to record a number of messages on a single steel strip and to reproduce each message without interference from the other. With this improvement in the Poulsen invention, it is obvious that the size of the drum or the length of the wire or ribbon used therein may be materially lessened, so that a long speech or a number of speeches or signals may be stored upon a comparatively short or small magnetic body.

The telephphone is the invention of a Danish electrical engineer, Valdemar Poulson, and is, as the name implies, a combination of the telegraph, telephone and the graphophone or phonograph. By the use of this device a telephone or telegraph conversation can be recorded on a steel wire or tape and reproduced at any time and as often as desired without the record deteriorating.

In this apparatus a steel wire, or a steel band, is moved by any suitable means with considerable velocity between the poles of a small electro-magnet. On speaking into a telephone transmitter joined on the circuit, the undulatory currents set up in the transmitter react upon the electro-magnet and cause a continuous variation in the direction and in the degree of magnetism at the poles of the electro-magnet. These variations are permanently recorded on the steel wire as it rushes by, and when the message is complete the steel wire retains a definite record of what has taken place in the shape of a continuous series of transverse magnetized lines varying throughout in their polarity and in their strength. On connecting a telephone receiver to the electro-magnet, and again starting the wire on its course, this magnetized wire generates electric currents in the coils of the superimposed magnet as it passes between its poles, and these electric currents, which are the exact counterpart of those generated by the original voice, cause the telephone to repeat what was said in an almost absolutely perfect manner.



DYNAMOTORS

...FOR...

Telegraph Stations.

Saving of space, added convenience, and a reduced cost of maintenance can be obtained by discarding batteries and using current from power or lighting circuits.

WE BUILD DYNAMOTORS FOR
PROPERLY TRANSFORMING THIS POWER

Crocker-Wheeler Co.,

Manufacturers and Electrical Engineers.

SALES OFFICES IN ALL LARGE CITIES.

Chicago Office :
OLD COLONY BLDG.

Main Office & Works :
AMPERE, N. J.



Railway Telegraph Superintendents!

It will pay you to visit our Factory
and examine our apparatus,
while in Chicago.

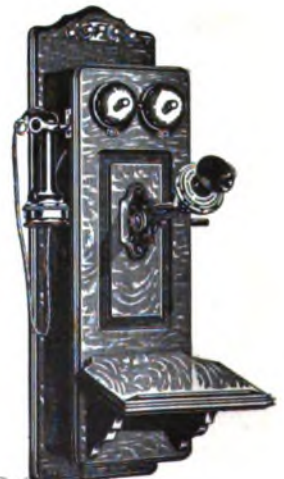
RAILWAY TELEPHONE SETS
LINEMAN'S TESTING SETS
SWITCHBOARDS
BRIDGING TELEPHONES

Stromberg--Carlson

Telephone Mfg. Co.

70-80 w. Jackson Bou.,

CHICAGO, ILL



To Prevent Strikes in Canada.

The Dominion government has introduced a bill into the House designed to settle in Canada all railway labor disputes and strikes by compulsory arbitrations, says the Railway and Locomotive Engineering. This applies to the difficulties arising between the railroads and the employees. The bill makes strikes and lockouts illegal and includes all steam and electric roads including those owned by the governments, making the offenses above named illegal and punishable.

The matters will be handled by provincial boards. In case the matter in question is not wholly in one province, it will be handled by the Dominion board. The provincial boards will be composed of three members, one chosen by the employers, one by the boards and the third by these two. In case these two cannot agree on the third, he will be chosen by the governor in council.

The Dominion board is to be composed of five members, two elected by the representatives of the railway owners on the seven provincial boards, two by the employers' representatives on these boards, and the fifth by the other four, or by the Dominion government. Each employee has one vote. The elections are to be held every three years, that being the limit of time each member of an arbitration board serves. Awards are to be current for one year, or until superseded by another award of the same arbitrators.

It is also provided that no court shall have power to review, amend or quash awards. The bill will not be passed by Parliament this year, it being desired to first make the country familiar with its provisions, and to receive suggestions from all parties interested. Next year the measure will be pressed to a conclusion, with such amendments and alterations as may be found necessary.

How England Sends Telegrams.

(From Electricity, London.)

The latest thing in this effete old country to provoke the criticism of the New World is the Post Office method of catering for those who want to send telegrams.

A gentleman from Boston, U. S. A., whose visit to London is connected with a new publishing enterprise, was emphatic and "free" on the subject.

"It beats me," he said, "how you people stand the arrangements for telegraphing here. First time I wanted to send a few wires I drifted into your Fleet street office. In the very darkest corner I saw a few rabbit-hutches. Nailed to a rough, corrugated wooden counter was in each one of the bins a piece of string attached to a quarter of an inch of lead pencil without a point.

"The telegraph forms came to me doubled up one at a time, and there was no pad to write on. I was expected to scribble down my wires in a cell where there was no light, on a creased piece of paper, with a blunted pencil, with the hard

grain of the counter making hills and dales of every word. I tell you it is not good enough.

"You do not telegraph unless you are in a hurry, and what with the physical difficulties put in your way and the superiority of your lady clerks, who come straight from the ice chest, it seems to me quicker to walk to the man you want to get at.

"I have been into lots of telegraphing stations in London, and it seems to me that these conditions are the normal conditions in this country. I do not wonder Pierpont Morgan goes back to the States when he wants to do some real business. It saves time to operate on England from New York, and Pierpont Morgan knows that all the time."

Frogs and Telegraphs.

Something new in the relations between "galvanic" telegraphs and frogs is reported as follows: One of the great enemies of the overland telegraph line in central Australia is the common green frog. In order to save the insulators from being broken by the lightning they are provided with wire "droppers" leading round them at a little distance, to conduct on to the iron pole in case of need. The frogs climb the poles and find the insulators cool and pleasant to their bodies, and fancy that the "dropper" is put there to furnish them with a back seat. After a nap they yawn and stretch out a leg until it touches the pole—result, sudden death of the frog, and as the body continues to conduct the current to earth we have a paragraph in the papers to the effect that "in consequence of an interruption to the lines, probably caused by a cyclonic disturbance in the interior, we are unable to present our readers with the usual cables from England."

The Creosoting of Poles.

W. E. Moore of Augusta, Ga., has written a paper entitled "Does it Pay to Creosote Wooden Poles for Electric Line Work?" Dr. F. A. C. Perrine of Pittsfield, Mass., pointed out that all cutting of the timbers should be done before creosoting. The relation of creosoting to the insulation should be considered. With attention to comparatively minor details, there is no question, said Dr. Perrine, that the process of creosoting is to be commended. The United States Department of Agriculture has gone into the question very exhaustively. The author of the paper answered several questions. He said chestnut poles had an extremely long life, but were very crooked. After creosoting, a sap-pine pole is as good as a cypress pole.

INCREASES ITS CAPITAL STOCK.—The directors of the American Telephone and Telegraph Company, at a special meeting held in Boston on May 29, voted to issue \$21,000,000 of new stock.

He that avoideth not small faults, by little and little falleth into greater.—Thomas à Kempis.

An Early Defender of Professor Morse.

Rev. Dr. Arthur C. Ludlow, of Ohio, in speaking at a prayer meeting at Plymouth church, Brooklyn, recently, said:

"When Professor Morse sent by the electric telegraph from Washington to Baltimore his famous message: 'What hath God wrought?' almost the entire country refused to believe that it was more than trickery. My grandfather drove into the city forty miles from the country village where he lived in order to hear Professor Morse lecture. Thereafter, he fought the conservatives, who insisted that Professor Morse had secured simply a patent on something with which to bamboozle people. For a long time my grandfather was the only man in that village who believed in the electric telegraph, and he fought the conservatives single-handed. Like Luther, he tacked a poem on the door of the church, and if this wasn't a prayer meeting I would read you that poem. For many years after Morse had absolutely demonstrated in the most positive manner that his system would do all that he claimed there was this incredulity, but it is not so now. If the newspaper is placed in one's hands, no matter how startling its news may be, it is never questioned."

This will bring to the minds of many older people the incredulity which followed the first announcement of the invention of telegraphic communication. People in those days had not become accustomed to the discoveries in electric science and were slower in understanding the new application of the electric current. It took many years for a clear conception to filter through all grades of popular intelligence.

Morse Code in a Flat.

"I suppose," said Mr. Flatdwell, as recorded in the Chicago Inter-Ocean, "that there are plenty of people living in flats who have a signal system by which they communicate from the vestibule to the flat itself, announcing their arrival, and some other points of information, as, for instance, whether they have visitors with them.

"All there is to this, you know, is that each member of the household has a ring of his own; say one has one short ring; another has one short and one long touch on the bell, and so on; while some general prearranged signal, added to the regular ring of any member of the household, means that a visitor is coming also.

"That system of flat signaling, I guess, is now pretty common. But it had never occurred to me that it might be greatly extended until one day when I came into the vestibule of our home and found our new tenant, one flat higher up on the other side of the halls, standing there with an interested look on his face, and apparently listening to something.

"The latch of the street door was clicking away with somebody upstairs pressing the button to let him in, but he didn't go in, he just stood there,

and in a minute, when the clicking stopped, he turned with a smile on his face to the letter box and began pressing the button under it.

"A minute later the door began to click again, and he began to listen once more; and pretty soon he says, the clicking still going on, this as though he was talking to somebody:

"'Sho! Go 'way! You don't mean it!' smiling all the time, and when the clicking stopped again he pressed the letter box button a couple of times and the door clicked a couple of times, and then he turned and went out.

"Well, all there was to that, you know, was that our new tenant was a telegraph operator, and his pushing in of the letterbox button and the clicking of the door opener simply were he and his wife telegraphing to one another over the bell wire and the door-opener wire. With the push button in the flat working the door-the push button in the vestibule for one key and the button in the flat working the door-opener for the other, and bell and door-opener for sounders, they could talk as freely as two operators could talk over a telegraph wire.

"Of course this, you know, made the old flat signaling system as followed by the rest of us, and which we had always thought was pretty good, look like child's work, and now everybody in our house is studying Morse."

Submarine Cables in War.

With the advance of the plans for submarine cables in the Pacific there arises the pretty question of the relative advantages in time of war of a cable system having landing places only in territory belonging to the belligerent owning it and one which has its intermediate stations in the territory of a neutral power, says an exchange. It has generally been the aim of nations in constructing cables to have the landing places, whenever practicable, in their own territory, and this has been spoken of as a military advantage. But the point having been raised in connection with the proposed British cable from Vancouver to Australia, weighty arguments have been advanced in favor of choosing a route which should not bring the landings entirely in British territory. It is argued that in time of war a cable landing in the territory of several nations is less liable to seizure and interruption than one which comes to the surface under only one flag. A hostile power cannot, in the former case, land at will upon some remote and outlying cable station and interrupt the communication without committing such a breach of neutrality as would send the nation whose territory was violated into the ranks of its enemies.

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.

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.]

WASHINGTON, D. C., POSTAL.

A. H. Mitchell, formerly of the Alexandria, Va., office, has accepted a position here.

The operating department desire to express its thanks to the officials for their thoughtfulness in putting in motion our electric fans, which aids greatly to make life more bearable when the weather is hot.

The Linemens Union of Washington, 148 I. B. W., will give a family excursion to Marshall Hall, Va., on July 28. It is hoped that as many of the operators from here and surrounding points as can conveniently do so, will patronize this affair for an enjoyable time is promised.

D. P. Carlin has resigned and accepted a bank position in Philadelphia, Pa., his home.

S. R. Turner of the fish district and C. S. White of the market district, who have been absent on sick leave for several days, are again at their posts.

CINCINNATI, O., WESTERN UNION.

The resignation of Mr. A. A. Brown during the latter part of May to accept the managership of the Pittsburg, Pa., office, has brought about many changes in the official personnel of this office. Mr. Brown came to Cincinnati soon after the strike of 1883 and was soon afterwards appointed all night chief and later assistant night manager. He was appointed wire chief about the year 1890, which position he has since held with signal ability.

Mr. A. T. Gould, for the past thirty-five years identified with the office as chief operator and night manager, accompanies Mr. Brown to Pittsburg and has been made chief operator of that office.

Mr. John P. McCabe, formerly assistant chief operator, succeeds Mr. Gould as night manager and Mr. W. J. Connelly becomes assistant chief operator; Mr. A. A. Montgomery has been appointed traffic chief and L. E. Moores wire chief. L. S. Miller assumes the duties of all night chief.

Mr. A. B. Clark, for many years cashier for Manager Page, also accompanies Mr. Brown to Pittsburg as assistant manager of that office.

Mr. Gould and Mr. Clark were remembered in a handsome and substantial manner by their friends and associates upon their departure for their new fields of labor.

PHILADELPHIA, PA., WESTERN UNION.

Our new superintendent, Mr. J. P. Altberger, made his initial visit to the operating rooms about two weeks ago and the consensus of opinion is

that he is admirably fitted for the responsible and honorable position which, by the way, came to him entirely unsought, simply a splendid tribute to his sterling worth as a man of superior ability and executive force. A brief study of his facial lines revealed determination to succeed and yet, withal, a kindly countenance. With one accord we wish him well in his new field of labor.

Mr. William B. Gill, the retiring superintendent, whose resignation took effect June 1, bid goodbye to the employees generally. He spoke feelingly of their past relations but was glad to lay aside the burden of responsibility which has been his for many years. Mr. Gill has already had tempting offers from many large corporations but has rejected them all thus far.

Owing to a reduction of from five to four test operators Mr. Joseph T. Wilde, who held this position for many years and who was chief operator at one time, severed his connection with the Western Union Company and is now located with the Postal Company in this city. Mr. Wildes' departure was regretted very much as a kindly Christian gentleman, held in highest esteem, conscientious in every way he was well liked by us all.

LANCASTER, PA., POSTAL.

This company is enjoying a prosperous business. Infrequency of changes is the only reason why we are not oftener heard from through the columns of TELEGRAPH AGE.

We are grieved to announce the death of Christian Hoefel, who was killed by a fall in a barn whence he sought shelter recently during a storm. The funeral service was largely attended; six operators, the Messrs. Ralph A. Barton, manager of the Postal; Former Manager Robert Robinson, Charles C. Lehman, David B. Lehman, W. S. Conn and Albert Zahm acted as pallbearers.

The floral offerings were beautiful, most conspicuous of which was the design from the local operators representing two broken telegraph poles four feet in height made of bride roses, from which depended a severed copper conductor; the figures "30" on the base. The newspaper correspondents, with whom the deceased was held in high esteem, sent an exquisite large shower bouquet of American beauty roses; even the messenger boys of the office remembered their dead friend with a bouquet of calla lilies.

PHILADELPHIA, PA., POSTAL.

After spending forty years—almost a lifetime—of faithful service to the Western Union Telegraph Company, Mr. Joseph Wilde suddenly realized he was no longer in their employ. On presenting himself at this office he was promptly put in charge of the lines through the Delaware, Maryland and Virginia district.

Charles C. Dreher, quad chief, and Katie McIntyre, of the sugar district branch office, were married on the 3d inst. A pleasant trip was taken to Old Point Comfort. Their friends unite in wishing them happiness and prosperity.

After a disappointing experience at Pittsburg

TO RAILWAY TELEGRAPH SUPERINTENDENTS,
in Convention at Chicago, June 18, 19 and 20, 1902.

Dear Sirs:—The Fay-Sholes Company respectfully calls your valued attention to the peculiar adaptability to Railway Telegraph service of the

FAY-SHOLES TYPEWRITER

with which *all the competitions* in the Second American Telegraphers' Tournament at Atlanta, March 1st, 1902, were won, and also the *Message Receiving Competition* in the First American Telegraphers' Tournament, New York, May 14th, 1898.

Officers of this Company will be in attendance at the Convention, and will take pleasure in showing and making proposals for our latest model machine.

FAY-SHOLES COMPANY, C. N. FAY, President.

DIRECTORS:

JAB. H. ECKLES BRYAN LATHROP FRANKLIN REMINGTON C. N. FAY FRANKLIN MACVEAGH
WILLIAM E. STONE FRANKLIN H. HEAD SAMUEL MATHER ARTHUR D. WHEELER

70th THOUSAND PRINTED FROM A NEW SET OF PLATES

THE MOST SUCCESSFUL A B C OF ELECTRICITY By W. H. MEADOWCROFT.

ELEMENTARY WORK.

One volume, 12mo cloth, 50 cents. Fully illustrated.

This excellent primary book has taken the first place in elementary scientific works. It has received the endorsement of Thos. A. Edison. It is for every person desiring a knowledge of electricity, and is written in simple style, so that a child can understand the work. It is what its title implies, the first flight of steps in electricity.

ENTHUSIASTICALLY ENDORSED BY THE PRESS.

Sent post paid on receipt of price by

J. B. TALTAVALL, Telegraph Age

253 BROADWAY, NEW YORK.

Excelsior Webster Pocket Speller and Definer of the English Language



containing over 25,000 words. This work gives the correct orthography and definition of all the words in common use. The illustration gives a fair idea of the shape of the work being especially made to fit the pocket and bound in a style which makes it durable and elegant. This Speller and definer is not reprint, but has been carefully prepared by competent hands to meet the general want for a book of this kind, and for the space it occupies has no superior in the publishing world; containing 820 pages, double column, it weighs 2 1/4 ounces, size 5 x 2 1/4 inches, bound in elegant American Russia Leather and indexed.

J. B. TALTAVALL,
253 BROADWAY
New York.

Commonwealth Oil Company

OF TENNESSEE AND KENTUCKY.
ROOMS 503-504 PADDOCK BUILDING,
101 TREMONT STREET, BOSTON, MASS.
HENRY C. SHERMAN, General Manager.

INCORPORATED UNDER THE LAWS OF THE STATE OF MAINE

CAPITAL STOCK, \$350,000.

Par value, \$1.00 per share, fully paid and non-assessable.

OFFICERS:

JOSEPH G. TAYLOR, President. HENRY C. SHERMAN, Vice-President and General Manager.
ALBERTO D. HUNTON, Treasurer. THOS. H. CANNING, Secretary.

Any electrical or telegraph book published for sale by Telegraph Age, 253 Broadway, New York.

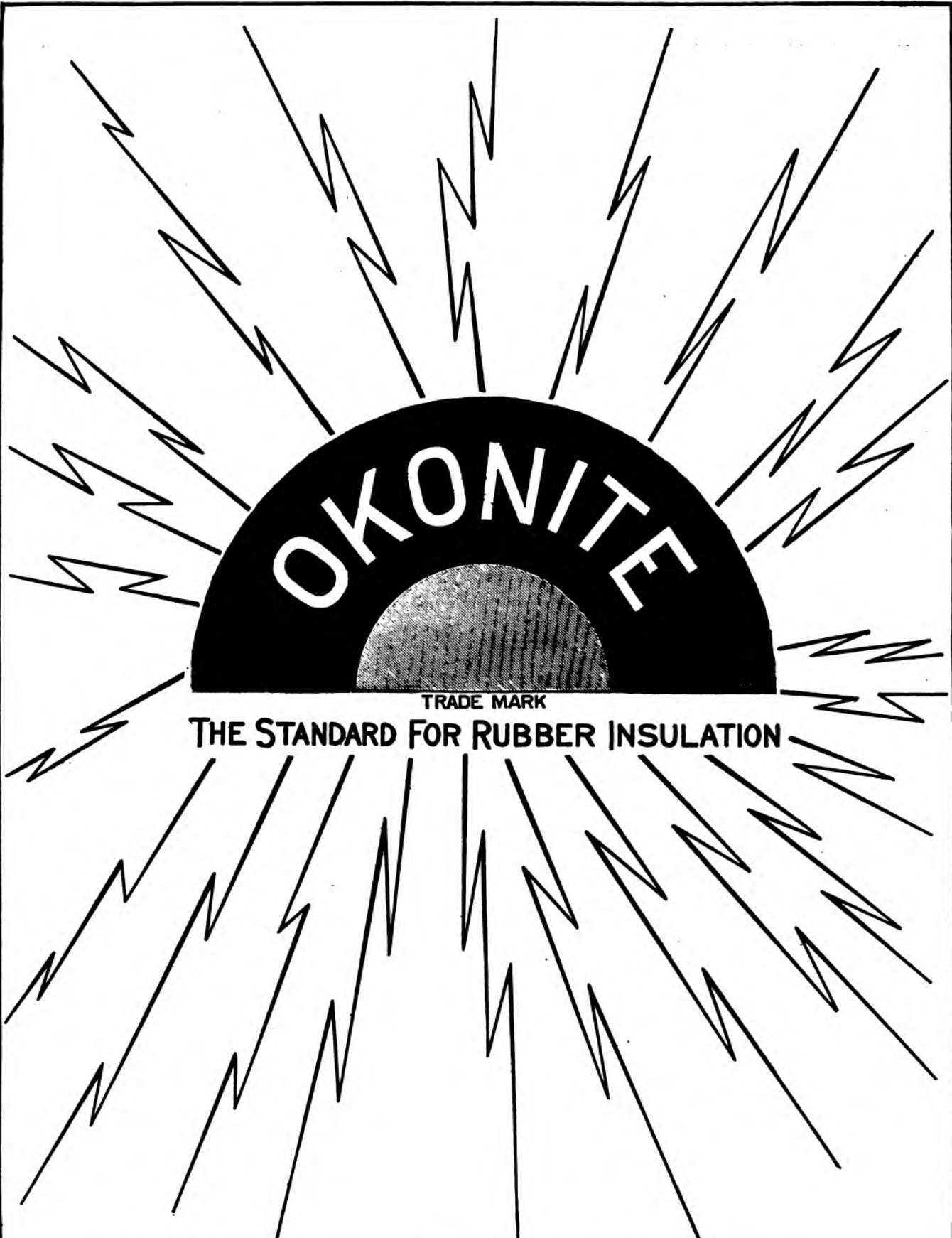
Pope's Modern Practice of the Electric Telegraph. A handbook for operators. 223 pages, fully illustrated. Price, \$1.50, postage prepaid. Address J. B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York.

NOW IS THE TIME...
TO SUBSCRIBE FOR
TELEGRAPH AGE.

IF YOU DESIRE **ELECTRICAL OR TELEGRAPH BOOKS,**

SEND YOUR ORDERS TO

Telegraph Age, 253 Broadway, N. Y.



TRADE MARK
THE STANDARD FOR RUBBER INSULATION

The Centre of Attraction

Digitized by Google

Mr. Wilmer C. Wrenn immediately returned to resume his place in this office. A few days later he was hustled off to Princeton, N. J., to help out during the rush.

Foreman John G. Gorsuch, of the construction department, is the inventor and patentee of a combination tool, which looks like an ordinary pair of linemen's plyers but, on investigation, is seen to be provided with a device which makes a perfect sleeve connection in a few seconds.

A change at the "Record" brings Mr. Earl W. Miller back to this office, Mr. P. J. Behan relieving.

W. Vance Compton and W. A. Wells have been added to the extras.

During the illness of Mr. Pedrick, manager at Camden, N. J., Mr. Luther D. Heath, of this office, has been temporarily placed in charge.

Unable to further withstand the attractions of Southern California, Mr. Richard Ziegler has relinquished the managership of the Third and Chestnut streets branch office, packed his grip and returned to the Far West, bidding a final farewell to the East.

Mr. William J. Breitmayer is the new operator at the Bourse office, assisting Manager James Wilson.

Owing to the release of a private wire, Mr. William Cornell returns from a broker's office.

INDIANAPOLIS, IND., WESTERN UNION.

E. H. Price, foreman of the Postal Telegraph-Cable Company, Atlanta, Ga., was married recently at the home of his brother, J. W. Price, quad chief.

The ticker service will be installed here June 1. For the present it will be operated from Cincinnati. Mr. C. Tilghman, of Cincinnati, is here completing arrangements for this service.

Harry Monteith, of Lafayette, was a recent visitor.

Arrivals: J. F. Hart, C. L. Kennedy, James E. Ikerd and J. O. Barnes.

Departures: Robert W. Bass, G. B. Lumpkin, J. T. Dewitt and D. C. Alter.

ST. LOUIS, MO., WESTERN UNION.

Mr. Ryan, manager at Hot Springs, who has been very ill recently, was a recent visitor at this office.

The Kansas City wheatstone circuit has been abandoned at this point, and the combination men were put at the table. The recent wheatstone appointments were released and the old employees were put to work on the New York circuit.

"Mel" Hawley has assumed charge of the Kansas City quad division in addition to the wheatstone.

General Superintendent Theodore P. Cook and his son, of Chicago, spent Sunday, May 25, in this city.

Edward Githens of the New Orleans local has recovered from a stroke of paralysis, which kept him from work ten days.

William Sleight of the "Globe-Democrat" force

has been confined to his home for the past two weeks by serious illness.

E. J. Williams has accepted a pool room position and left for Oklahoma City.

Marcus D. Crain, Jr., has been working for a pool room in Texas, which collapsed, and he has returned to this office.

Eight new tricks—2 p. m. until 8.30 p. m.—have been created to cover the eight men necessary for newspapers, baseball and race tracks.

Robert J. Fruin who has been in the employ of this company for a number of years in St. Louis, died April 25.

Harry A. Thomas of Chicago and St. Louis, died of consumption at Dale, Cal., on May 7. Mr. Thomas served during the Spanish war with the Signal Corps and contracted the disease from which he died by exposure. He was quiet and unassuming in manner and a general favorite with all who were associated with him.

Earl Morgan has been assigned to the Merchants Exchange for duty.

"Dip" McCrudden has returned from Hannibal, Mo.

Miss Mamie McLaughlin has returned from Hot Springs, Ark., where she helped out during the rush season.

Assistant Division Chief Charles Henry and Clarence Safford of "The Globe" are doing good work.

LOS ANGELES, CAL., POSTAL.

Horace Chase has resigned to accept a position with the Santa Fé Railroad Company in this city.

Mr. J. G. Halsey from the Western Union relieved Mr. Chase.

Walter McInerney has resigned. His place will be filled by J. H. Dorsey of the Chicago Postal office.

L. C. McIntosh has been assigned to the early morning trick.

BIRMINGHAM, ALA., POSTAL.

A remarkable record was made on the Birmingham-New Orleans bonus circuit May 19, when a total of 1,300 messages were handled in nine and one-half hours. Messrs. C. H. Ward, of this office, and W. L. Ward, of New Orleans, are accredited with 700, while Messrs. B. B. Pierce, of this office, and P. W. Kenefick, of New Orleans, disposed of 600 messages. Considering the distance, 410 miles, and messages ranging from ten to an unlimited number of words, this is a good record.

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.

No telegrapher who places the right estimate on his opportunities in the telegraph service should be without the practical aids to advancement afforded by a subscription to TELEGRAPH AGE.

NEW YORK CITY.

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

WESTERN UNION.

Much sympathy is expressed by the operating force to the several old-time clerks who recently lost their positions at an age when it will be most difficult for them to obtain other employment. Some of those whose services have been dispensed with had been in the employ of the company upwards of thirty years, and it is thought some light employment should have been provided for these people who unfortunately were not telegraphers, and unable to do other work.

The chief operators who have previously been allowed brief vacations each year, with pay, are questioning whether the customary privilege will be continued this season. The company was really put to no additional expense in granting these vacations and they have always been looked upon in the light of a good investment inasmuch as the service in the long run was the gainer thereby.

A. G. Kelley, chief clerk of Superintendent Gifford's office, Syracuse, New York, has been transferred here to Superintendent Mulford's office.

The posted notice conveying the information that semi-monthly pay days would be established instead of the regular weekly system at present in vogue, and which remained on the board for some time, has been withdrawn, the same having been rescinded.

Seventy-five operators were recently transferred from the regular to the extra force.

A. H. Hickerson, H. E. Stokes and J. A. Tallon have resigned to go with Swift and Company, New York; J. G. Hoffman to go to the United States Hotel, Saratoga, N. Y., for the summer; Howard Smith to take charge of the Manhattan Beach Hotel, Manhattan Beach, L. I. Other resignations are: W. J. Tynan, H. W. Teed, E. A. Connelly, G. S. Hearon, C. McLellan, P. W.

De Baun, E. D. Cameron, W. E. Athearn, J. McGann and Paul H. Freyer of the newspaper force, to go into newspaper business.

O. J. Zilly will take the place made vacant by the resignation of J. W. Callahan.

C. R. Clampitt has been appointed night Eastern traffic chief vice J. Gschwind who goes to loop switch, vice C. Danforth to night general traffic chief vice E. T. Burrill, who succeeds F. O. Nourse as general traffic chief, days.

C. J. Chryst has returned from Florida and resumed duty.

W. C. Howell, son of Edwin F. Howell, has been promoted to be a junior operator and assigned to duty at Fire Island, N. Y.

Mr. Gardner Irving, manager of the Commercial News Department, was married to Miss Isabella Fish Forson, at Garrison-on-Hudson, on June 4. Mr. Irving is one of the best known and most respected telegraph officials in New York, and he has the heartiest congratulations of every member of the fraternity. After the wedding trip, which will occupy about two weeks, the couple will take up their residence at Garrison-on-Hudson.

Miss Etta Dwight, the daughter of the late John H. Dwight; Miss May Tierney, daughter of the late John Tierney, and Miss Sadie Morris, daughter of the late Julius Morris, joined the ranks of junior operators on June 4.

The lunch room, because of table rearrangement and the employment of waitresses, wears such a different look it seems like going into an entirely new place.

Avery Dougherty has been assigned to duty in President Clowry's office. He is a skilled draughtsman and engrosser.

Robert Morton, on account of rearrangement of service in the Wheatstone department, has resumed work on the Augusta wire.

Martin J. Durivan has again gone to Long Branch for the summer. As Colonel Clowry will make that place his home for the season it may be expected that the work will be heavy.

John H. McGinity, of the Race Bureau, who has been confined to his bed for the past three months with sciatica, is improving and is now able to sit up.

James W. Callahan, for many years night operator on the marine circuit, has, through partial loss of sight, been compelled to resign. He has been employed in this office for the past thirty years.

Miss Nellie T. Calvert has, after an absence of six months on account of illness, resumed duty.

J. T. McCormick is again on the sick list.

The mother of Norman C. Sears, of the Cincinnati wire, died at Sackville, N. B., June 1.

Miss Nina Voorhees has been spending a week at her father's farm in New Jersey.

Southern Traffic Chief John B. Hurd was recently suddenly overcome in the office by illness, but has returned to duty since.

Hamilton Fitchett has resumed duty and his condition is greatly improved.

Mr. J. J. Riley, one of the finest and most popular New York operators, has been assigned to duty as manager of the telegraph bureau of the New York "Times."

The recent death of James F. Farrell, who was connected with the Maritime Exchange, New York, and well-known to the telegraph and shipping interests of the maritime world, recalls his father who was a famous marine observer before telegraphy was employed in that work. He was stationed at Sandy Hook, and in connection with Commodore Walter O. Lewis, the father of "Marine News" in America, used to go out in a small boat off Sandy Hook and pick up the mail advices that were encased in can buoys and dropped from incoming steamers.

Miss Anna Canders of the city line department left June 4 to be married. She carries with her the good wishes of all.

Pearl King, aged sixteen years, the daughter of John F. King, died June 4. Much sympathy is expressed for her bereaved family.

Alexander Kline, cable foreman of the Western Union Telegraph Company, New York, is now in the Klondike region laying cables for the Government. Mr. Kline recently had his salary raised twenty-five dollars per month by the Western Union Company.

Mrs. E. H. Rogers, Jr., Miss E. Roy, Miss K. Tyrrell, Miss A. Dunnigan and Thomas M. Dougherty have been recently appointed on the operating force of the 46 Broad street office, presided over by Manager P. J. Tierney.

Mr. E. W. Griffith, son of Edward P. Griffith, general wire chief of the operating department, has been appointed wire tester in the office of the electrical engineer.

POSTAL.

The baseball team of the "Postal" executive offices defeated the team representing the Missouri Pacific Railroad Company on Saturday May 17, by a score of 21 to 1. The Postal's lined up as follows: Messrs. Cahill, Davids, Fleming, Vollbracht, Dennis, Loughlin, Anderson, Healy and Bissett.

The same team also defeated the Commercial Cable team by a score of 15 to 11. The teams in this contest were as follows:

Commercials: Messrs. William, Weyrich, Tomsey, Maguire, Mignon, Burke, Keifer, Lean, O'Conner.

Postals: Messrs. Wintraecken, Tenny, Bradley, Anderson, Fleming, Davids, Cahill, Vollbracht and Healy.

Frederick Cleverdon, the son of John F. Cleverdon of the electrical engineer's office, and an old-time operator, graduated from the New York University June 4.

Mr. S. B. Haig who for several years has been the chief of the city division was recently made general traffic chief. To show the esteem in which he was held by the operators of his department, these gentlemen prior to his promotion presented him with a set of diamond cuff buttons.

C. P. West resigned to take a position with the Postal at his home, Richmond, Va.

Quad Chief Glen Newman is away on his annual vacation.

Eastern Wire Chief J. A. McNulty, who has been absent on account of severe illness, has returned to duty.

Mr. John r. Skirrow, assistant manager of this office since 1894, has been promoted to the position of electrician of the Eastern division of the company.

Mr. F. F. Norton, for many years general traffic chief, has been appointed assistant manager, vice J. F. Skirrow.

Mr. S. C. Dodd has been appointed city chief to fill the position formerly occupied by S. B. Haig.

CHICAGO, ILL.

TELEGRAPHERS' TYPEWRITER CO.

REBUILT TYPEWRITERS
LEADING MAKES
GOOD AS NEW.
SOLD AT BARGAIN PRICES
ASK FOR YOUR CHOICE OF MACHINE.
RENTED ANYWHERE



122 LA SALLE ST. CHICAGO.

O. T. ANDERSON, MANAGER.

Wholesale Dealers in Platen and Parts.

Agency for Telegraph Age.

MONTREAL, QUE., CANADIAN PACIFIC RAILROAD.

Superintendent W. J. Camp has returned from a tour of the maritime provinces and will probably leave for Winnipeg and the West this week.

Mr. James Kent, general manager of telegraphs, has gone on a trip to the Coast.

Mr. and Mrs. H. J. McCann, from Sydney, N. S., are in town enjoying their annual holiday.

Mr. Arthur Sullivan, of the Commercial Cable office, Hazel Hill, N. S., was a recent visitor en route to New York.

Mr. James D. Wood, who was indisposed for a week, is again at his post.

Mr. Joseph Manning of the Windsor street station has assumed charge of the telegraph school at Mrs. Bullock's College where the art of telegraphy is being taught.

Resigned: J. P. O'Leary and E. L. Herdman.

Arrivals: G. H. Santamoure and W. H. Gomery.

Directory of Telegraph Organizations.

Association of Railway Telegraph Superintendents. Next meeting, Chicago, June 18.

International Association of Municipal Electricians. Next meeting, Richmond, Va., Oct. 7, 8 and 9.

Old Time Telegraphers and Historical and United States Military Telegraph Corps Association. Next meeting, Salt Lake City, Utah, September 10, 11 and 12.

The Convention of Railroad Telegraph Superintendents.

The Association of Railway Telegraph Superintendents will meet in annual convention at the Stratford House, Chicago, Ill., on Wednesday, Thursday and Friday, June 18, 19 and 20.



CHARLES F. ANNETT, OF CHICAGO.
President of the Association of Railway Telegraph Superintendents.

This assembling will be the twenty-first meeting of the association since its organization at Chi-



P. W. DREW, OF MILWAUKEE, WIS.
Secretary and Treasurer of the Association of Railway Telegraph Superintendents.

ago, in November, 1882, and such an auspicious anniversary cannot be hailed other than with feelings of gratification and the expression of earnest congratulations incident to reaching the dignified years of maturity. This coming of age, so to speak, of an association that has held so conspicuous a place in railway telegraph circles, and that has been the means of accomplishing so much in the development of the American railway telegraph superintendent, and through him of bringing about vastly improved methods of regulating the operation of railway trains, has naturally awakened an enthusiasm in the minds of members that is full of good omen for the success of the gathering this week. Moreover, young fellows, like those of the railway, are apt to "feel their oats" at the time of their twenty-first birthday, and though full of dignity over the prospect of the business that awaits them at Chicago, which of course is quite proper, a sentiment of good fellowship also widely prevails, and from the Atlantic to the Pacific, anticipations of a pleasant reunion is everywhere uppermost in the minds of the superintendents. Those who attend the convention will be abundantly rewarded from every point of view. The Committee of Topics, named at the last meeting held at Buffalo, N. Y., in June, 1901, embracing E. A. Chenery, of St. Louis; A. B. Taylor, of New York, and H. I. Simpson, of Richmond, Va., has arranged for the presentation of an interesting list of papers treating on a wide range of subjects, which will be read and discussed.

Superintendent of Leased Wire Service.

Mr. W. N. Fashbaugh has been appointed superintendent of the leased wire service, a newly created office of the Western Union Telegraph Company, New York, coming to the metropolis from the Denver, Col., office where for ten years past he has filled the position of electrician.

Mr. Fashbaugh was born in Denver and obtained his first employment in the Western Union office at that place, and his rise has been rapid. Owing to his ability as an electrician, he was made chief operator of the Denver office in 1882, several years before he was old enough to cast his first vote. Poor health in 1888 compelled him to retire briefly from telegraph employment, but with renewed strength he again entered the service as chief operator at Helena, Mon., at a time when that office was doing the principal relay work for the Northwest. From thence he returned to Denver as electrician for the company as first stated.

For several years Mr. Fashbaugh has been considered one of the best electricians in the Rocky Mountain region and his advice has been frequently sought in complicated cases by the larger electrical companies doing business in that section.

Subscribe for TELEGRAPH AGE, \$1.50 a year.

Obituary.

Lyman E. Fitch, aged twenty years, receiving clerk in the Western Union Telegraph office, Los Angeles, Cal., died on May 23.

Ernest T. Barberie, a well-known telegraph engineer and a prominent New York telegraph operator from 1875 to 1890, died in the insane asylum, New York, on May 28. Mr. Barberie had the reputation in his day at the key of being the most expert cable operator, producing the plainest copy ever turned out by any cable telegrapher, men who are always selected from the standpoint of good penmanship.

Mrs. Josephine McLaughlin, wife of Charles McLaughlin, the head of the corporation of J. H. Bunnell and Company, 20 Park Place, New York, manufacturers and dealers of telegraphic and electrical supplies, died of paralysis at her home in Paterson, N. J., on June 4. Mrs. McLaughlin, who was Miss Josephine Reider, daughter of Joseph Reider the veteran watchmaker and jeweler of that city, was a woman of lovely character, generous and charitable, and had long been an indefatigable worker in the parish of St. Joseph's Church in all the societies of which she was a leading spirit. Her funeral, which was largely attended, was held at St. John's Church, Paterson, on June 7.

The Cable.

Mr. F. E. Fisher, of the traffic manager's office of the Commercial Cable Company, New York, has returned from London, Eng., where he visited his parents.

Mr. William M. O'Keefe, steamship agent of the Commercial Cable Company, New York, who was married two weeks ago, has returned from Niagara Falls, where he spent his honeymoon.

Mr. David Cuthbert, of England, who recently resigned from the Direct United States Cable Company for the purpose of taking charge of the British Pacific Cable station at Fanning Island, arrived in New York on the 8th inst., and proceeded to San Francisco the following day. He will sail from the latter place by a specially chartered steamer which will also carry a large quantity of supplies for the men at Fanning Island.

Wireless Telegraphy.

Wireless telegraphy, according to John Gordon Gray, who read a paper on the subject before the meeting of the Engineers' Club of Philadelphia, is not a new invention. Mr. Gray claims it was known to the world of science 100 years ago.

"It is now over a 100 years," said Mr. Gray, "since Salva, a Spanish physicist and the inventor of the electro-chemical telegraph, in a paper before the Academy of Science of Barcelona, said: 'If earthquakes be caused by electricity from one point charged positively to another

point charged negatively, one does not even want a cable to send across the sea a signal arranged beforehand.'

"In 1838," continued Mr. Gray, "Steinheil, of Munich, tried the experiment of utilizing two rails of a railway as telegraphic conductors, but was unable to obtain an insulation of the rails sufficiently good for the current to reach from one station to another. His experiments resulted in the introduction by him of the earth current. In 1842 Prof. Morse arranged for a demonstration of his telegraph by connecting Governor's Island, New York, with Castle Garden. He arranged his wires along the banks so as to cause the water itself to conduct the current across. This he accomplished in December of 1842, across the canal at Washington. In 1854 James B. Lindsey, of Scotland, patented a method of transmitting telegraphic messages by means of electricity or magnetism through and across water without wires.

"It is to be observed with every respect to Marconi, that while he made modern wireless telegraphy possible and practicable, he is not the inventor of wireless telegraphy. He cannot be credited with the invention of any of the instruments used in that system. Trowbridge, Gahan, Bell, Dolbear, Hughes, Lodge and Branley contributed their share. It is to the special merit of Marconi that he perceived, as no other man did, the possibilities of the discoveries and inventions of the men who preceded him."

Wireless telegraphy is now being utilized by the Gloucester, Mass., fishing fleet. Some of the enterprising fishing steamers are being installed with wireless telegraph apparatus and operators are being hired to operate the same in order that the captains may be kept informed while at sea regarding the condition of the fish market at Boston and other points. The owners of one of the fish steamers have already proved the system valuable during the present mackerel season. When the market was glutted with fish, word was sent to the fishing steamer 163 miles at sea, and the cargo of fish then aboard was immediately salted for future use.

The American steamer Philadelphia, recently acted as a relaying station in mid-ocean for the steamers Campania and Lucania of the Cunard Line, which were respectively 100 miles east and west of the American steamer. The operator on board of the Philadelphia relayed fully a dozen messages for the Cunard steamers, which, owing to the great distance which separated them, were not in wireless telegraph communication with each other.

A wireless telegraph system is about ready for operation connecting Los Angeles, Cal., with Avalon, which is located on Santa Catalina Island, off the coast about forty-five miles distant. Mr. Vail Stevenson will have charge of the island station.

The kindest thing in the kindest way.
Politeness is to do and say

Items.

Mr. Frank H. Lamb, formerly assistant superintendent has been promoted to be superintendent of the first district at San Francisco.

Mr. B. Pfund, manager of the New York Herald wireless telegraph station, at the South Shoal Lightship, Siascouset, (Nantucket Island), Mass., has resigned to accept a position with the Marconi Wireless Telegraph Company of America, at New York. He is succeeded by M. J. Smith.

The Western Union Telegraph Company, through its president, Col. R. C. Clowry, has ordered the formation of a new Division to be known as the Pacific, to go into effect July 1st. Mr. Frank Jaynes, formerly district superintendent at San Francisco, has been appointed general superintendent of this division, his headquarters remaining at San Francisco.

Mr. T. W. Goulding, formerly manager at Seattle, Wash., has been appointed superintendent of the second district headquarters at that point.

The Scripps-McRae Press Association.

The annual meeting of the stockholders of the Scripps-McRae Press Association took place in Cincinnati, O., a few days since. The officers elected at the meeting were: Milton A. McRae, president; Edward W. Scripps, chairman of the board; Robert F. Paine, vice-president and general manager; L. T. Atwood, treasurer; J. C. Harper, secretary.

The association now serves, in connection with the Publishers' Press Association, three hundred newspapers in the United States.

Pacific Cable Bill Dead.

The Corliss Pacific Cable Bill, which authorizes the United States Government to construct and lay a cable from the Pacific Coast to Manilla, via Honolulu, was defeated in the House of Representatives, on June 11.

Recent Telegraphic Patents.

A patent for a telegraph repeater has been granted to J. W. Gray, of Fowler, Ind.

A patent has been granted to B. A. Brooks, of New York, for an electrically printing typewriter.

A patent, No. 700,380, has been granted to Evan Shelby, of West Lafayette, Ind., for a telephone and telegraph system.

A patent, No. 700,911, has been granted to Edwin L. Grauel, of Carthage, N. Y., for a composite telegraphic and telephonic system.

A patent, No. 700,989, has been granted to Clarence A. Stimpson, of Philadelphia, Pa., for an automatic fuse switch for telegraph or other circuits.

A patent, No. 700,800, has been granted to Lawrence A. McCarthy, of Brooklyn, N. Y., for a multiplex telegraph circuit instrument.

A patent, No. 700,302, has been granted to W. M. Chapman, of Newton, Mass., and William Pestell, of Lynn, Mass., for a railway block signal system.

Those outside of the

Telegraphers' Mutual Benefit Association

(Insurance, \$500, \$1,000 or \$1,500)

are in no

MORE PERIL

than those who belong to it, but their families are. Established 35 years. Resources \$200,000, clear of all liabilities. Initiation fee \$2, and no other expense of any kind. Pamphlets and application blanks forwarded on request by any Agent, or by **M. J. O'LEARY, Sec'y, P. O. Box, 510, NEW YORK**

IMPORTANT TO YOU

J. S. TOWNSEND--The Telegraphers' Jeweler, 1654 Wabash Ave., Chicago, offers any article in his elegant stock at net wholesale prices. A rare opportunity. Any watches or jewelry advertised can be bought at a lower price from this well known firm.

J. S. TOWNSEND, 1654 Wabash Ave., Chicago.
Our 400-page catalogue sent on application.
Agents wanted. Established 1877.

The Modern Service of Commercial and Railway Telegraphy [8th edition, revised and enlarged,] by J. P. Abernethy. The theory and practice, including railway station and express service. Arranged in questions and answers. 425 pages, 46 illustrations. Price \$2.00, expressage prepaid. Address John B. Taltavall. The Telegraph Age, 25 Broadway, New York.

Please mention The Telegraph Age in communicating with advertisers.

Any electrical or telegraph book published for sale by Telegraph Age, 253 Broadway, New York.

SUNG WITH GREAT SUCCESS BY MAY CRAWFORD,

JUST A COUNTRY MAID.

SONG AND WALTZ CHORUS.

Composed and Published by

Ned.—FLARANT & HALL—Chester
25 East 14th Street, New York.

MAIL 30c. WRITE FOR SPECIAL DISCOUNT, 10 OR MORE.

**Typewriters of High Grade**

We Handle All the Leading STANDARD
MAKES of Various Grades

RENT—SELL—RE-BUILD

them and Ship them Anywhere in the
U. S. to Reliable People

BARGAIN PRICES & EASY TERMS to TELEGRAPHERS

Write Us Mentioning Telegraph Age

Telegraphers' Typewriter Company

O. T. ANDERSON, Manager

122 LA SALLE ST., SUITE 5

CHICAGO

WE CAN TRAIN

YOU FOR ANY POSITION IN ELECTRICAL ENGINEERING

IF you are dissatisfied with your present position, change it. Don't waste your time worrying about it. We can train you for something better. Mark **X** before the position you want in the coupon below, fill in the blanks, and send to us. We will explain how we can train you to earn a higher salary.

DO IT TODAY

International Correspondence Schools
BOX 853, SCRANTON, PA.

Please explain how I can qualify for the position marked **X** below.

- Telegraph Engineer
- Telephone Engineer
- Electrical Engineer
- Designer of Electric Machinery
- Erector of Electric Apparatus
- Manager of Electric Railway
- Manager of Electric Light Plant
- Superintendent of Electric Plant
- Fire Underwriters' Inspector
- Interior Wireman
- Foreman of Dynamo Room
- Foreman of Electrical Repair Shop
- Dynamo Tender
- Electrical Lineman
- Motorman

Occupation _____

Name _____

No. _____ Street _____

Town _____ State _____

THE EDISON PHONOPLEX SYSTEM OF TELEGRAPHY

INSURES CONSTANT COMMUNICATION.

It WORKS through all kinds of trouble and weather.

Are you using it? If not, write to its patrons and ascertain their opinion of it.

SOME USERS OF THE PHONOPLEX SYSTEM:

- Western Union Telegraph Co.
- Illinois Central R. R. Co.
- Boston & Maine Railroad.
- New York, New Haven & Hartford R. R. Co.
- Lehigh Valley R. R. Co.
- Central Railroad of New Jersey.
- Baltimore & Ohio R. R. Co.
- Baltimore & Ohio & Southwestern R. R. Co.
- Pennsylvania R. R. Co.
- Union Pacific R. R. Co.
- Kansas City, Fort Scott & Memphis R. R. Co.
- Kansas City, Council Bluffs & Omaha R.R. Co.
- Colorado Midland R. R. Co.
- Central of Georgia R. R. Co.
- Chicago & Grand Trunk Railway.
- Standard Oil Co.
- Tide Water Pipe Line.
- Acheson, Topeka & Santa Fe R. R. Co.
- Southern California Railway Division.
- Atlantic & Pacific Division.

Catalogue and Further Information upon Application. **THOMAS A. EDISON, Orange, N. J.**

"The Standard Work on Telegraphy."

AMERICAN TELEGRAPHY:

SYSTEMS, APPARATUS, OPERATION.

450 Diagrams, 575 Pages, 34 Chapters.

By **WILLIAM MAVER, Jr.**

Bound in Cloth, \$3.50
Sent, express charges prepaid, to any part of the world upon receipt of price.

J. B. TALTAVALL,
Telegraph Age,
253 Broadway, New York.

PRICES REDUCED FOR 60 DAYS.

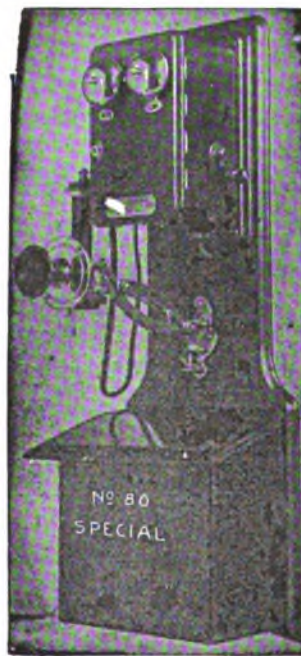
\$4.00 Vapor Bath Cabinet \$2.25 each
\$5.00 Quaker " " 3.50 each
\$10.00 " " 6.10 each
\$1.00 Face & Head Steam. Atch. 65c
Quality best. Guaranteed. \$2. Book Free with all "Quakers."
Write for our New Catalogue, special 60-Day offer. Don't miss it. Your last chance. New plans, new prices to agents, salesmen, managers. Wonderful sellers. Hustlers getting rich. Plenty territory. World M'fg Co., 97 World Bldg., Cincinnati, O.

The Telegraph Chronicle

is the only telegraph newspaper published in England. All who wish to know what is going on in the British Postal Telegraph Service and to keep abreast of the progress of technical improvements in telegraphic apparatus and methods, should subscribe to the

TELEGRAPH CHRONICLE

Published fortnightly at 129 Pepys Road, London, S. E. Subscription, post-free, Five Shillings per Annum. The TELEGRAPH CHRONICLE is the organ of the Postal Telegraph Clerks Association, the most powerful organization of telegraphers in the world.



TELEPHONES

For Long Lines
Short Lines
Private Lines
Exchange Lines
Toll Lines
and All Lines of Business.

All Standard Instruments are equipped with the celebrated "Milde" transmitter, which for talking and lasting qualities has no equal, and is considered by all users and experts to be the best transmitter on the market.

THE STANDARD INSTRUMENTS ARE THE BEST.

Standard Telephone & Electric Co.,

WRITE FOR PRICES.

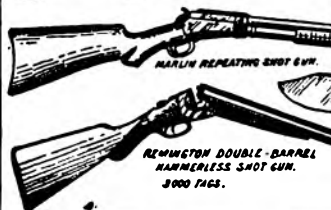
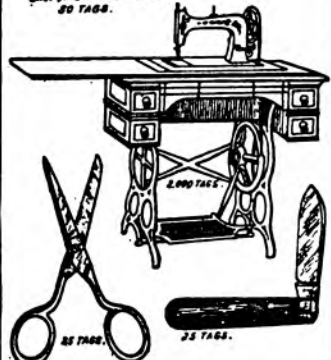
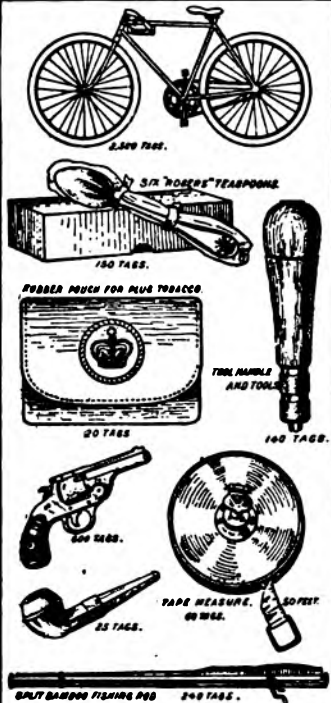
MADISON, WIS.

GOODS SHIPPED PROMPTLY.

TRADE MARK STICKERS FROM "FIVE BROTHERS' PIPE SMOKING" TOBACCO ARE OF EQUAL VALUE WITH TAGS IN SECURING PRESENTS.

FREE FOR TOBACCO TAGS

NOV. 30TH 1902.



FROM
"STAR"
"HORSE SHOE"
"SPEARHEAD"
"STANDARD NAVY"
"J.T."
"PIPER HEIDSIECK"
"BOOT JACK"
"DRUMMOND" NATURAL LEAF
"OLD PEACH & HONEY"
"NOBBY SPUN ROLL"
"JOLLY TAR"
"E. RICE GREENVILLE"
"GRANGER TWIST"

2 Granger Twist Tags being equal to one of others mentioned.
"GOOD LUCK," "CROSS BOW," "OLD HONESTY,"
"MASTER WORKMAN," "SICKLE,"
"BRANDYWINE," "PLANET," "NEPTUNE,"
"RAZOR," "TENNESSEE CROSS TIE,"
"OLE VARGINY."
Red Tin Tags from Tinsley's 16 oz. Natural Leaf and W. N. Tinsley's picture tin tags are also good for Presents.
TAGS MAY BE ASSORTED IN SECURING PRESENTS.

OUR NEW ILLUSTRATED
CATALOGUE OF PRESENTS
FOR 1902

Includes many articles not shown here. It contains the most attractive List of Presents ever offered for Tags, and will be sent by mail on receipt of postage—2 cents.

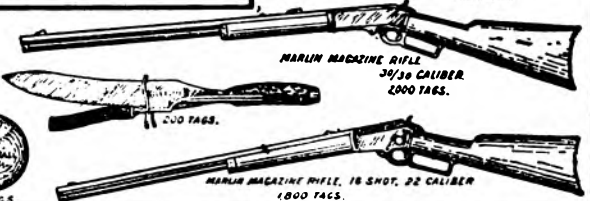
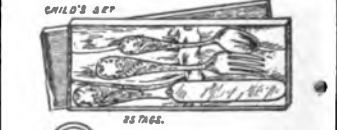
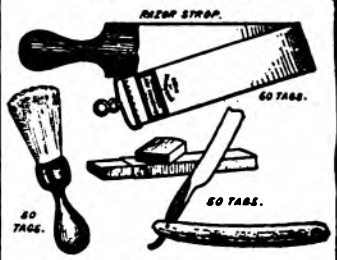
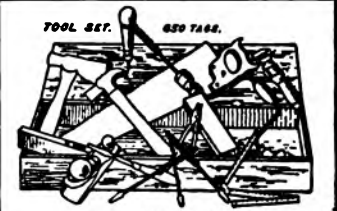
Our offer of Presents for Tags will expire Nov. 30th, 1902.
 CONTINENTAL TOBACCO CO.

Write your name and address *plainly* on outside of package containing tags, and forward tags by registered mail or express prepaid. Be sure to have your package securely wrapped, so that tags will not be lost in transit.

Send tags and requests for Presents (also requests for Catalogues) to

C. Hy. BROWN,
 4241 Folsom Ave.,
 ST. LOUIS, MO.

NOV. 30TH 1902.



Paper Bands from "Florodora" Cigars are of Equal Value With Tags in Securing Presents.



The Best Conductor of Comfort
PRESIDENT Suspenders

The genius has "President" on the buckles. Trimmings can not rust. New model now ready for men of heavy work; also small size for youths. Sold every where, 50c. or by mail, postpaid.
C. A. Edgarton Mfg. Co.,
Box 250, Shirley, Mass.

BLOOD POISON

Primary, Secondary or Tertiary permanently cured in 15 to 35 days. We eliminate all poison from the system, so that there can never be a return of the disease in any form. Parties can be treated at home as well as here (for the same price and under the same guarantee), but with those who prefer to come here, we will contract to cure them or refund all money and pay entire expenses of coming, railroad fare and hotel bills.

OUR MAGIC REMEDY has been many years in use and never failed to cure. Since the history of medicine a true specific for Blood Poison has been sought for but never found, until our Magic Cyphillene was discovered. This disease has always baffled the skill of the most eminent physicians. We solicit the most obstinate cases and challenge the world for a case we cannot cure.

\$500,000 CAPITAL

behind our unconditional guarantee. ABSOLUTE PROOFS sent sealed on application. 100-PAGE BOOK FREE.

HAVE YOU Sore Throat, Pimples, Copper Colored Spots, Aches, Old Sores, Ulcers in mouth, Hair Falling, write

COOK REMEDY CO.,
1632 Masonic Temple, Chicago, Ill.

COOK REMEDY CO.

Headquarters Established 1869

Rogers Manifold and Carbon Paper Co.,
MANUFACTURING STATIONERS,
No. 75 MAIDEN LANE, NEW YORK.

MANUFACTURERS OF SUPERIOR
CARBON PAPER
-----FOR-----

Stylus, Pencil, Pen and Typewriter Use.
All kinds, colors and sizes on thin, medium and heavy paper for all purposes. Large Stock. Large discount. Orders filled promptly.

ALSO MANUFACTURERS OF
TYPEWRITER RIBBONS
FOR ALL MACHINES

Superior quality, woven edge, Gold Tips. Send for price lists. Also for Manifold Papers and Books, Stylus, Duplicating Books, Oil Boards, Train Order Books, etc.

\$1250 TO \$3600 Per Year & Expenses.
FOR HUSTLERS—BOTH MEN & WOMEN



At home or traveling. Let us start you. Our Puritan Water Still—a wonderful invention. Great seller—big money maker. Enormous demand. Over 60,000 already sold. Everybody buys. It purifies the foulest water by distillation—removes every impurity. Furnishes absolutely pure, aerated, delicious drinking water. Boats Filters. Saves lives—prevents fevers, sickness, doctor bills—cures disease. Write for **NEW PLAN AND OFFER.**

HARRISON M'F'G CO., 12 Harrison Bldg., Cincinnati, O.

Please mention the Telegraph Age in communicating with advertisers.

MENNEN'S BORATED TALCUM



TRADE MARK
THIS FACE ON EVERY BOX

TOILET POWDER

Delightful After Bathing
A Luxury After Shaving

Beautifies and Preserves the Complexion

A positive relief for PRICKLY HEAT, CHAFING and SUNBURN, and all afflictions of the skin. For sore, blistered and sweaty feet it has no equal. Removes all odor of perspiration. Get MENNEN'S (the original), a little higher in price, perhaps, than worthless substitutes, but there is a reason for it. Sold every where, or mailed for 25c. Avoid harmful imitations. (Sample free.)
GERHARD MENNEN CO., Newark, N. J.

1898 EDITION

— OF —

Experimental Science

By GEO. M. HOPKINS.

20th Edition Revised and Enlarged.

914 Pages, 820 Illustrations.

Price \$4.00 in cloth; \$5.00 in half morocco, postpaid

This is a book full of interest and value for Teachers, Students, and others who desire to impart or obtain a practical knowledge of Physics. This splendid work gives young and old something worthy of thought. It has influenced thousands of men in the choice of a career. It will give anyone, young or old, information that will enable him to comprehend the great improvements of the day. It furnishes suggestions for hours of instructive recreation.



Address, **J. B. TALTAVALL,**
253 Broadway, **NEW YORK.**

EVERY GOOD OPERATOR

SHOULD HAVE A GOOD WORD COUNTER
THEY SAVE TIME AND TROUBLE

INVALUABLE BECAUSE THEY ARE RELIABLE

We Can Supply Either the Hudson or Alexander

They record the exact number of words written upon any writing machine. They are an ornament to any typewriter. Simple and durable. Cannot get out of order. Unlimited counting capacity. Can be instantly reset. Warranted accurate.

Mailed to any Address upon Receipt of \$3.00

In ordering state what machine you use, as attachments differ. Remit by express or post office money order to

JOHN B. TALTAVALL, Telegraph Age, 253 Broadway, N. Y.

Maver's American Telegraphy. A thorough Encyclopedia of the Telegraph. Over 600 pages, 450 illustrations. Price, \$3.50, express charges prepaid. Address J. B. Taltavall, 253 Broadway, New York.

Any electrical or telegraph book published for sale by
TELEGRAPH AGE,
253 Broadway, New York.

NOW IS THE TIME TO
SUBSCRIBE FOR :: :: ::



TELEGRAPH AGE

TERMS: \$1.50 PER YEAR.

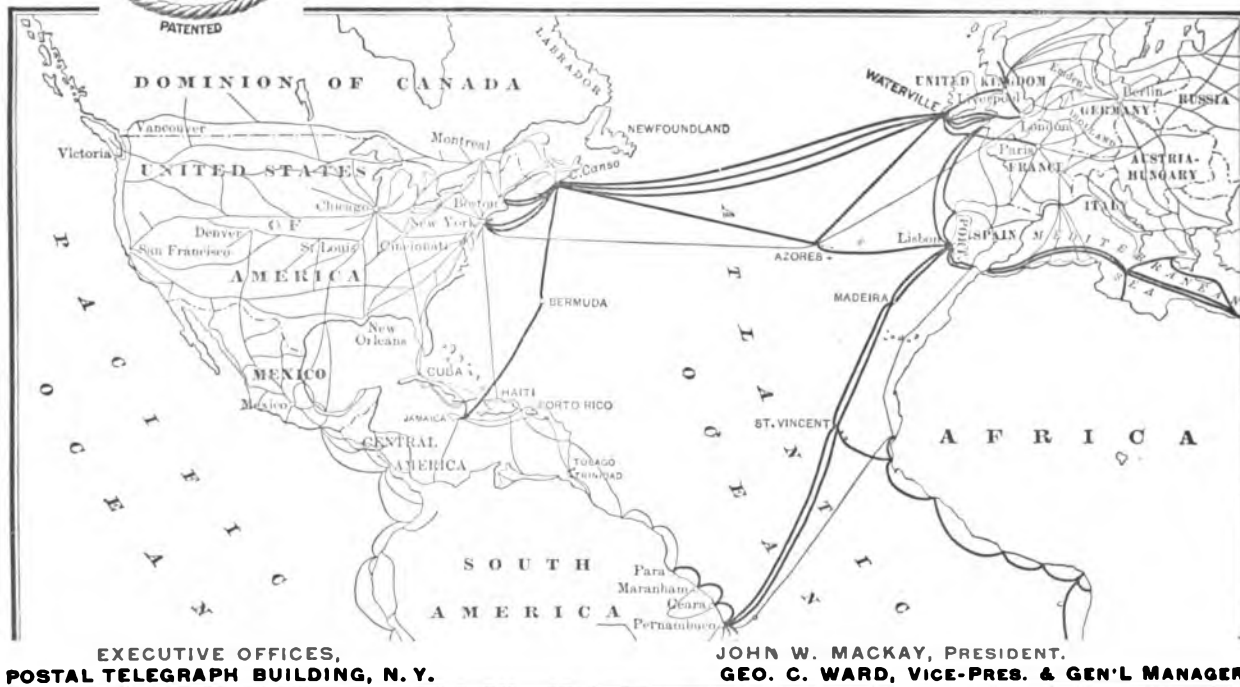
Address **J. B. TALTAVALL, Publisher, 253 BROADWAY, NEW YORK.**

Commercial Cable Co.



CONNECTIONS :

POSTAL TELEGRAPH-CABLE COMPANY,
CANADIAN PACIFIC RAILWAY TELEGRAPHS,
HALIFAX & BERMUDAS CABLE COMPANY,
DIRECT WEST INDIA CABLE COMPANY,
DEUTSCH-ATLANTISCHE TELEGRAPHEN-GESELLSCHAFT
(GERMAN ATLANTIC CABLE COMPANY).



POSTAL TELEGRAPH vs. WESTERN UNION.

A FIGHT FOR THE PACIFIC.

The Postal Telegraph is laying a submarine cable from California to the Philippines, 8,000 miles, at a cost of \$12,000,000, without subsidy or guarantee of any kind.

The Western Union is asking the Government to prevent the Postal from carrying out the work, and is also asking the Government to lay a Pacific cable at Government expense for the benefit of the Western Union.

The Postal Telegraph (Commercial Pacific Cable Company) has agreed in writing with the Government to sell its cable to the Government, at any time, at the cable's appraised valuation.

If the cable does not work, or is a bad venture, the Government need not take it. The Company takes all the risk, and gives the Government all the chances of gain.

The Company can lay this cable as cheaply and as well and as successfully as any cable company in the world. The Company believes it can make the cable succeed commercially, and is entirely willing that the Government shall have the right to take it, at its appraised valuation, whenever the Government wants it, for any reasons, political, governmental, or commercial.

Is it not best for the United States Government to let the Postal do the work and put in its money and take all the risk of the cable not working, all the risk of the cable not paying, laid by the best expert cable talent in the world, laid economically, laid skillfully, laid to secure the greatest efficiency, and then if the cable succeeds for the Government to take it at its appraised valuation?

Rates reduced from \$2.35 to \$1.00 per word.

.....THE.....

Western Union Telegraph Co.

Executive Offices, 195 BROADWAY, :: :: :: :: NEW YORK

ROBERT C. CLOWRY, President and General Manager.

The Largest Telegraphic System in Existence

900,000 MILES OF WIRE. 22,500 OFFICES.

TWO AMERICAN ATLANTIC CABLES

From New York City to Penzance, England, direct. Both cables are duplexed. Connects also with FOUR ANGLO-AMERICAN and one DIRECT UNITED STATES CABLES. Direct communication with GERMANY and FRANCE. DIRECT WIRES to GALVESTON, TEXAS, connecting at that place with the Cables of the MEXICAN, the CENTRAL and SOUTH AMERICAN TELEGRAPH COMPANIES for

ALL POINTS IN MEXICO AND CENTRAL AND SOUTH AMERICA

DIRECT WIRES and CABLES to HAVANA, CUBA, connecting at that place with the CUBA SUBMARINE and WEST INDIA AND PANAMA TELEGRAPH COMPANIES for

ALL POINTS IN THE WEST INDIES

Exclusive Connection with the Great North-Western Tel. Co. of Canada

OFFICES IN GREAT BRITAIN

252 Gresham House, Old Broad Street, :: London, E. C.

40 Mark Lane, London, E. C.
21 Royal Exchange, London, E. C.
109 Fenchurch Street, London, E. C.
Effingham House, Arundel Street, Strand, London, W. C.
2 Northumberland Avenue, London, W. C.
A 5, Exchange Buildings, Liverpool.
Backhall Chambers, Baldwin Street, Bristol.

29 Gordon Street, Glasgow.
10 Forster Square, Bradford.
1 Panmure Street, Dundee.
106 George Street, Edinburgh.
Exchange Buildings, Leith.
7 Royal Exchange, Bank Street, Manchester.
1 Side, Newcastle-on-Tyne.



GOOD BUSINESS IF YOU USE OUR
150 OHM MAIN LINE TELEGRAPH SETS

It can be quickly adjusted to meet any line conditions in any kind of weather. If you want to use it outside for Line Testing, etc. order a leather carrying case with shoulder strap.

FOOTE, PIERSON & Co.
 NEW YORK
 Telegraph Instruments our Specialty

Gold and Stock Life Insurance Association

— TWENTY-FIFTH YEAR —

For Telegraphers and Others in Electrical Service.

INITIATION FEE, \$1.00; DUES, 50 Cents per Month; INSURANCE, \$500.00, in payments of \$50.00 per Month for Ten Consecutive Months.

WM. J. DEALY, Secretary, 195 BROADWAY, NEW YORK.

Received Only Medals Awarded World's Fair, Chicago, 1893.

COVERING INSULATED WIRES AND CABLES

FOR
 Aerial, Underground, - - -
 Submarine and Interior Use.



TRADE MARK.

FOR
 Telephone, Telegraph, Power and Lighting.

W. R. BRIXEY,
 MANUFACTURER.

203 BROADWAY, NEW YORK.

CALIFORNIA ELECTRIC WORKS,
 San Francisco, Cal.

KERITE TAPE.

Catalogues, Samples and Prices on Application.



Telegraph Operators
 will find that the

**NUMBER FOUR YOST
 LATEST MODEL - -**

contains many improvements
 that are of special advantage
 in their work.

Yost Writing Machine Co.,

No. 316 Broadway, New York.
 No. 50 Holborn Viaduct, London.

**THE WESTON STANDARD
 VOLTMETERS AND AMMETERS.**



The Weston Standard Mill-Ammeters and Ammeters are infinitely superior to galvanometers for tests of current strength on lines and for tests of Relays, Sounders and other telegraphic Apparatus. They are direct-reading, dead-beat, and are practically uninfluenced by the earth's field. No constants are required, and with careful use there is no necessity for recalibration. The Weston Standard Voltmeters are the very best practical instruments obtainable for determining the electro-motive force of single cells, or series of cells, or for ascertaining the voltage on lines. By the proper use of these instruments all tests of resistance, current, strength and electro-motive force required in telegraphic practice can be made with great ease and accuracy. Correspondence solicited.

WESTON ELECTRICAL INSTRUMENT COMPANY,
 WAVERLY PARK, NEWARK, N. J.

BERLIN: European Weston Electrical Instrument Co., Ritterstrasse No. 88.
 LONDON: Elliott Bros., No. 101 St. Martin's Lane.



**This Ad. is Worth
 \$1.00 to You**
 If you mention this paper.

"Operators, Please Show to Your Linemen."
 If you will send a Postal Money Order for \$2.00 we will send you a pair of Donnelly's Steel Climbers and GIVE YOU a \$1.00 Set of Straps with Pads.

Each Spur is Oil Tempered by the Wallace Barnes Company.

Testimonial of the Grand Treasurer of the International Brotherhood of Electrical Workers
 "I have always found the Donnelly Climbers satisfactory. I have used them and can recommend as second to none."
 F. J. SHEEHAN, New Britain, Conn.

J. J. REIDY & CO.,

311-319 East Street, New Haven, Conn.