

complete model

A. Jackson

# THE ELECTRIC AGE.

DEVOTED TO TELEGRAPHY, TELEPHONY, ELECTRIC LIGHTING AND ALL PHASES OF ELECTRICAL DEVELOPMENT.

VOL. VII.—

NEW YORK, JUNE 1, 1889.

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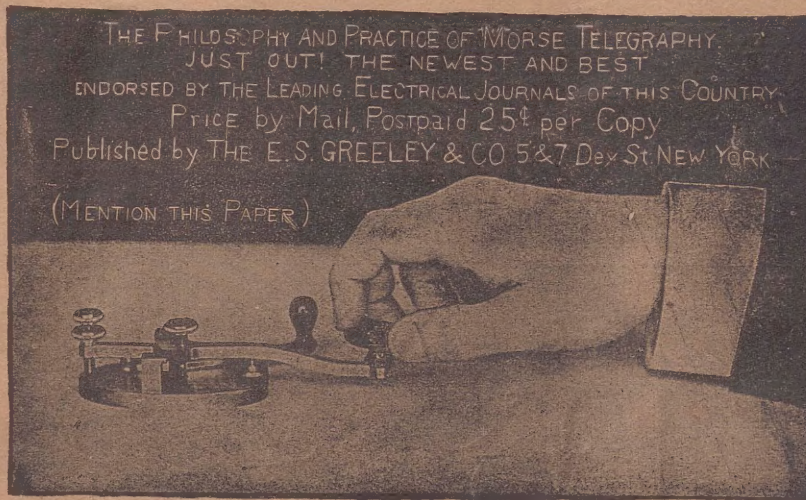
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"A rational and practical guide for the young telegrapher, intended to make him acquainted early in his career with a few underlying facts and laws that usually, without specific study, only come to his knowledge after years of service and practical observation."—*The Electrical World*, March 24, 1888.  
The truth (referring to the true position of the telegrapher's hand in the act of "sending") exposed by a lightning wink of the instantaneous camera, and permanently fixed for our deliberate inspection by the science of photography, dawns upon the craft intellect accompanied with something of the amazement that startled the artistic world when the elaborate anatomical studies by R. a Bonheur of the horse in the act of running were delivered over to universal ridicule by the subtleties of the same agent, instantaneous photography.—*The Electrical Review*, March 24, 1888.

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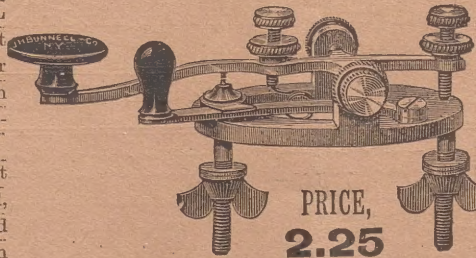
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20,000 CALIGRAPHS ARE IN DAILY USE.

THE COMMERCIAL GAZETTE.

C. G. Muller, Agent Caligraph.  
Cincinnati, O.

Cincinnati, October 5th, 1885.

Sir:—About three months since, I commenced to use the Caligraph with a view of receiving special dispatches from the wires, instead of by the old method by the pen. In about three weeks I was able, by diligent practice, to write from thirty-five to forty words per minute. Since then I have been using the machine with success, receiving from five to six thousand words per night upon it. We have found the machine of such value in the work as to be able to receive the dispatches by code, or abbreviation, thus increasing this capacity of the wire, though the matter is written out in full upon the Caligraph. We make an average speed of fifty words per minute by this method, and expect to do still better work with it.

The machine is a No. 2 and must be a marvel of durability, as it has never been out of order under this continuous and heavy strain, and is always ready for use.

Very truly yours, Signed; Frank B. Ross, Opr., Commercial Gazette.  
C. G. Muller, Esq., Agent Caligraph, Cincinnati, O. October 5th, 1885.

Dear Sir:—I cheerfully certify to the correctness of the above statement of our operator.  
Signed; Chas. E. Thorp, Telegraph Editor, C. G.

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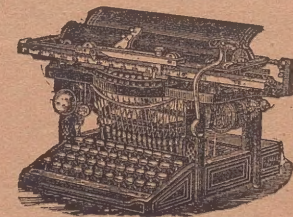
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# THE ELECTRIC AGE.

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NEW YORK, JUNE 1, 1889.

Vancouver hopes soon to have the telephone and electric railway.

Sweden and Norway are said to lead in progress made in telephone communication.

Powerful interrupted voltaic currents have recently been used in surgery to arrest the growth of cancer.

Experience shows that it does not pay to use rails for electric roads weighing less than fifty pounds per yard.

Electric light equivalent in illuminating power to 1,700,000 candles will be used in lighting the Paris exhibition.

The saloon of Buckingham palace, famous for the three superb crystal chandeliers which it contains, is now lighted by electricity.

The storage system of electricity, in spite of its various conversions of energy, has a superiority of at least 25 per cent. over cables.

The capital of Arragon in Spain is shortly to have a central station which will be more than a mile from the town; power to be supplied from turbines.

All Russian ships of war are to be lighted exclusively by electricity, and by January next the whole of the Russian fleet will be lighted by that means.

The electric light let down in the fish nets used between the Isle of Man and Anglesey attracts the crustacea and other creatures of the deep in large numbers.

A bill has been reported to the legislature in Massachusetts which is to prevent a system of overhead wires for electric roads in cities of 60,000 inhabitants.

It is claimed that there is no apparatus for the transmission of energy that compares in simplicity with the dynamo-electric machine and the electric motor.

A Portland, Ore., man examined an electric motor recently and said it worked all right, but that the electricity smelled dreadfully. The motor had just been varnished.

The tallest light in New York city, since the Madison and Union Square masts were done away with and the Hell Gate tower was torn down, is the electric light on top of the rocky eminence in Mount Morris Park. It can be seen from all over the upper part of the city.

The Westinghouse alternating electric current is said to have killed twenty persons. This is shocking mortality.

The American display in Machinery Hall of the Paris Exposition is especially strong in electrical inventions, Edison and Bell making wonderful exhibits.

A great difference between the practice in this country and abroad is in the speed of the dynamos. Here very high speeds are used; abroad, low speeds are aimed at.

Electricians working for the Edison Company at Gilbert's mines in Bechtelville, Berks county, have invented a wire fishing-rod with an electric bell which will ring for every nibble.

In the new types of resistance and switches introduced by M. Deprez for high tension currents he uses pure water as the connection. There is no sparking, as the metals do not touch.

Thirty-four per cent of horse railroad companies have decided on using electricity in some form—conduit, storage or overhead—and of this number about one-third are for the overhead system.

Secrecy in telephonic communication is said to be secured by the new method of dividing the transmitting current so that one portion may be sent over one line and the remainder over another line.

A blunder by a telegraph operator caused a collision at Glen Mary, Tenn., between a freight and passenger train on the Cincinnati Southern Road. A fireman was killed and four other employes wounded.

Abroad they have also reached the conclusion that the constant and unavoidable accumulation of gases and the attending explosions are the most serious questions in connection with placing wires under ground.

The tramway between the Quai d'Orsay and the Champs de Mars is to be used during the Paris exposition for the exhibition of various mechanical systems of traction, among which the electric motor will find a place.

From the present knowledge of the subject, should it be decided to run a telephone cable under the ocean, it has been calculated that the copper core would have the diameter of a flour barrel and the necessary insulation would be as large around as a hogshead.

Mr. Edison told a Pittsburg reporter the other day that all the electric supply companies had made an agreement not to sell any dynamos to be used for the purpose of shocking the life out of condemned murderers in New York State. Nevertheless, the State authorities experienced no difficulty recently in securing three big Westinghouse machines.

A correspondent says: "Like everybody else who uses the cable much, I have a signature registered—which saves five words—my name and address. But the officials have the habit of forgetting such signatures. Only last week they returned a cablegram as 'not known,' when the name was staring them in the face from their books. I did not even know that I had been addressed by cable until, eight days afterward, I received a letter asking an explanation of the blunder."

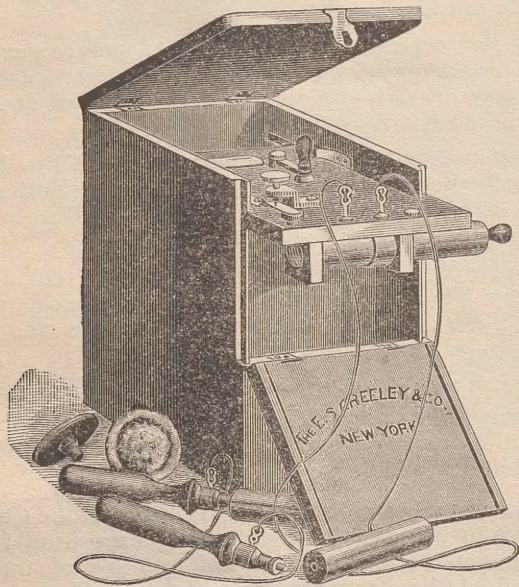
In an extra issue of the Bangkok Times, April 6, is an interesting official "notification," from which an instructive lesson may be drawn. The Telegraphic Department of his Siamese Majesty's Government appears to have been doing a losing business. It has been receiving pay for telegraphic service in Siamese silver currency at the face value and making settlements with the telegraph companies at the real or gold value. As a consequence the Siamese telegraphic tariff has been summarily revised.

### IMPROVED LECLANCHE FARADIC MEDICAL BATTERY.

Mr. T. J. Smith, of The E. S. Greeley & Co., 5 and 7 Dey street, New York, is the inventor of the improved Leclanche Faradic Medical Battery we herewith illustrate. All the faults of the old form batteries have been avoided in the construction of the Improved Leclanche Faradic.

The improved Leclanche Faradic medical battery consists of a polished hard wood case, opening at the top and at the front. It is provided with a metallic handle, which, together with all the metallic parts of the machine itself, are nickel-plated. The outside measurements of the case are  $9\frac{1}{4}$  inches high,  $5\frac{1}{2}$  inches wide and  $7\frac{1}{2}$  inches long.

In the case is a commodious electrode pocket, contain-



ing a pair of their standard interchangeable electrode handles, a pair of nickel-plated hand electrodes and one sponge electrode, which accompany the apparatus.

The battery cell is enclosed in an inner compartment, which, while it is closed up and completely separates the cell from the rest of the apparatus, is arranged with a sliding cover to give convenient access to it whenever required.

A feature of special importance is the fact that the coil and all the working parts are mounted upon a polished ebonized slide, with automatic electrical contacts beneath its surface. To start the machine, it is only necessary to pull out this slide a short distance and then the mere fact of closing up the battery, after using it, cuts out the battery cell.

The Louisville telegraph operators, who, for years, have used in betting on races private information obtained from "tips" handled by them in course of their duties, got a heavy dump last week. Anderson M. Waddill, the well-known sport, sent a message to Nashville, asking a friend to put \$500 on one horse and all the winnings on another in a succeeding race. This was intended to catch the boys. The first horse, as Waddill expected, won. By that time the word had got out and the operator crowd plunged heavily on the second horse, which ran unplaced.

The Shaver Telephone Company has been awarded contracts to build acoustic line telephone exchanges at both Georgetown, S. C., and Asbury Park, N. J.

The Western Union Company was recently compelled to remove a line of poles in Milwaukee, as they seriously marred the appearance of one of the streets.

### ANNUAL MEETING OF ELECTRICAL ENGINEERS.

The American Institute of Electrical Engineers concluded its annual meeting, May 21, by listening to a paper by Prof. H. A. Howland, of Johns-Hopkins University, on "Modern Views in Respect to the Nature of Electric Currents," and it was pronounced by the experts to be one of the ablest treatises on the subject to which the present generation has had an opportunity of listening. The paper did much to remove the cloud of mystery surrounding electric currents, and among other things proved that the world is all wrong in its theories as to the best mode of protection from lightning. The Professor compared electricity and light and defined the similarities and differences and illustrated his theories by experiments.

During the session of the association papers on technical subjects were read by Dr. Louis Duncan, F. B. Crocker, W. H. Preece, Alexander S. Brown, Prof. Elihu Thomson, H. Nakano, J. H. Ryan and Prof. Edward L. Nichols.

The following officers were elected for the ensuing year: President, Prof. Elihu Thomson, of Lynn, Mass.; Vice-Presidents, Francis R. Upton, T. Commerford Martin, Edward Weston, Prof. Edward L. Nichols, Major C. E. Michaelis, Dr. Louis Duncan; Managers, Dr. Schuyler S. Wheeler, Joseph Wetzler, Francis B. Crocker, John W. Howell, Henry Van Hovenbergh, Prof. William E. Geyer, George B. Prescott, jr., Thomas D. Lockwood, William Mayer, jr., Charles Cuttriss, H. C. Townsend, F. Benedict Herzog; Secretary, Ralph W. Pope; Treasurer, Geo. M. Phelps.

Electrical Rules, Tables, Tests and Formulæ. By Andrew Jamieson, C.E., F.R.S.E. Fully illustrated. 12mo. cloth. Price, 75 cents; The Industrial Publication Company, 9 Barclay st., New York. This is the most compact and thorough work in the market for the practical electrician. It contains minute directions for all calculations, tests, etc., with clear engravings of the apparatus employed. The following list of contents will give an idea of its scope: Formulæ of the absolute Units, Practical, Electrical, Mechanical, Heat and Light Units.—Electrochemical Equivalents, Electrolysis, Heat and Energy of Combustion.—Practical Methods of Electrical Measurements.—Electric Conductors, Copper, etc.—Insulators, Guttapercha, etc.—Batteries.—Submarine Cables.—Aerial Land Lines.—Electric Lighting and Transmission of Power.

The wife of a telegraph operator having treated her husband to an interminable scene of reproaches and complaints, during which he had remained absolutely quiet, asks him, infuriated at his silence: "Well, sir, what have you to say in answer?" And he, after a moment's reflection: "Just this—that if I had had to telegraph all that to Bordeaux the message would have cost you 426 francs and 60 centimes.—*Paris Figaro*."

A physician warns people against examining the naked arc of the electric light with the naked eye lest they be attacked by blepharospasm, central scotomata or chromatopsia, etc., accompanied by intense photophobia, lacrymation and conjunctival congestion. A complaint of that kind is certainly to be avoided.

The Connecticut Assembly has reported a bill taxing telegraph companies doing business in the State 25 cents for each mile of wire owned, operated, or leased within the State.

If the telegraph poles keep coming down until the last one is felled, New York will look like a different city six months from now.

The Edison Electric Light Co. is suing the Westinghouse Co., of Pittsburgh, Pa., for infringement of patent.

## SOMETHING NEW—THE BROOKLYN BATTERY.

This new and powerful open-circuit battery, advertised in another page, contains new compounds never before used or combined in any open-circuit battery. It is very energetic, and starts with a strong current inside of one minute when filled with nothing but water in porous cup and outside glass jar. This battery has been kept on a closed circuit for weeks without destroying the electric effect of the combined chemicals in the battery. It has run *seven weeks day and night* on a vibrating electric bell with only  $3\frac{1}{2}$  ohms resistance, working over *one thousand hours* without stopping. On several occasions they have replaced two 6x8 sulphate of copper cells with excellent results on open-circuit work. The steady electro-motive force test after one month's use was 1.33 volts and over .50 ampere, each cell being measured by an expert electrician. The zinc coil in this instance being only  $\frac{5}{16} \times \frac{3}{8} \times 6\frac{1}{2}$  long. But with a circular zinc, and cell otherwise the same, the electro-motive force was increased to 1.377 volts and .65 ampere.

We have had them on a closed circuit for two months at our laboratory on a resistance of 25 ohms, and the same two cells are still in use on bell work, which was eight months ago. There are several thousands on the market giving entire satisfaction. For burglar alarm, electric elevator, hotel annunciators and gas lighting they are unequaled. For clock work they are of great value. For gas lighting they have been in use for a year and a half. One trial will convince the most skeptical. C. UPHAM ELY, 35 Dey street, New York.

The Heisler Electric Light Co. reports plenty of business and excellent prospects. Their Belton, Tex., station has just been started and is giving perfect satisfaction. Plants at Port Arthur and London, Ontario, and Montrose, Colorado, are being started this week. The installation of the Heisler plant of 1,000 30-candle power lights at the Paris Exposition is now being completed. Mr. Heisler expects to leave for Paris in a few days to give this exhibit his personal attention. Among contracts recently received is one for lighting the art department of the St. Louis exposition, the lighting of this department by the Heisler Company last fall having proven highly satisfactory. In view of the fact that the Exposition Association has an incandescent plant of its own, and has also experimented considerably with arc lighting, this order is particularly gratifying.

The Corsicana, Tex., division of the O. R. T. has elected A. J. Hickman, chief telegrapher; P. Conners, secretary and treasurer; J. L. Bain, assistant chief telegrapher; J. R. Hicks, senior telegrapher; C. W. Casnahan, junior telegrapher; T. J. Roots, inside sentinel; W. H. Singletary, outside sentinel. Messrs. Hickman and Conners were elected delegates to the session of the grand division which meets in Cleveland, Ohio, June 19th.

It has cost the City of New York over \$10,000 to remove the poles from the streets, and father Gotham is now busy devising some means of coaxing the companies to reimburse the city for the outlay.

The simplest way to moderate the glare of the light of incandescent lamps, without losing too much of its lighting power, is to give the globes a thin coating of collodion.

A company to tan leather by electricity has been organized. The time consumed in the process is but four days, against five months by the old methods.

Jay Gould says he made every cent of his money by hard work.

Transmitting kisses by the phonograph is something new.

## PIECES OF ALL THE CABLES.

A UNIQUE PRESENT TO JOHN W. MACKAY FROM AN ENGLISH COMPANY.

John W. Mackay has been presented by the Silvertown Telegraph Company, England, with a handsome glass case containing samples of all the telegraph cables in the world, nicely tipped with German silver bands. In size they range from that of a lead pencil to that of a strong man's arm.

The oldest cable in operation is the Dover and Calais, laid in 1850, covered with gutta percha, hemp and iron armor. Then came the Lowestoft and Zanvoort, laid in 1858. One of the neatest samples is that from the Spanish National, after which comes the West African and the Dublin and Hollyhead. The deep water cables are much smaller and lighter than those of the coast lines. One of the heaviest cables in the exhibit is the Canadian, made so as to resist the icebergs.

The Postal Co., of Baltimore, moved into its handsome new building on Saturday, May 18th, and Mr. Connor, the chief operator, certainly made a wise move. He not only has looked out for the Company's interest in Baltimore, but has also given the men a beautiful and comfortable home to work in. The force greatly appreciates his work. The receiving department, on the first floor, is in charge of George J. Fischer, cashier; Wm. C. Walmsley, clerk, with four district circuits. The office is handsomely frescoed, and the signs elaborate. On the door is a grand globe about three feet in circumference, showing the Company's cables across the ocean in blue and gold. A pneumatic tube runs from the receiving department to the operating room on the fourth floor, put in by the Meteor Despatch Co., and it works finely. The battery room is well situated and contains about 2,000 cells, in charge of chief lineman, I. N. Smith, with J. S. Smith, assistant. J. Farley looks out for the districts with Chas. Joyce, batteryman. The operating room is 56 x 38. It is a fine, large, spacious room, handsomely painted. The switch accommodates 100 wires. There are 32 desks with two quads, eight duplexes, two sets of repeaters, sixteen single Morse sets, six city lines. The operators are delighted with their new quarters. The office is well ventilated, and contains the modern accommodations in the shape of wash rooms, etc., also elevator to convey the men to the operating room. We predict a bright future for the Company in Baltimore under the guidance of F. J. Connor. The new branch offices will be opened this week.

At Birmingham, Ala., last week, the pool rooms lost heavily on races where they thought they had a sure thing. Wire-tapping was suspected, and Manager Williams of the Western Union Telegraph office was asked to investigate the matter. He put his linemen at work and they discovered how the races had been beaten. The Western Union office is on the first floor of a four-story building. There is a basement under the office and through this all wires enter the room above. Some one had attached a fine wire to the Western Union wires in the basement, run it through the outer wall, thence to the roof, then down a chimney to a vacant room on the fourth floor of the building. In this room the wire was attached to an instrument, and the circuit was so arranged that the reports of the races intended for the pool rooms could be doctored.

A commission has been appointed in Belgium to inquire into the employment of electricity in mines, and particularly as to the use of portable electric lamps.

The Western Union in Buffalo, N. Y., is burying a portion of its wires.

## DEATH ALWAYS AT HAND.

ELECTRIC LIGHT LINEMEN MUST GUARD THEIR LIVES WITH GREAT CARE.

"A lineman carries his life in his pocket, and it may slip through a very tiny hole," says an employe. "A cool head and a steady nerve, with a smattering of electrical knowledge, are the prerequisites of a first-class lineman. Unless a man be apt to judge and quick to remember he will be liable to serious blunders in his manipulation of the wires. Where there are dozens of them attached to one pole it is necessary that he should be able readily to distinguish each from the others, and have no doubt as to whether it be quick or dead. Contact with the earth through means of a conductor should be shunned like death itself. Moisture in the atmosphere or on the wire or the pole greatly accentuates the danger that always prevails. What is ordinarily a non-conductor becomes imbued with conducting properties when it is wet, and this is why many linemen dread to mount the poles after or during a heavy storm.

"If a man exercises due diligence and a certain amount of what is termed 'gumption' he may pursue his business for years without receiving any worse injury than a burn or two. But even the coolest-headed man is liable to a blunder occasionally, and there is no other department of life where a blunder of microscopic proportions effects such disastrous results. The contact of a dangling watch charm or a little finger nail with the wrong wire at the wrong time may cost a man his life. So long, however, as he sits astride the cross-piece of a wooden telegraph pole and confines his attention solely to a wire that has no communication with the earth he is as safe as if he were in his mother's arms."

The Paris correspondent of the *New York Tribune* says: "Nothing is just which is unjust or injurious to France; nothing is unjust which is for the advantage of France. In that slightly epigrammatic form the whole foreign policy of the country, since it has been a country, may be summed up. In the administrative world, the foreigner does not exist; or, if he exists, it must be for the benefit of the native. I will give one strong illustration of my meaning. In cabling from Paris to New York on various occasions, I have found that the service is never so accurate as between London and New York. I wrote to the Paris director of the Commercial Company. He promised that every care should be taken. When I came to Paris I saw him, and I there learned the secret of the whole difficulty. The operators who send all cable messages from Paris to Havre are Frenchmen. "But," I said, "you have your own wires from Paris to Havre. Why don't you employ English or Americans?" "We cannot," was his answer; "we are not allowed to. You are aware that the telegraph is a Government monopoly. They will not employ for any purpose any foreigner whomsoever." And he went on to say that even in their own office at Havre they had only been allowed to select their own operator after much pressure and difficulty. Between Paris and New York there is of course a very large cable business in English—very little in French. But every message which leaves Paris, whether by the Commercial or any other line, whether for America or England, or anywhere else, has to go by French hands. The French operator is supposed to know English, but the English which he knows is sometimes extremely peculiar. The service suffers; the rest of the world suffers, but France profits, and that is enough."

C. W. Zecher, manager of the B. & O. offices in Philadelphia Oil Exchange, has been made manager of all the B. & O. offices in the Quaker City.

THE POSTAL COMPANY.—The Postal Telegraph Company has issued the following: "As the arrangements recently made between the telegraph companies have been greatly misrepresented by newspaper publications and otherwise, and we find that both our patrons and some of our own employés have become apprehensive and disturbed by rumors of 'consolidation,' it is deemed proper to say officially, to all concerned, that the legitimate and active competition with the Western Union Telegraph Company and the 'pooled' Cable companies, as established by the 'Commercial' and ourselves, is in no way diminished.

"The recent action of the companies amounts simply to this—the Western Union Company has recognized the impracticability of destroying competition, and we have agreed with them upon a schedule of rates, materially reduced in many cases from those heretofore charged by them; that no reductions therefrom shall be made, between competing points, except by mutual consent, and that the pernicious and unfair practice of paying rebates, and offering other irregular inducements in order to control business, shall be absolutely done away with."

The friends of R. J. Gray, who is connected with this paper, will be pleased to learn that his little daughter who fell from the top of the new building in course of erection near his residence in Tremont, and severely fractured her skull, is rapidly improving under the hands of Dr. William E. Woodend, whose untiring efforts and great professional skill has fanned the small spark of life that remained in her after the terrible fall into a flame and is now out of all danger. Mr. Gray's friends will all unite in extending their thanks to Dr. Woodend.

F. W. Hirst died at Echo, Utah, April 18. Chas. Lemaul Le Baron died at Pensacola, Fla., May 8, 1889. He was for several years agent of the T. M. B. A. at that point.

John Daveron died in New York, May 12.

Martin Dunn, head-waiter of the Western Union lunch room, gave the clerks and waiters of that department and quite a number of the operators a very pleasant and enjoyable time at his residence on May 12.

Mrs. Joseph H. Bellows presented her husband, the genial error clerk of the Central Cable office, with a bouncing baby boy on Monday 22d. This is the second edition, and Joe is correspondingly proud.

George P. Reilly, formerly of the Albany, N. Y., force, attempted to commit suicide in that city, April 21, by shooting himself. The wound inflicted is not a dangerous one.

Mr. Geo. M. Myers, of the Home Telegraph Co., Kansas City, Mo., accompanied by his wife sailed for Europe on the steamer City of New York, May 30.

Electric lights let down among the fish nets used about the Isle of Man are very successful in attracting large numbers of fish.

An electric car run by the Gibson storage system at New Orleans, on the various roads, has met with great success.

Jay Gould has settled down at Lyndhurst for the summer. He has no private wire thence to Wall street, either.

The Halifax and Bermuda cable has been sanctioned by Parliament and will be laid within the next six months.

Mr. T. D. Lockwood, of the Bell Telephone Co., Boston, an ex-telegrapher, will sail for Europe in a few days.

W. R. Ryder, a St. Louis lineman, fell from a 40-foot pole May 7 and was killed.

Ocean telephony is expected to be done successfully at no distant day.

OFF FOR THE PARIS EXPOSITION.—Captain Willard L. Candee, of aerial telegraph and telephone wire fame, Treasurer of the Okonite Company, New York, sailed Saturday, May 11th, on the La Gascogne, bound for Harve. Like many others aboard, his objective point is Paris, where he will represent the Okonite Company at the Exposition. Numerous friends and a number of the members of Brooklyn's crack regiment (23d) in which Mr. Candee holds a captaincy, and a delegation from the Electric Club, were on hand to bid him *bon voyage*. We noticed on board, among other liberal remembrances, a very handsome floral piece representing the well-known Okonite trademark made up of carnations on a bed of yellow roses, which was sent by the Captain's co-laborers in his office. It attracted great attention. Captain Candee is probably one of the most active business men in New York and is justly entitled to the rest that this trans-continental trip will give him; he will remain abroad about two months, and, no doubt, come back greatly improved in general health and laden with new ideas, that will undoubtedly be turned to advantage of his company.

Mr. C. J. Kintner has associated himself with Dr. Leonard Paget, of New York, under the firm name of Paget & Kintner, for the purpose of acting as chemical, mechanical and electrical experts, and electrical engineers. Dr. Paget is well known both here and in Europe, as an electrician and chemist, and was for several years assistant professor of applied electricity in Kings College, England, and associated with Professor Sir Charles Wheatstone. He was also consulting engineer of the Anglo-American Brush Co., and Messrs. Siemens Bros., of London. He is the inventor of the Macraeon storage battery. Messrs. Paget & Kintner purpose acting as electrical and chemical experts in both the Patent Office and courts, and in the rendering of opinions upon all matters of such nature for investors or others. Their office will be at 45 Broadway, where Mr. Kintner has been located for some time.

Mr. Robt. J. Horwood, of Cleburne, Tex., was married April 20, to Miss Leona Prettyman. Mr. Horwood is a well-known member of the telegraph profession. The bride is the second daughter of Jacob Prettyman, Esq., of Havana, Ills. The groom has been employed at Cleburne, as chief operator, for the Santa Fé Railway for the past two years, and no one has stood higher in the estimation of the general public and the Railway Co. We wish the happy couple a safe and happy voyage over life's troubled waves.

John M. Hodges is a man who has found excitement enough at Bergen Junction to justify him in remaining there for the past twenty-five years in the employ of the Erie Company. He is a good, clever fellow, and a rattling operator, and at present is despatching trains on the Weehawken branch.

Mr. J. W. Hayes, for the past two years assistant superintendent and manager of the Western Union Telegraph Co., at Portland, Ore., has resigned to accept the district superintendency of the Postal Pacific for Oregon and Washington, to take effect June 1.

Mr. Habirshaw, of the India Rubber and Gutta Percha Insulating Co., has issued a handy pamphlet of useful tables of relative dimensions of pure copper wire at 60° Fahr., which is pronounced an excellent book.

Mr. S. J. Pryor, of New York, has left for Liverpool, Eng. Before his return, next September, he intends to visit France and Spain as well as the British Isles.

Organizer Blackmond, of the O. R. T., is doing good work among the railroad telegraphers of South Jersey.

Mr. J. R. Tomes, of Boston, has gone to New Orleans, where he is with the Standard Oil Co.

COURSE OF ELECTRICAL ENGINEERING AT COLUMBIA COLLEGE.—For a long time a course of electrical engineering at Columbia College has been thought and talked of, but it is only recently that the necessary plans were so far matured as to enable the college to announce the actual establishment of the course. Mr. Francis B. Crocker and Mr. Michael Pupin have been appointed respectively "Instructor" and "Assistant-Instructor," and Mr. Crocker has taken charge of this new and important department.

In the development of the electric motor, as is well known, Mr. Crocker has done yeoman's service, and his contributions to electrical science have been frequent and full of interest. He is an active member of the American Institute of Electrical Engineers, and also of the New York Electrical Society, of which he is president.

Mr. Pupin has a brilliant reputation as a mathematician, and the college is fortunate to have secured two such eligible and capable men for the appointments.

In commenting on the giant strides which electricity is now making, Prof. Elisha Gray establishes the fact that a greater advance has been made in the last twenty years than in all the 6,000 historic years preceding. More is discovered in one day now than in a thousand years of the middle ages. Electricity now carries our messages, drives our engines, rings our door bell, scares the burglar and supplements, where it does not supersede, the stethoscope in the diagnosis of diseases. Its applications are daily entering more and more into our domestic life, and day by day becoming more bewildering in their marvelous adaptability, and yet we are only on the threshold.

"Prof. C. S. Lugenbeel of Chattanooga, Tenn., has bought half interest in the Georgia Telegraph School, at Senoia, Ga. Prof. Lugenbeel has large experience in the telegraph field and is a gentleman of sterling integrity and undoubted veracity. Thus another honor has been conferred upon that institution." This is from a Southern journal evidently not very well posted in matters telegraphically.

Brown & Sharpe Manufacturing Co., of Providence, R. I., has issued a card circular, for gratis distribution, setting forth its stock of standard gears carried in stock. They number eight hundred sizes. Rules are given as to the manner of obtaining accurate measurement of spur gears.

Resolutions of condolence in the death of F. F. Storrs, who died at St. Andrews Bay, Fla., April 21, were recently passed by H. G. Adams division of the O. R. T., Wichita, Kans., and signed by A. J. Applegate, C. T.; Ed. M. Wolff, A. C. T.; and J. H. Hodnett, S. and T.

We are indebted to Mr. G. B. Kirkpatrick, of Boston, for a photograph of the 109 State Street baseball team. We have not, however, heard of a challenge passing between the Boston and New York Teams. Are they afraid to meet?

Governor Beaver, of Pennsylvania, on May 13 appointed Superintendent W. B. Gill, of the Western Union, Philadelphia, commissioner to the Paris Exposition.

Mr. W. A. Austin, for many years with the Western Union at Utica and Albany, N. Y., is now with the American Screw Co., Providence, R. I.

F. T. Moyer, late of Wilmington, Del., succeeds J. T. Riley, of L. H. Taylor & Co., Philadelphia. Mr. Riley goes with the W. U. night force.

Charles Stewart, W. U. operator at Newburg, N. Y., committed suicide on May 13. No cause is assigned for the rash deed.

Purchasers of telegraph poles will find quite a supply in New York city, where they have been falling for some time.

## ALBERT L. SUESMAN.

Albert L. Suesman, General Western Manager of The United Press, was born in Providence, R. I., September 12th, 1844, where his ancestors settled in the year 1652. After leaving school he engaged in the jewelry business, an extensive industry of that city; but while yet a lad he was among the first to rush to arms when the civil conflict burst upon us. He was a soldier in the Twelfth Regiment of Rhode Island Volunteers, and was attached to the Ninth Army Corps of the Army of the Potomac. It fell to the lot of his regiment to be selected for the attack on the famous stone wall at the hard fought battle of Fredericksburg, where efforts were made to dislodge Longstreet's infantry and to storm Marye's heights, whereon was planted Lee's artillery, supported by the main body of the Army of Northern Virginia. In this fight, where the Federal loss was more than ten thousand killed, wounded and missing, the Twelfth Rhode Island was for some time exposed to an enfilading fire and suffered severely.



ALBERT L. SUESMAN.

In February, 1863, the Ninth Corps was transferred to Newport News, Va., and later to Kentucky, where its chief occupation consisted of tracking and pursuing the partisan leader, John Morgan, whose depredations in the southern part of that state had been widespread.

Upon his return to Rhode Island, Mr. Suesman was taught telegraphy by his intimate friend Walter P. Phillips, and in 1865 he entered the Western Union office in Providence, where he remained until 1881. He then resigned his position and took the managership of the office of the American Rapid Telegraph Company in that city. The American Rapid Company having passed into the hands of the Bankers' and Merchants' Company, Mr. Suesman was put in charge of the Company's property in Rhode Island and superintended the building of the new line between Willimantic and Boston. In 1869 he started a newspaper advertising agency in Providence, speedily built up a prosperous business and established relations with the leading newspapers of the country from Maine to

California. He conducted this business with great success in connection with his telegraphic labors until the Spring of 1885, when he was induced to cut loose from all his business pursuits in Providence and go to Chicago. With headquarters in that city he has since that time served The United Press with fidelity, intelligence and most pronounced success. The growth of this organization, in every direction, has been marvellous, but nowhere has its business increased in such an entirely unheard of manner as in the West. Some of this extension is due, of course, to the growth of the country, but in a large measure the increased business in the West has been due, as it has also been in the South, to the tactful and persevering personal canvasses which have been made by Mr. Suesman. However, he is a modest man and attributes his success very largely to the fact that he has a most desirable line of goods to market. In the management of the work of collecting and disseminating news, Mr. Suesman has also shown, in a marked degree, his fertility of resource, while in all his relations with the telegraph companies—a most important element in the problem of obtaining and distributing press reports—he has been most fortunate, having commanded respect and won popularity at one and the same time. The United Press has such an army of valuable people connected with it that it is difficult to name the most valuable one of its numerous representatives, but it may safely be said of Mr. Suesman that, even admitting that he has some equals, no one will be bold enough to assert that he has any superiors in the line of business in which he is engaged.

## P. V. DE GRAY.

P. V. DeGraw, the General Southern Manager of The United Press, is one of the best known as he is one of the most popular newspaper men in Washington, the scene of most of his journalistic triumphs. Mr. DeGraw is one of the many men who have graduated into journalism from the telegraphic desk. It cannot be said of him, however, that in changing his vocation he spoiled a good operator to make a poor newspaper man, for Mr. DeGraw has demonstrated his ability to gather and disseminate news as cleverly as he once handled the key. His knowledge of telegraphy, he finds, is a valuable adjunct to his knowledge of news and his ability to handle it.

Mr. DeGraw was born in Kingston, N. J., Feb. 1, 1853. The family name was originally written de Grau, and those bearing it were of French origin. The first de Grau came from France at the time of the French persecution, with the French Huguenots, in 1500—that being their first settlement in America. When this colony of settlers was massacred, a few of them, including de Grau, escaped and scattered through the wilderness of what is now the Carolinas. Some of de Grau's descendants are next found at Bergen and Bergen Point, N. J., with a Dutch settlement formed there. From these sprang the New Brunswick branch and the Brooklyn branch; from the latter DeGraw street was named. These two branches of the family finally separated entirely, and it was from the New Brunswick branch that the subject of this sketch was evolved. At the age of thirteen Mr. DeGraw entered the telegraph business at South Amboy, N. J.; served the Camden and Amboy Railroad Company as telegrapher for several years; subsequently the Pacific and Atlantic, Continental Hotel, Philadelphia, and later the Western Union, in Philadelphia and New York. In January, 1875, he entered the service of the New York Associated Press, at New York, as operator. In October, 1879, he was transferred to the Washington reportorial staff, and on November 1, 1882, became associated with Mr. Walter P. Phillips in the Western Associated Press Bureau, at Washington. On November 20, 1882, he took charge of the



Western Associated Press business at Washington. On December 5, 1882, he was appointed clerk to the Post-Office Committee House of Representatives, Hon. H. H. Bingham, chairman. On December 3d, 1882, the Executive Committee of the Associated Press ordered his reinstatement on the staff of the Associated Press, Washington, the Western and New York Associations having combined and agreed to operate but one bureau. On November 10, 1883, he resigned from the Associated Press, and on November 25, 1883, again became associated with Mr. Walter P. Phillips in The United Press. On December 3, 1883, he took charge of the Capitol work; on January 4, '84, he was appointed by Hon. Nicholas Muller, of New York, clerk to the House Committee on Militia. On March 26, '85, he was ordered by Mr. Phillips to assume the management of The United Press in Washington on April 1 following and on February 22, '86, he was appointed General Southern Manager of The United Press with headquarters in Washington.



P. V. DEGRAW.

While yet a very young man Mr. DeGraw ranked as one of the best telegraphers in the world, and though practically out of the business since 1879 his rank to-day is just as high as it ever was. He was one of the original "Big Eight" organized by Walter P. Phillips to work the Associated Press wire between Washington and New York, and it was while in the Washington office that he made his best record in sending. He gave an exhibition of rapid sending for the benefit of a Congressional Committee, Mr. Phillips being the receiving operator at the other end of the wire. In ten minutes he transmitted 490 words, which was for a long time the best record in this country for a short spurt.

Mr. DeGraw has made a reputation in news circles in Washington of which he may well be proud. Working at times under great disadvantages and against heavy odds he has made the Washington service of The United Press most perfect and most satisfactory. He has spared no individual effort that would contribute in however slight degree to the glory and the business success of the great

organization which employs him. Some of his best individual records have been made at the National political conventions, where he has received unlimited praise for his quick bulletin work and his accurate stories of the important occurrences of which he has been a witness. Throughout his journalistic experience he has commanded the respect and confidence of the public men with whom he has been brought in daily contact.

Mr. DeGraw's experience in telegraphy has been of great advantage to him in his news work. Whenever there is a big piece of work to be handled he maps out a plan of campaign and then, sitting at the key, he directs his assistants and edits their copy as he transmits it. An instance of the value of his telegraphic experience was his adventure at Elberon when he "scooped" all of the correspondents on the news of Garfield's death. Mr. DeGraw was representing the Associated Press at Elberon. He was sitting near the telegraph office on the night of Garfield's death when the sad but important news was related to the correspondents. Before the operator could send a message, the Attorney-General, Wayne MacVeagh, entered the office, saying: "I demand this telegraph wire for the Government of the United States and order that it shall be used by none other." There were two wires in the office, one a through wire the other a local to Long Branch. At the first word of the Attorney-General, Mr. DeGraw glided under the counter and, muffling the sounder of the local wire sent the following message to the operator at Long Branch: "Hueston, General Agent, Associated Press: Garfield died 9:15. Rush. DeG." The Associated Press had a special wire from Long Branch to New York and the news of Garfield's death was in that office about forty-five minutes before any of the special correspondents could send it.

Mr. DeGraw is one of the handsomest men on Newspaper Row. He is unquestionably the best tempered man that ever managed a Washington bureau. His good-nature is proverbial among Washington newspaper men. Another characteristic for which he is famous is his love of good horse-flesh. He drives one of the best horses in Washington. He is above all a Christian gentleman and a member of the Church of the Reformation (Lutheran) of which the Rev. William E. Parsons is pastor. So consistent is his life, so harmonious are his family relations, so thorough is his loyalty to his employers, and so faithful is his adherence to the beautiful teachings of the Saviour that he well might adopt as his motto: "My soul to God, my love and devotion to my family and friends, and my bone, brain and sinew to The United Press."

Since the two cent rate of postage for drop "local letters" went into force in the Dominion of Canada, the Great Northwestern Telegraph Co. at Toronto has started a one cent delivery system with sufficient patrons to give a number of boys and men employment for the day, and after canvassing among the wholesale houses, which resulted in further patronage, so that the scheme is said to be already on a paying basis.

The question of absorbing interest to the profession is whether the New York and Boston telegraph base ball clubs dare cross bats with one another. We hear a great deal about these clubs, but nothing in the nature of a challenge.

The increase of Canadian registration fee of 5 cents is throwing more money transfers into the telegraph money transfer system in Canada.

The Buffalo Electrical Society has issued a list of papers presented before the society since 1883. The subjects covered embrace all branches of electricity.

The Bell Telephone Co., at Toronto, Ont., have stated their intention of placing their wires underground.

## THE TELEGRAPHERS' CLUB.

On Tuesday evening, May 21, the New York Telegraph Club held its first quarterly meeting in the new Club Rooms, 48 Church street. A large number of members were present. Meeting called to order by President Holbrook. After welcoming the members and congratulating them on having such fine rooms, where they could cultivate each others acquaintance, improve their minds from the library, or enjoy the games placed at their disposal, the club proceeded to business. The secretary's report showed a large membership with but three lapsed and one resignation. Considering the short time the club existed the growth was really phenomenal. The treasurer's report gave a fair balance in the treasury. John R. Powers was then unanimously elected librarian. One of the most pleasing incidents of the meeting was the presentation to the club of an elegant crayon portrait. Mr. Holbrook was asked to accompany the recording secretary, J. C. Watts, to the entrance of the library where, covered and hanging on the wall, was the portrait to be presented to the club. Mr. Watts, in a few well chosen words, in which he stated to the president that several members desired to present, through him, to the club some article that would be an adornment to the rooms, and in years to come recall to the present members one who was ever ready to sacrifice all personal interests for the benefit of the profession at large, and concluding he said: "In view of the facts stated, Mr. President, allow me on behalf of the members to present, through you, to the New York Telegraph Club, this elegant crayon of George E. Holbrook, the first president of the New York Telegraph Club," simultaneously pulling the covering off the portrait. The applause was deafening; members shouting and throwing up their hats. President Holbrook was completely overcome by the ovation, and more so when the unveiling disclosed to him his own features—his eyes filled with tears and voice shaking with emotion—he mounted a chair and thanked the members for the gift to the club and the great honor they had conferred on him. After quiet was restored the members resumed their seats and R. C. Edwards rose and made an eloquent speech, in which he enumerated the benefits that would accrue to the profession at large by having such magnificent and comfortable quarters in which to spend their leisure time. Members should endeavor in every way and manner to assist each other, and when they met be sociable and frank, not pass along coolly and indifferent. Never, in the history of the telegraph, could he recall an organization of this character, and it should receive the financial and moral support of those high in electrical circles. Addresses were also made by Messrs. Greene, Faulkner, Lounsbury, Hann and Callahan, all in the same enthusiastic strain.

Mr. T. E. Kearney, formerly with Messrs. Fenn & Braxmar, electricians, has engaged with Mr. A. L. Bogart. Mr. Kearney has just left for the Adirondacks to equip the Mirror Hotel, Lake Placid, N. Y., with all electrical appurtenances. The work will occupy all of June. His Kansas City, Chicago and St. Louis friends, while feeling pride and pleasure in his progress, may envy Mr. Kearney the delights that will attend his labors in this charming mountain region.

James Washington Elliott, for many years service clerk on the night force at the Western Union main office, and latterly secretary to Manager McLaren, of the Baltimore and Ohio Company's New York office, died at his residence on Jersey City Heights on May 21st, aged thirty-two years.

Mr. F. W. Green, a well-known New York operator and lineman, is now located in San Francisco.

UNLIKELY BELL TELEPHONE RUMORS.—A story was circulated a few days since that as soon as the contract between the Bell Telephone and the Western Union Telegraph Companies would expire the Bell Company would conduct a telegraph system as well as the telephone. In reference to the matter Superintendent Gill, of Philadelphia, says:

"In 1892 the patents of the Bell Company expire, and while they would have a perfect right to enter into the telegraph service, so would the Western Union have the same right to enter into the telephone service. The Bell Telephone Company may be looked on as a formidable opponent of the Western Union Telegraph Company, but when the matter is dissected it is easy to see that the Western Union can be just as formidable an opponent of the Bell. But I do not think this will happen. The good sense of each company ought to suggest to them that there would be more profit in keeping in their own field.

"If such a thing were to happen, or was going to happen, it would be kept quiet, for it would be a battle of giants, and not until the time for the fight would it become public property. Both companies have their own peculiar line of business. The Bell Telephone Company could not use their present wires to telegraph on account of the telephones. They now have wires from Boston to New York, from New York to Philadelphia and a proposed line from Philadelphia to Baltimore and Washington. As it now stands we have contracts with every large railroad in the United States and without this no telegraph company would be able to exist. The business would not be sufficient to pay expenses. Now we are able to have an operator at every station on a railroad at which there is an instrument; but we make a contract with the railroad company to pay them, or the operator, a percentage for handling our business. If we had to pay an operator full salary we could keep very few stations opened.

"In Pennsylvania there are only about fifty points where the service is sufficient to warrant an independent office. For this alone I do not attach any importance to the rumor. The Bell Telephone Company knows when it is well off."

William H. Bryan, for many years connected with the Pond Engineering Company, and whose specialty was the department of steam plants for electrical service, has identified himself with the Heisler Electric Light Company, and can be found in future at their offices, St. Louis, Mo. He hopes to hear from his friends and others who may be investigating the question of incandescent electric lighting.

Messrs. Phillips, Kelly, Jas. Weis, Rosseau, Kelly, John Gref, Cusack, Cowell, Gerber, representing the linemen, defeated Messrs. Rosseau, Foley, Walsh, Brennen, Warnock, Mallon, McBain, Fredericks and Ganung, representing the operators of the Postal Telegraph Company, at baseball, May 19, by a score of 9 to 11. Chas. A. Richter was scorer and J. Anthony, umpire.

Eugene Munsell & Co., of 218 Water Street, New York, sell an excellent grade of mica for commutator and other insulation purposes. A full assortment of all sizes of both cut and block mica of various qualities, suitable either for construction or repairing, is on hand at all times.

The exclusive use of electricity on board ships-of-war for firing guns and for various other purposes seems to be only a question of time—and a very short time at that. The electrical appliances for these naval uses are being perfected with great rapidity.

Mr. A. R. Foote, of Cincinnati, Ohio, is one of the most active members of the Electric Light Association, and his labors are a credit.

The effect of the electric light on the Eiffel Tower is to illuminate all Paris in a manner unprecedented.

## ELECTRICAL PATENTS GRANTED APRIL 23.

- 401,732. Mouth-piece guard for phonographs or telephones; Willard L. Candee, Brooklyn, N. Y.
- 401,744. Secondary battery; William W. Griscom, Haverford College, Pa., assignor to the Electrical Accumulator Company, of New York.
- 401,789. Burglar alarm and testing system; Frank H. Nutter, Malden, assignor to Herbert L. Slade, Chelsea, Mass.
- 401,796. Electric railway system; Sidney H. Short, Columbus, Ohio.
- 402,108. Process of welding together sections of pipe by electricity; Elias E. Ries, Baltimore, Md., assignor to Ries & Henderson.
- 401,953. Secondary battery; William P. Kookogey, Brooklyn, N. Y., assignor to the Kookogey Electric Company.
- 402,007. Splice box for electric cables; Thomas J. Dewees, Palmyra, N. J.
- 402,027. Condenser switchboard; William Marshall, N. Y.
- 402,120. Message and time recorder; John C. Wilson, Boston, Mass.
- 402,190. Distribution of electricity by secondary batteries; George B. Prescott, Jr., Newark, N. J., assignor to the Electrical Accumulator Company, of New York.
- 402,408. Railway telegraph; Frank J. Crough, Oakland, assignor of one-half to C. P. Houston, Junction City, Ore.
- 402,415. Telegraphy; Mark W. Dewey, Syracuse, N. Y., assignor, by direct and mesne assignments, to the Dewey Corporation, same place.
- 402,507. Duplex fire alarm telegraph; Sidney A. Chase, Ewart, Mich., assignor of one-half to William R. Mapes, same place.

## GRANTED MAY 7, 1889.

- 402,626. Electrical annunciator Benjamin Smead, Chicago, Ill.
- 402,639. Polarized relay; John C. Wilson, Boston, Mass.
- 402,717. Telegraph instrument; Charles G. Burke, Richmond Hill, N. Y.
- 402,810. Supporting and cross-connecting electric wires; William J. Denver, Boston, Mass.
- 402,828. Circuit closer for railway car telegraphs; George I. Hopkins, Manchester, N. H.
- 402,832. Electric Railway; Rudolph M. Hunter, Philadelphia, Pa.
- 402,912. Rheostat; Joseph B. Entrikin, Des Moines, Iowa.

## GRANTED MAY 14.

- 403,100. Electric alarm clock; Thos. H. Grady, Brooklyn, N. Y.
- 403,110. Electrically heated vacuum pan; Gail B. Johnson and Milbank Johnson, Elgin, Ill.
- 403,192. Electric railway; Rudolph M. Hunter, Philadelphia, Pa.
- 403,258. Vibratory telegraphy; Stephen D. Field, Stockbridge, Mass.
- 403,291. Exchange system for telegraph; James H. Robertson, Rutherford, N. J.
- 403,292. Combined telephony and telegraphy; James H. Robertson, Rutherford, N. J.
- 403,374. Electric riveting apparatus; Elias E. Ries, Baltimore, Md.
- 403,472. Printing telegraphy; Zeroy P. Hotchkiss, Oak Park, Ill., assignor of one-fourth to Carlos J. Ward, same place.
- 403,487. Dynamo-electric machine; Frank A. Perret, Brooklyn, N. Y., assignor to the Electron Manufacturing Company, of New York.

403,491. Insulating device for line wires; Thomas J. Smith, Brooklyn, N. Y., assignor to The E. S. Greeley & Company, of Connecticut.

403,492. Electro-medical apparatus; Thomas J. Smith, Brooklyn, N. Y., assignor to The E. S. Greeley & Company, of Connecticut.

Mr. S. B. Sarbadhicary, the East Indian Morse operator, who spent 12 months at the key in this country, is now located in London, England. He has written a pamphlet of 90 pages, descriptive of his sojourn in America and mentions all the persons he met while in this country. We have promised to sell a few copies without cost for him, at 50 cents each. The book is written in a very interesting style. The first copy was sent to Mr. W. J. Dealy, who voluntarily returned the following testimonial: "I marvel at Mr. Sarbadhicary's book. It is in many respects the most interesting book I ever read, when considered as the production of an East Indian. He is a scholar and worthy of encouragement and evidently a grand character." Address, the ELECTRIC AGE, 5 Dey st., New York.

The annual meeting of the Canadian Pacific Railway was held at Montreal May 8th. The report showed the gross earnings for the year to be \$13,195,535; working expenses, \$9,324,760; net earnings, \$3,870,775. The old directors were re-elected excepting Mr. Grenfel, he being replaced by Thomas Skinner, of London. Mr. W. C. Vanhorne and Sir George Stephen severely criticised the senseless hostility the Grand Trunk Railway exercised towards the enterprise of the C. P. R. from the time of its inception to the present.

William Marshall, the expert electrical condenser manufacturer, of No. 4 University Building, New York, has just issued his 1889 catalogue. It is replete with engravings and diagrams of the various makes of condensers. The electrical profession as a unit, has testified to their durability and efficiency, and many individual electricians in their praiseworthy testimonials claim those of the Marshall make are superior to any ever produced abroad. Copies of the pamphlet may be had free upon application to the manufacturer.

A colored chap, named Newkirk, hailing from under the Hurley Mountain, was in Kingston, N. Y., circulating a petition recommending him for the position of "Blower out of Electric Lights." Some joker had told him that the city wanted a man to climb the poles at 2 o'clock every morning and blow out the lights, and that a well-recommended person could get the job.

The unkindest cut made by the pole choppers of New York was on Mayor Grant's private telephone line which fell by the way-side on Monday. His remarks, except what sounded something like "Hello!" "Hello!" were but imperfectly gathered when he found it out.

Professor Forbes declares that the only types of underground cables apparently suitable for permanent work are either bare copper supported on insulators or else vulcanized India-rubber, or perhaps okonite.

A telegraph operator who was out of a job went to Guthrie last Monday, squatted on a lot, bought a tent and started a game of stud poker. He says his average profits are \$100 per day.

Wm. T. Shields, a well known operator of Troy, N. Y., formerly of New York city, has been elected deputy sheriff of Rensselaer County. The office holds good for three years.

G. G. Clover, station agent and telegraph operator for the Jersey Central Railroad at Asbury Park, has disappeared and his accounts are said to be much mixed.

## NOTES.

CHICAGO W. U. NOTES.—The office has undergone a general scouring and cleaning since our last letter. The walls have been calcimined, the switch-board brightened, the wood-work oiled, the posts painted and the iron-work bronzed so that one would scarcely recognize the room as it is now. All the glass that surrounded the switch from its top to the ceiling has been removed and a skylight put in which greatly improves the ventilation and appearance of that part of the office. There is plenty of room for improvement in the ventilation of the operating department, as the only way to air the room during the past winter was to open the windows, causing those near them much distress from colds. Any improvement, therefore, in this matter is hailed with satisfaction. The incandescent light was turned on a week ago, and although quite severe on one's eyes, is far superior to gas, the room being as light as day. On hot summer nights working hereafter will be comfortable as the hundred or two gas jets raised the temperature ten to fifteen degrees. Some were unkind enough to say that all these improvements were made in anticipation of a visit from Gen. Eckert, but we think Messrs. Holligan and Lloyd are responsible. Frank Mack has evidently become very tired of the Wheatstone, having resigned the position of chief of that department, Mr. J. J. O'Brien, recently from Milwaukee, taking his place. As the day Wheatstone force numbers some seventy five ladies and gentlemen, the personals of which we hope to send in for the next issue, the handling of it is no sinecure, and Mr. O'Brien has our best wishes for success. His place at the switch is taken by Mr. Paddock, the latter's position as assistant loop-chief being filled by Harry Knight, recently Eastern division chief on the night force. The old Board of Trade building across the street is being replaced by a 14-story brick structure which is going to make the room comparatively dark, surrounded as it will be by very high buildings. Mr. McLean has been ill for some time. Time-keeper Gillette is also on the sick list, and although improving now was at one time in a very critical state. Miss Bert White has also been ill, but is at her desk again. Mr. Frank McLoraine, who has been seriously ill for several weeks, has gone to his home in the East, where, it is hoped, he will speedily recover. The Board of Trade promise to inaugurate another war against the bucket shops by cutting off quotations from all except their own members, and should they succeed in closing the shops, it will throw nearly fifty operators out of work. The opinion is, however, that the shops will, as they have in the past, come out victorious. "Clark," whose signature to service messages has made him well known throughout the country, went to Texas some time ago to engage in other business. Mr. R. Whitty takes his place as chief check. Mr. W. H. Allington has resigned to write insurance for a prominent company. Mr. Lute Smith, recently of the night force, is making quite a success of the life insurance business and says he is out of the telegraphic profession for good. Messrs. Lee, Pimm and Smith have returned from a fishing expedition, and the stories they tell of their success would discount Ananias. Messrs. Hammond and Tate are on a vacation. Mrs. Allington has returned from a trip West and is feeling well. Among recent arrivals we find Messrs. Elliott, New York; Pearson, Deming; Phillips, Bradford, Pa.; Woodard, New York; Eaton, Michigan; and Weilburg, Muscatine, Iowa. Mr. C. Willoughby has gone to San Francisco. Among the night Wheatstone force we find Miss Daisy and Jennie Shaw, the Misses Kerwin, Cahill and Barley. These ladies are expert typewriters and turn out some very neat work. Al. Babb, T. Babb, Messrs. Leahy, Goodman and Wm. Stevely, also copy in this department. The punchers are Messrs. Olsen, Lindsey, McCormick, Matrona, Jones and Burley. Messrs.

Dillon, Hand and Wigney, look after the transmitters. A very busy office is that in the Palmer House. Messrs. Kimball, Dettman, Seifret and Gressell handle from 600 to 800 messages daily. At the Grand Pacific Messrs. Coleman, Swistrom and Millett get away with an average of 400 messages daily. The last issue of the AGE was eagerly sought after and was well liked. Mr. A. Sherwood has traded on to the split trick. It was so long since "Sherry" has been seen on the night force that he was pestered with questions as to what trick he was working and finally put a tag on himself reading "I am working the 9:15 split trick; I traded with Davenport for a month; now sneak." We all "sneaked."

NEWARK NOTES.—Newark Division 118, O. R. T., held a special meeting on May 22d, for the annual election of officers and three delegates to the Convention of the Grand Division in Cleveland to be held in June. C. A. Seaman, of Elizabeth, was elected chief telegrapher and S. A. Campbell re-elected secretary and treasurer. F. P. Marshall, T. S. Smith and S. A. Campbell were elected delegates to the Convention, but it is not probable that more than one delegate will be sent; the lucky one to be decided at the next regular meeting. The W. U. have opened a branch office at Wilkinson, Gaddis & Co.'s store, with Miss Mamie Leamy in charge. Mr. Abe Westervelt is now in charge of one of the W. U. pool rooms. Among the recent arrivals on the P. R. R. are: D. J. Hamilton and D. M. Alkire at Newark and Mr. Ball at Jersey City. Mr. Sheffers at Fourth street, Brooklyn; J. Brennan at 944 Broadway, N. Y. Along the line, D. J. Burnes, J. J. Bowles and Messrs. Reid, Gurrin and Janney at the New Waverly Tower.

BOSTON NOTES.—The usual spring uneasiness is beginning to manifest itself; there are some who come, and some who go, and some stay here forever. The matrimonial fever has been quite contagious here lately. John O. Roarbach has been the latest worshipper at the hymeneal shrine. We had a visit from the "blushing" bride a few evenings ago. The happy pair have our hearty congratulations. W. A. Kenna has recently returned from a short term of rustication at one of the prettiest towns in Central Massachusetts. Thomas R. Finan and Robert E. Tobin attend to the W. U. and C. N. D., respectively, at the Boston base-ball grounds. Mr. Tobin has for several years been the C. N. D. representative at the grounds and has not yet made an error. Edward Reddy, formerly batteryman for the W. U., but recently with the Gold and Stock, has again returned to the W. U., his service with the Gold and Stock being no longer required on account of the substitution of dynamos for battery. M. J. Kenna of the race department, New York, recently paid us a visit on his way to visit his home in Concord, N. H. E. B. Elliott, of the New York quad, days, has gone to Halifax, N. S., on a vacation, A. G. Blair, a broker operator, and W. A. Kenna, of the night force, filling in his time. James Nolan has been appointed to the Cobb vacancy on the all night force. Mr. Blake, of Fitchburg, has been added to the extra list. Mr. McGarty, of the White River Junction wire, has accepted a position with the Postal, Mr. Gibbons, from Portland, acting as substitute during the required ten days' notice. Miss Emslee has returned from a broker to the ladies' department. Mr. J. H. McGlinchy, for many years a well known member of the force here, has resigned to accept a position with a broker. Mr. T. F. Clark is temporarily filling his position. Another good man has gone wrong, Wm. B. Derby, cashier of the Mutual District Messenger Company, is under arrest, charged with the embezzlement of between \$10,000 and \$20,000 from the Western Union Company. The exact sum is not yet known, but at the time of this writing experts were at work on the books and the exact amount of the defalcation will soon be manifest. Cashier Derby's

scheme, it is alleged, was to raise the amount of the bills payable by the Western Union to the District Company, on account of messenger service rendered by the latter company to the former. This overcharging, it is said, has been going on for over two years, Mr. Derby appropriating the added charges. It is believed that speculation was the cause of his crookedness. He has a wife and family and is about 45 years of age.

PORTLAND, ME., NOTES.—Mr. W. H. Coffin, of the Western Union, is again on duty after a severe illness. The Mutual Union office has taken down its sign now and is working as a W. U. office according to the agreement between the Postal and the Western Union Companies, which went into effect May 1st. Mr. W. H. O'Brien, for six years the night operator at the W. U. office in Augusta, Me., has removed to Gloucester, Mass., where he will open and take charge of a broker office for John Stetson, of Boston. Mr. S. J. Hegarty, formerly of the W. U., Boston, has been appointed Mr. O'Brien's successor at Augusta, Me.

CLEVELAND NOTES.—The closing of the Mutual Union office places operator Reising on the waiting list with Messrs. Gillman, Harden and Friedner. Additions to the regular force are Miss Georgia Skinner, Messrs. Mar'in, Allen and Ganson, also Mr. Baker, *vice* Wendover resigned to go to Cincinnati. Miss S. Toole and Miss Kinney have gone to brokers' offices. The sympathy of their friends are extended to the Misses Toole in the death of their brother recently at Richmond, Ind.

CHICAGO POSTAL NOTES.—Mr. J. E. Pettit is chief operator, Al. Drake, assistant; Frank Butterfield, wire chief; Wm. H. Mills, quad. chief; Gus Carroll, traffic chief, days; H. G. McGill, night chief; Chas. McElroy, assistant; N. A. Noss, all night chief. H. Waters is manager of the Board of Trade office; N. H. Perrin, chief operator; W. E. Griffiths, assistant. The following is the staff: O. H. Lincoln, Wm. Wallace, M. E. Cozzens, Frank Roberts, all old timers. Among the younger element are: L. H. Howe, Howard Shane, W. H. Moore, John Wilbee, John Reid, Elmer E. Earhart, Frank Brassells, Geo. Root, Ed. Boole, Robt. Corner, Jos. Laird, A. Coulter, W. H. Pinkney, P. W. Persels, Jack Garrett, James Mitchell, Charles Potter, Fred. Krusemarck, Sam. Nolly, Martin Adams, C. Randall, Ed. Foote, H. S. Peters, Chas. Ogden, A. Magill, Orrin Chapman, Wm. MacDonald, C. E. Benjamin, John Ebbs, James Green, Frank Bassett, Jay Carver, John Hutson, Mr. Marr, Fred. King. Among the new arrivals are: Messrs. Martin, Carey, Maples, Ackley and Potter. The fair sex is represented by Mrs. Potter, Misses Gardner, Robinson and Weller. Ed. Stanton looks after the check boys, and John Strong is service clerk; Mr. Benzie, chief delivery clerk; Chas. Tatge, receiver, and the genial Billy McMillan, cashier. Chas. Keown has left us, going to Winona for some private firm. The following corps compose the *Tribune* force: James DeLong, chief; Messrs. Baker, Woodring, Perkins, and John L. Morris. This company's business is rapidly increasing and the wires are crowded to the utmost. Any one who has been in Chicago for any length of time cannot fail to see wherein the usefulness of the Aid Society lies. Take the instance of the numerous subscription lists that are continually going around. Many of them no doubt are worthy of the charitable feelings of the operators. The society's aim is, however, to do away with them as far as practicable. The benefits of the society are \$5 a week for sickness and \$50 for burial expenses in case of death. The society has already done its duty in helping sick members and calls on all who have the good of the fraternity at heart to lend a helping hand in the good work.

ST. LOUIS W. U. NOTES.—Arrivals: Miss Nellie Tobias, E. F. Downer, D. B. Jones, L. F. Gates, C. D. Lee, Ar-

thur Andrews, M. E. McKittrick, F. B. Lindsay, J. B. Norcross Jack Magill and M. H. Markley; the latter from a vacation. Miss Floerke has been transferred from a branch to the main office. Resigned: E. C. Danforth, J. P. Reinecke, D. M. Hughes, Mrs. Agnes Garrity, A. J. Fitzpatrick, B. G. Stillwell, E. F. Clements, F. C. Schanz, B. D. Earhart and W. H. Middlemiss. Miss Carroll, of the city department, is on the sick list.

BRUNSWICK, GA., NOTES.—This is fast becoming one of the important seaports of the South Atlantic, cotton and all other kinds of business having wonderfully increased during the last year. It is also one of the best known resorts in the South on account of the splendid opportunities for pleasure afforded by the adjacent islands. On Jekyll Island are the palatial club houses and grounds of the Union League Club of New York, and all winter the island is filled with members of the famous "400," who come here to hunt and fish. After they have flown, the St. Simon's Hotel, on St. Simon's Island—where Lighthouse Harry Lee is buried, Oglethorpe held the fort, and Wesley preached—opens its doors to crowds of refugees from the torrid zones in search of a cooling June breeze. Cumberland, the adjoining island, has a fine beach, and is also crowded during the hot months. In Brunswick proper is The Oglethorpe, one of the finest hotels in the South; an abundance of beautiful, shady trees, flowers and excellent drives, and a climate entirely free from malaria. The W. U. have a fine office on the principal business street. Business is heavy. Miss M. Cleminson, a very charming and popular young lady, is the manager; with Mr. E. B. Lacy, operator, and H. Dexter, clerk.

THOMASVILLE, GA., NOTES.—"The City among the Pines" has just passed a most successful season. Three years ago there were three hotels; now there are ten, three of which will rank with any first class hotels in the United States; the private houses, if put under one roof, would be one vast boarding-house. Hundreds come here to be benefited by the high, dry, resinous atmosphere, which is so soft and balmy that a very feeble person is benefited rather than injured by exposure to the open air. It is estimated that seven thousand visitors came here this season. Business has almost doubled in the last two years. Miss C. A. Deisher is the efficient and accomplished manager, with Mrs. K. Cato, operator. At S. F. & W. are Wm. Fleming, days; Y. Beasley, nights.

CANADIAN PACIFIC RAILWAY, WESTERN DIVISION, NOTES.—F. W. Whitfield, of Eagle River, is on a vacation. W. H. Hallett, of Hector B. C., is visiting relatives at Port Arthur. T. G. Aikinson, of Rossland, has the sympathy of his many friends in the loss of his little child a few days since. Conductor Harry Nicholson has left to attend the general convention of O. R. C., at Denver. J. G. McDonald, of Kalmar; A. McLeod, Eagle River; J. Mooney, Rennie; J. W. Ferree, Buda; A. E. St. Laurent, Keewatin and S. W. Reynolds, Whitemouth, have resigned. Arrivals: C. Eggett, Montreal, to Tache; D. Signac, Montreal, to Eagle River; Wm. McDonald, Orillia, Ont., to Buda; C. A. Moore, M. C. R. R., to Fletcher, on waiting list. Transfers: J. N. Davidson, Brule, to Eagle River; A. J. Purchase, Tache, to Brule; J. L. Houston, Teeford, to Kalmar; C. H. Kent, Tyndall, to agency, Rennie.

PHILADELPHIA NOTES.—Night Manager Charles A. Bigler, of the W. U. office, in the Post Office building, and Dr. Dare, of the night force, main office, are studying hard in order to graduate in the medical profession next spring. Joseph E. Janney, of the W. U., and L. Miller, of the Postal, are the efficient agents of the ELECTRIC AGE in this city. Mr. John Hurley has turned up from Jacksonville. Horace Shinn has compiled a series of route sheets of Pennsylvania, New Jersey and Delaware for the W. U., which will be framed; the work reflects credit on the artist.

Mr. Murray, of Auburn, N. Y., who lately joined the W. U. force, has resigned to go with the Postal Co. as press operator. Mr. F. N. Scott is now in charge of the Postal Company's office, at the N. E. cor. of Front and Arch sts., where the success which marked his career with the Mutual Union Co., in this district, still abides, and helps to swell the coffers of the Postal Company. "Scotty" says he is so busy he don't have much time to read, but there seemed to be some time which he was willing to devote to the perusal of the spicy columns of *THE AGE*, and promptly subscribed. A walk along the river front and soon the welcome (?) smell of fish greets the nostrils, then Chas. E. Stump's office has been reached. Mr. Stump has "worked" this district upwards of 15 years, is well and favorably known, and controls considerable trade. He is ably assisted by Messrs. Ed. Hibbs and Z. Stoddard. Across the street, in the Market-house, Victor Powers holds forth the W. U. banner, assisted in a very creditable manner by Mr. John White. Messrs. Powers and White were both employees of the late B. & O. Co., and are a valuable acquisition to the W. U. Mr. D. A. Curl, late superintendent of the B. & O. district department, is again in the service of the W. U. and has a good berth. The smiling face of Mr. Andrew G. Wallace was seen in the office of the Postal Co., at 3d and Walnut streets. Mr. Wallace is an experienced branch office manager of the first quality, and business shows up accordingly. Messrs. Barney and Harry Campbell are the two other knights of the key who assist Mr. A. C. Chatman, Jr., to "shear the lambs" at the latters' commission office. At the "3d" district office of the A. D. T. Co., Elmer Locke is discovered behind the bars in a very small corner of the room. Mr. E. A. Tomlinson, his assistant has plenty to do to keep the volume of business on the move, but says he is never happy unless engaged in the occupation designated by his initials. Messrs A. J. Whittingham and Harry Boniface both occupy responsible positions in the service of this company; their experience fits them to meet every obligation, as both have risen from the bottom round of the ladder, and are deserving of their success. At the "4," Mr. Ed. Kearns manipulates the wires and transmits "Morse" and "Continental" in fine style.

NEW YORK WESTERN UNION NOTES.—One of the brightest young ladies in the City Line, whose thoughts must have been far, far away, got it "chickens fresh and clean" for chickens thirteen. She tumbled before the message left her hands and corrected it; but as she herself says, "the joke is too good to keep." Frank Howell returned from Oklahoma two weeks ago delighted with his trip but not particularly impressed with the beauty of the Boomers' Paradise. M. J. O'Brien is back after a two weeks' absence on account of sickness. Somehow the Boston quad never looks natural at night without the genial Mike's presence. Doorkeeper Finnigan reports having had a most enjoyable time during his visit of a week or so in Boston, and to have met many men who made it pleasant for him. He speaks in highest terms of Superintendent Roche's treatment, and says that "gentleman is the dandy of them all." Mr. Chas. E. Thompson has been appointed a member of the regular night force. He is a recent arrival from Chicago. Your correspondent, while expressing regrets that he is disappointed in not being able to present for the edification of the readers of this journal a picture of Mr. Ed. Delaney, the "Brevity Man," promised for this number in a previous issue, takes pleasure in announcing that it is now in the hands of the engraver and will undoubtedly be laid before the public on the 16th of June. "J. Nota McGill," for John K. McGill, is on a Bostonian. Mr. Wangemann, whose death by Bright's disease occurred at his home Corona, L. I., a few days ago, was a gentleman who has long been employed here, and whose absence is mourned by a large circle of acquaint-

ances. A large number, among whom were the Misses Kittie McNally, Ida Erbedling and Kirschner and Messrs. Barry, Brannin and Wahlname, attended the funeral. The pall-bearers were Ed. Mesler, Dan Donohue, John Hindemark, Max Green, Charles Lemaire and George Blood. Mrs. Crafts has been transferred here from 851 Bedford avenue, Brooklyn. Charles E. Burroughs, William G. Hassler, John P. McNeill and Harry A. Roberts have been added to the waiting list. Miss Lizzie Finnegan has returned from Boston where she has been for a year or more on sick leave. She is, we are pleased to say, greatly improved in health. Miss Minnie Kelloch has returned from a broker's office. The sole topic of conversation here seems to be the phenomenal progress made by the New York Telegraph Club since its institution. The strides it has made are gigantic. Cosier rooms than those occupied by this successful organization of telegraphers it would be hard to find. If you doubt this assertion visit them and see, and then send to J. Clayton Watts an application for membership. A. U. P. Dike for, well—you know what, is about as good a one as we have seen in at least two moons. In a previous issue, in some inexplicable manner, the article reflecting so much credit upon the handling of business in the Eastern Division was made to read Chief Catlin. This is an error we take pleasure in seeing corrected. Mr. Catlin has nothing whatever to do with the handling of traffic. We, therefore, award to Chief Nourse all praise and credit for having under his supervision a force so worthy of the commendation.

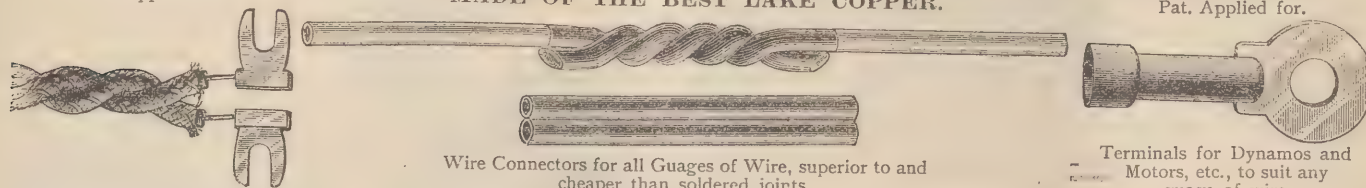
NEW YORK TELEGRAPH CLUB NOTES.—Mr. E. F. Stevens has been appointed by the governing committee, manager of the Base Ball Club. Messrs. Anson and Beatty have enhanced the beauty of the library by the presentation to the club of a magnificent clock for the mantel. We are indebted to Mr. Walter P. Phillips, of The United Press, for a magnificent steel engraving of himself, which he presents to the club with his best wishes. To show the esteem in which this gentleman is held by the profession at large, the suggestion of the president, that it be hung immediately over the library, was at once complied with. To the Cunard Line we return our heartfelt thanks for a beautiful picture of the steamer Umbria, which has been hung in our billiard room. The letter accompanying the gift of Manager Geo. G. Ward, of the Commercial Cable, of a photograph of the repairing steamer Mackay-Bennett, a yearly calendar, and a promise of a cable chart of the world, when read before the members of the club met with vociferous cheers. Popular as Michael F. O'Brien has always been he has fairly won the hearts of every member by the presentation, to the library of the club, of a complete set of Dickens works, as well as those of Charles Lever. Mr. John R. Powers, one of the best known operators in New York, and who is at present employed in the telegraph department of the New York *Tribune*, has been elected to the responsible position of librarian. That he will discharge the duties of office to the entire satisfaction of the club and its members no one for one moment doubts. Fifteen candidates were elected members at the last meeting. At the present rate of increase in membership our suite of six rooms will soon be inadequate to accommodate the members, and larger quarters as a matter of course must be procured. Enthusiastic cheers followed the election, to the position of second vice-president, of that well known and highly esteemed chief and friend of every deserving operator, Conrad Meyer, vice Robt. W. Martin. Since his election to membership in the club Mr. Meyer has been an indomitable worker and his promotion is well merited. The first reception of the club will be held June 18th, full particulars of which will appear in the issue of June 16th. The fact that our base ball club is without suits seems not to have been in the way of winning every one of the three match games played.

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For genuine enterprise and thorough business capacity commend us to Mr. A. V. Cutler, of the W. U., Kansas City, Mo. This gentleman, in a two weeks' canvass has secured upwards of seventy-five yearly subscriptions for the AGE, and he has only begun to work in the paper's interest.

Mr. P. Foley, one of the Providence, R. I., operators, was highly complimented for his excellent showing in the parade of the "Meagher Guards" on the 23d. Mr. Foley is one of the few honorary members of the company.

The two year old son of Mr. M. J. Doran, of the Central Cable office, strayed from home the other day and when his parents found him he was playing checkers with the police sergeant. A bright two year old that

To K. E. B.—Please send me your address. "43," care ELECTRIC AGE, New York.

The organization of the Electric Age Publishing Company has been hailed with delight in all sections of the country. The announcement in the last issue caused many indifferent persons to forward their congratulations and offers of assistance in the new company. The company is now fully equipped, and it is expected before long that the shareholders will be scattered throughout the entire country. The feeling is best expressed in a letter received from Mr. B. C. Elder, of the Western Union, Wichita, Ks., who writes: "I am glad to see the AGE the property of a stock company. It may now get the support it so richly deserves."

We notice that the Kansas City, Mo., papers praise Manager Clohesey, of the Postal office of that city, because of his individual efforts as a hustler in enacting laws, during the recent general assembly of Missouri, of which he was a member. The telegraphers are bound to get to the front, even in legislating laws for a State.

Quite a number of copies of May's latest telegraph song, "True Heroes were They who Died at the Key," have already been sold. We have a few of them still on hand, which can be procured at the regular price, 40 cents, postage prepaid. Address the Electric Age Publishing Company, 5 Dey street, New York.

The Electric Age Publishing Company desires active agents at all points where the paper is not now represented, and enterprising individuals are invited to correspond with us.

Mr. Maxwell Green, of 195 Broadway, New York, desires a copy of the *Telegraphers' Advocate* of August 1, 1883, to complete his file, and is willing to pay liberally for it.

Mr. H. C. Allison is with the Associated Press at Memphis, Tenn., and Charles S. Weaver is with the same association at Nashville, Tenn.

Mr. M. D. Shaw, of St. Louis, was in town last week and called on his numerous friends.

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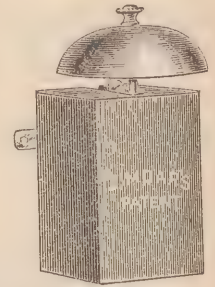
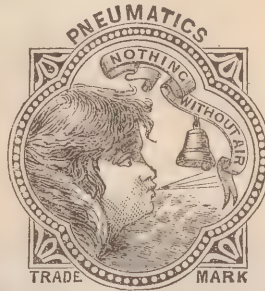
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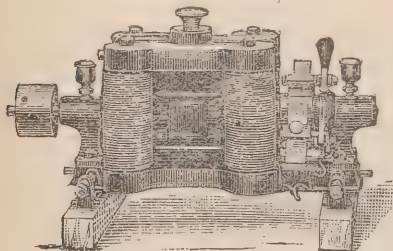
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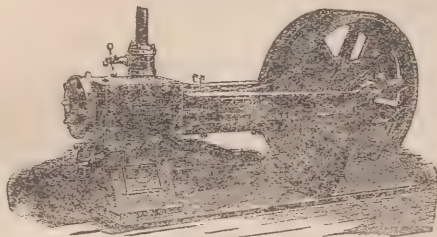
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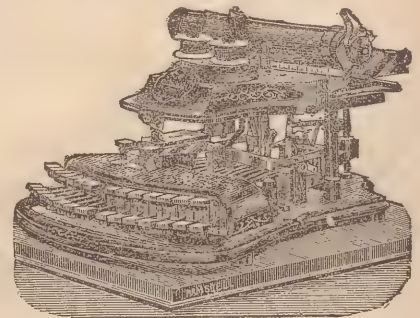
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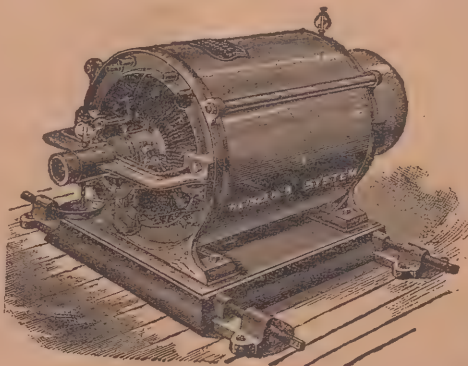
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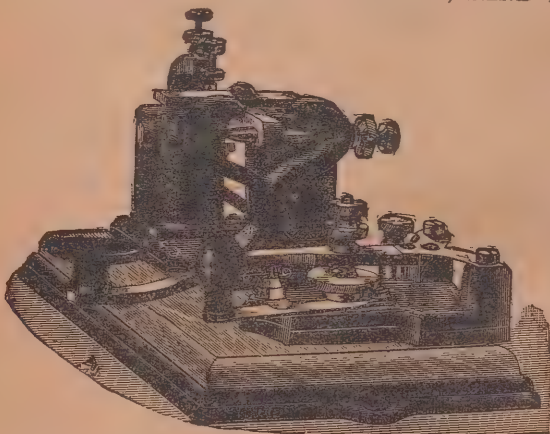


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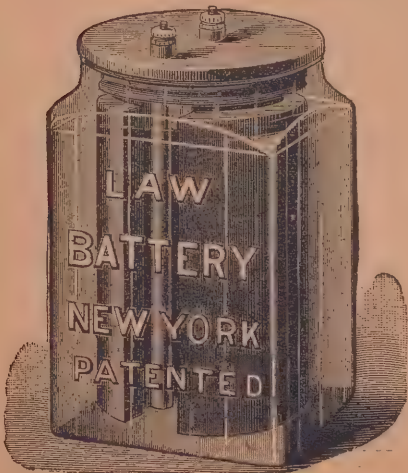
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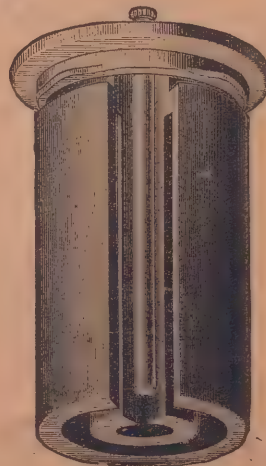
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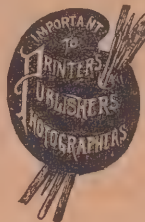
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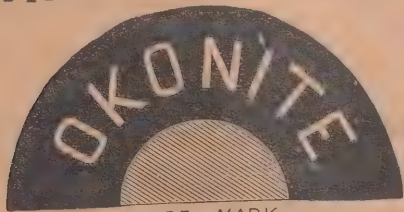
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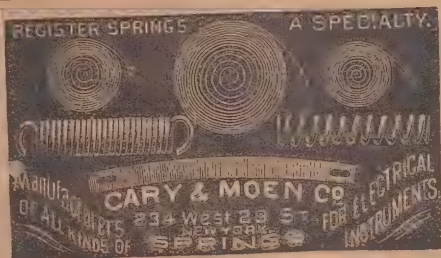
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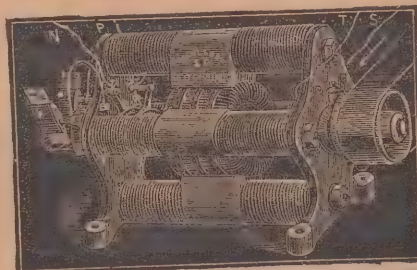
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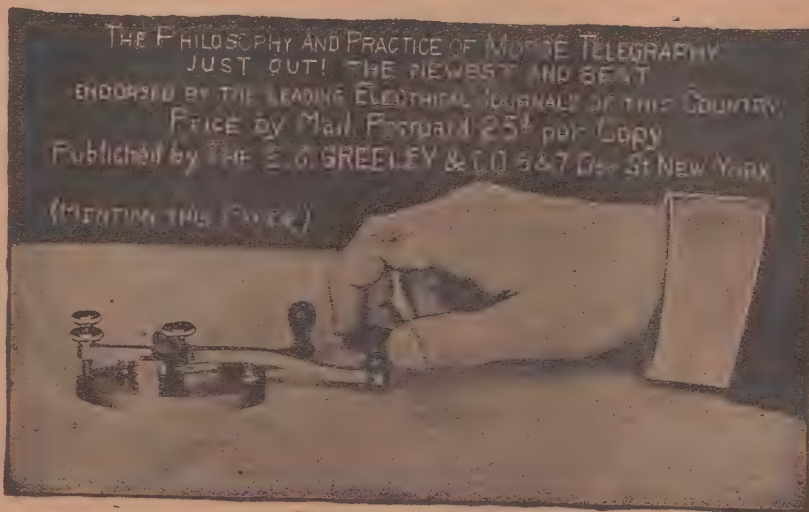
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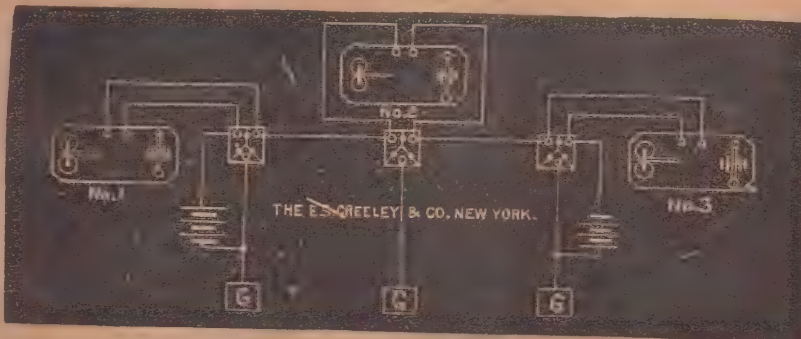


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The following diagram from the *Philosophy and Practice of Morse Telegraphy* gives an intimation of its scope.



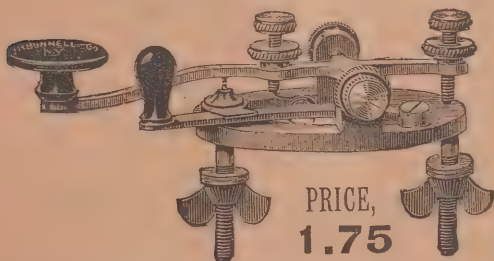
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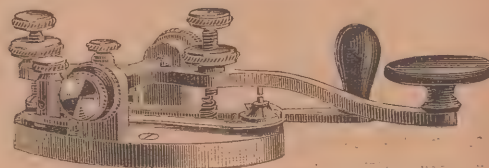
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Telegraphers cannot fail to have noticed that upon the introduction of the BUNNELL STEEL LEVER KEY four years since, it at once achieved a vast popularity, such as never before attached to any specialty in Telegraph Instruments, and that this popularity has continually increased, and is still increasing.

It will also be noticed by Telegraphers, that since the STEEL LEVER KEY was introduced, a brood of "improved" keys has been hatched and put forward from various sources from time to time each one made to look as much like the STEEL LEVER KEY as possible, or made with some kind of a "steel lever," or "patent lever," and in every case claiming all the merits possible and impossible that language could describe. Most of these "improved keys" have become exterminated by the force of their own worthlessness. Years of practical test in the use of THOUSANDS of BUNNELL STEEL LEVER KEYS throughout America demonstrates their perfection and popularity. BE NOT DECEIVED BY THE ABSURD IMITATIONS.

THE BUNNELL STEEL LEVER KEY is more durable, and in every respect better than any other for rapid and perfect sending for the following reasons:

The Lever is only one-half the weight of the ordinary brass lever as generally made.

The entire Lever and Trunnions together being made of but one piece of fine wrought steel, the common defect of loose trunnions is avoided, the strength of a heavy brass lever is obtained with much less weight of metal, and, by the perfect bearing which the solid trunnion gives, together with the use of hardened platina points, sticking is absolutely prevented.

The size and proportions are such as to make it the most perfect operating key possible to obtain, either for the hand of the skilled and rapid expert, or the beginner.

**Price, \$1.75. Finely Finished, and Lever Nickel Plated.**

Steel Lever Keys sent by mail, post-paid to any part of the United States or Canada on receipt of price, by Registered Letter or Money Order.

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J. H. BUNNELL & CO., 106 AND 108 LIBERTY STREET, NEW YORK.

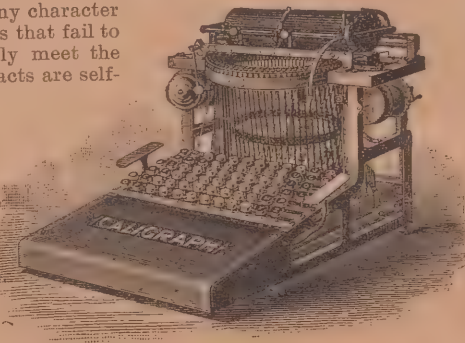
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ONE touch of the finger should produce any character used in a Writing Machine. Instruments that fail to accomplish this are deficient and do not fully meet the necessity that brought them forth. These facts are self-evident.

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We publish 400 letters from prominent men and firms which are convincing.



20,000 CALIGRAPHS ARE IN DAILY USE.

THE COMMERCIAL GAZETTE.

C. G. Muller, Agent Caligraph.  
 Cincinnati, O.

Cincinnati, October 5th, 1885.

Sir:—About three months since, I commenced to use the Caligraph with a view of receiving special dispatches from the wires, instead of by the old method by the pen. In about three weeks I was able, by diligent practice, to write from thirty-five to forty words per minute. Since then I have been using the machine with success, receiving from five to six thousand words per night upon it. We have found the machine of such value in the work as to be able to receive the dispatches by code, or abbreviation, thus increasing this capacity of the wire, though the matter is written out in full upon the Caligraph. We make an average speed of fifty words per minute by this method, and expect to do still better work with it.

The machine is a No. 2 and must be a marvel of durability, as it has never been out of order under this continuous and heavy strain, and is always ready for use.

Very truly yours, Signed; Frank B. Ross, Opr., Commercial Gazette.  
 C. G. Muller, Esq., Agent Caligraph, Cincinnati, O. October 5th, 1885.

Dear Sir:—I cheerfully certify to the correctness of the above statement of our operator.  
 Signed; Chas. E. Thorp, Telegraph Editor, C. G.

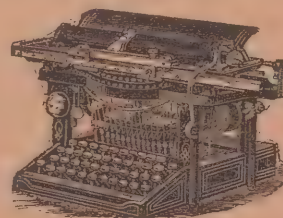
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NEW YORK OFFICE 237 BROADWAY.

HARTFORD, CONN.

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 TORONTO, Aug. 13, '88 (International Tournament for World's Championship.) 1st and 2d Prizes, business correspondence. 1st and 2d Prizes, legal testimony (gold and silver medals.)

Pamphlet with portraits of Miss Orr, (champion) and McGurran, sent on application to

**Wyckoff, Seamans & Benedict,**

327 Broadway, NEW YORK.

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NEW YORK, JUNE 16, 1889.

A telegraph lineman fell from the cross bar of a pole at New Haven, and, after descending 25 feet, struck astride a horse that stood below. The horse was knocked down, but the man escaped with slight injuries.

The use of electricity for inflicting capital punishment is about as hard on the English language as upon convicted murderers. A New York paper already proposes the words electrocution, electrocuting and electrocuted.

Genl. C. H. Barney, Secretary of the National Telephone Exchange Association has issued a notice to the members and others desiring to participate in the Minneapolis convention, informing them that a special train will carry the New York delegation through without change to that city. Those desiring to accompany the party should inform Genl. Barney as soon as possible to that effect, to enable him to judge as to the number to provide for.

The bonding companies are a great advantage to telegraph companies over the old method of securing wealthy friends to go one's security, which, in cases of dispute entailed law suits and loss of time and money. A short time ago, the Western Union Company at 10 a. m., notified the American Surety Co., that a certain manager was short in his accounts to the extent of \$600. At 12 noon, a check for the full amount was in the possession of the company.

Outside of telegraphy the first important applications of electricity to the service of man were shown at the Centennial Exhibition of 1876. It was not until three years afterwards that electric lighting became of commercial importance. The advances have since been so rapid that the most important class of exhibits in Paris may be embraced under the head of electrical devices. There are 500 exhibitors of electrical apparatus. The largest single exhibit in the whole exhibition is that of Edison, whose phonographs speak in all languages represented at the exhibition, and who has 9,000 square feet of exhibition space, in which are represented 493 of his inventions, many of these being, of course, minor appliances for use in electric lighting and telegraphy. Yet, with all the display of electrical devices, there is no news of anything strikingly novel or important, nor of any fresh discovery.

Comparisons between glass and mica show that even at high temperatures the latter is the best insulator.

The word "booming" is the only one adequate to express the present state of the market for electric motors.

The electric crane now used for handling heavy pieces of machinery at the Paris exposition will be used as a passenger transport at the exhibition.

Dr. Siemens vigorously opposes the opinions lately expressed as to the imperfect durability of cables laid in lead pipes armored with iron.

In France they have lately succeeded in duplicating Edison's experiments in repeating by a phonograph the words emitted by the aid of a telephone.

When submitted to a magnetizing force, it is said that the permeability of nickel or its magnetic conductivity is small at first, then increases to a maximum, then decreases again.

A fine opportunity to test the relative speed of steam and electricity will be afforded this summer between Boston and Revere Beach, as a new electric road runs parallel to the new narrow gauge steam road.

From the large Popp compressed air station in Paris it is proposed leading distributing conduits to smaller stations, each of which will be equipped with compressed air engines intended to drive continuous current dynamos.

Execution by electricity is frequently referred to as the "rapid-transit system." A canvass among the worst criminals of New York shows that the dread of this method on the part of the criminal soon to be executed is shared generally. The reason is easily explained.

Out of a large number of cases investigated where lightning had struck buildings and more or less damage had been done, a very large majority of the cases showed that the discharge made its way to earth through the water or gas pipes instead of by the lightning conductors.

Mr. William Henry Smith, General Manager of the Associated Press, happened to be an eye-witness to the great flood as it struck Conemaugh, for he was a passenger on the Chicago limited that was caught in the angry waters, and escaped death, with other passengers, only by running up the mountain side. He was caught, however, beyond the reach of telegraph service, and much anxiety was felt for his safety for three days.

Electricity to Blame.—A correspondent writes to the *New York World*: "By referring to statistics of railroad and telegraph construction in this country, you will learn that severe storms and atmospheric disturbances increase in ratio to the construction of same, resulting from unequal distribution of electrical forces caused by rail and wire extension. This may appear visionary to you on superficial examination, but observation will prove the above theory to be correct."

The West Coast Telephone Company have received a notification from Santiago, Chili, that after a long fight the courts there have sanctioned the extradition of William A. Bushnell, alias Gerald F. Hanson. Hanson was arrested for a ten-year-old forgery of \$36,000, after he had succeeded, under the name of Hanson, in stealing \$25,000 from the West Coast Telephone Company, of which he was agent in Chili. The case is one of the most extraordinary extradition cases in years. There is no treaty between the United States and Chili, and the prisoner is delivered as an act of courtesy to Uncle Sam. The man made many friends in Santiago. The town took sides, a duel was fought and wagers of thousands of dollars were made that he would never be brought back to New York.

### THE MEASUREMENT OF THE CANDLE POWER OF ELECTRIC STREET LIGHTS.\*

In measuring the candle power of electric street lights while burning in their position on the street, one has certain difficulties to contend with which are absent in ordinary photometric measurements. The chief of these difficulties lies in the facts that the lamp to be tested is at a considerable height above the horizontal plane which the photometer can, in most cases, conveniently occupy, and that the work must be done out of doors.

In the first place, the photometer must be modified, so that the light coming from a point considerably above its plane shall yield a beam parallel to the bar. This may be done in two ways:

First.—By having the photometer bar horizontal, as usual, and placing at one end of it a reflector, which shall throw the beam from the electric light along the bar. This reflector must, of course, be a plane surface, and may be an ordinary mirror or a totally reflecting prism.

Second.—By inclining the bar in the vertical plane so that it shall point directly at the lamp. Of these two methods I prefer the latter, because the use of a reflector of any sort involves loss of some light, the amount of which must be carefully determined and introduced as a correction in the final calculation, while it offers no advantage over the direct method to compensate for the greater trouble and liability of error in the results.

In the second place, a direct measurement of the distance from the arc to the Bunsen screen is, in general, not easy, and the modified photometer should provide some way for its indirect, and, at the same time, accurate determination.

Thirdly, the photometric work must be done in the open air, and in a number of more or less widely separated places on the same evening. The photometer must, consequently, be readily portable, and at the same time must be provided with a special lantern to protect the standard light from draughts, and with screens to cut off all extraneous light.

To meet these points I have constructed my photometer as follows: The graduated bar is fastened by a pin passing through one end to the edge of a thick board which serves as the base of the instrument. On this pin it moves freely in a vertical plane. At a convenient distance from the pivoted end a graduated circular arc, of some  $50^\circ$ , is attached to it in such a position that when the bar is raised, the arc plays in a slot in the edge of the base board. By means of a thumb-screw the arc can be clamped to the base at any point, and thus serve both as a support for the bar at any angle above the base and as a means for determining this angle by the reading of the graduation. The base has fastened to it a carefully adjusted level. The lantern containing the standard light is mounted on the base just beyond the pivoted end of the bar. When a measurement is to be made, the photometer is first brought into the same vertical plane with the electric lamp, and the base accurately leveled. The bar is then raised until it points directly at the lamp, and clamped in this position. The carrier, with its Bunsen screen, is then mounted on the bar together with blackened diaphragms, which serve to cut off all light except that coming from the standard and the light to be tested. If the night is a dark one, and other lights not too near, no further precautions in the way of screens are necessary; otherwise, the photometer is mounted in a covered wagon.

After the readings have been made [giving the distances of the Bunsen screen from the zero mark at the pivoted end of the bar], the horizontal distance from the zero

\* By Prof. J. T. Stoddard, Smith College, Northampton, Mass., in the *American Gas Light Journal*.

mark to a point vertically beneath the electric light is measured, and the angular elevation of the photometer bar is read on the graduated arc. From these data the direct distances from the screen to the electric light are readily calculated. The corresponding distances from the screen to the standard are obtained afterward by placing the bar at the angle noted and measuring directly from the screen [at its reading] to the point which the standard occupied in the out-door work.

### LOCATING SEA SIGNALS.

A party of Boston gentlemen, including Frederick Warren, of the Warren line of steamers, Hugh Allan, of the Allan line, Henry Hovey, the owner of the yacht "Fortune," Joseph Stillman, W. B. Thomas, W. S. Graff Baker, William De Ford, and others, went down the harbor Thursday afternoon to witness the first Boston exhibition of the eophone, an instrument for determining the location of the source of sounds, for the benefit of navigators. Its merits were amply demonstrated to the persons who were present at the exhibition.

The instrument was temporarily constructed in the pilot house of the tugboat "W. S. Sprague," and the exact location of the sources of all the sounds, not only from the tugboat that led the "Sprague," but from the "Echo" signals and the bell buoy were precisely determined upon by all the members of the party.

The inventors of this apparatus are Messrs. Baker and Della Torre, of Baltimore.

### A NEW ELECTRIC TRAIN SIGNAL.

Three Bloomington, Ills., railroad men have just perfected an ingenious electric train signal that is a great improvement on the old bell and cord. The device was put in operation for the first time on the Chicago and Alton. Each car is fitted up with a small magneto-electric machine operated by a crank, and connections are made directly to the engine by means of a wire that passes along the base of the air-break beneath the cars. A gong is placed in the cab of the engine and is readily sounded by generating a current by turning the magneto crank. The gong is prevented from being sounded by the jar of the locomotive and thus giving false signals by a magnet which holds the clapper until it is set in motion by the more powerful current from one of the magnetos. The return circuit is made along the rails and upon the truck to a wire connected with the magneto.

The inventors are T. M. Bates, superintendent of transportation; H. V. Miller, superintendent of telegraph of the Chicago and Alton, and J. L. Batchelder. They have obtained a patent and hope soon to place their device upon all trains on the Alton. The advantages over the old method are accuracy, rapidity and durability. The old-fashioned bell-cords are continuously breaking, and on long trains are practically useless on account of the slack. The electric train signal can also be applied on freight trains and operated from the caboose.

When the flood poured into Milton on Friday night, Western Union operator, John Wolfinger, telegraphed Superintendent Gill: "The water is coming in the office; what shall I do?" "Get a gum coat and a pair of rubber boots and stay there," was the quick reply. He did, and stayed all during the flood.

In the country districts of Sweden, electric lighting is rapidly increasing. Farmers are putting in independent installations worked by turbines at very small expense.

Telephrase is suggested as a suitable name for a telephonic message.



## A "FAULT" IN AN OCEAN CABLE.

The value of laying ocean cables containing two cores was shown during the violent storm of Nov. 25, 1888, when a fishing schooner about 26 miles from Gloucester, Mass., dragged her anchor for some distance until at last she hooked the Rockport cable of the Commercial Cable Company's system, riding to it for about 48 hours and producing the fault shown in the illustration. It was found when picking up the cable during the repair, that she had dragged along it for some 400 yards, tearing off the outer covering of jute and compound, also one of the armor wires, rolling it up into a tangled mass and at last driving the end of the steel armor wire between the sheathing of the cable and through one of the cores but leaving the other absolutely intact. With a single core cable of the ordinary type, communication would have been interrupted until repairs were effected; but in this case, by means of the uninjured core, traffic was passing



continuously with the exception of a few hours, during which the repair steamer had the cable cut in order to remove the fault. Considering the extreme violence of the gale and the large size of the vessel, it is surprising that the cable did not part, and the incident speaks well for the mechanical strength of the Commercial Cable Company's cables.

The repair was made by the steamship "Pouyer-Quertier," which was chartered for the purpose, as she was the only available cable steamer on this side of the Atlantic. Capt. S. Fossard, who commanded the steamer, showed such great skill in manoeuvring her that although two and a half miles of cable was picked up and relaid across a tideway of four knots per hour, it was found, on completion of the repair, that the cable was only lengthened by a few yards.

The electrical department on board was in charge of Mr. Chas. Cuttriss, the company's electrician.

This remarkable "fault" has now been placed on exhibition at the Paris Exposition by the Commercial Cable Company, who also exhibit there the Cuttriss recorder, and types of cables showing damage by ice, etc.—*Electrical World*.

**QUICK WORK.**—Fire was discovered at the Postal main office, New York, under the floor in the city department at 5.15 a. m., on May 20. At 5.25 the Fire Department was on hand; 6 a. m., fire extinguished—city department wrecked; 7 a. m., account taken of damaged stock—tables cleared and cleaned, and the work of running temporary wires commenced; 8.45 a. m., new switch and instruments received from the supply department; 9.30 a. m., all circuits working; 12 noon, loss adjusted with insurance companies; 3 p. m., loss paid; no interruption to business; no messages lost, so far as known, and the number handled in that department that day was 19,010. Superintendent Cochrane, Acting Manager Shirley, Night Manager Roloson and Foreman Jennings deserve especial mention for their prompt and valuable services.

**SUBWAY ELECTRICIAN APPOINTED.**—Mr. Wm. Maver, Jr., the widely known electrician of New York, has been appointed electrician of the Subway Company.

## THEN AND NOW.

The little old yellow building at 21 Wall street has just been swept away by the march of improvement. There has scarcely been a time within the past forty years when the premises have not been occupied, wholly or in part, as a telegraph office. The writer well remembers visiting the place for the first time, just thirty years ago, when he was filled with amazement at the magnitude of the metropolitan main office, containing no less than thirty-one sets of instruments; something more wonderful even than the celebrated "big pole" in Albany supporting forty-two wires. Probably this was then the most extensive telegraph office in the United States. Two of the old habits, at least, have been dealt with not unkindly by Father Time—Myers, the care-taker of the receiving-room at 195 Broadway, who looks much as he used to, perched on a high stool in the front basement at "old 21" deciphering from the slowly moving tape the hieroglyphics of the nautical practitioner at Sandy Hook; and good old Finnegan, the "grinder," perhaps the most widely known person in the service. About 1861 the headquarters were removed to 145 Broadway, and in 1875 to the present building at 195 Broadway, which was designed to be capacious enough to serve for all time to come, but is already most uncomfortably crowded. The halcyon days of "old 21" were in truth the days of small things in the electrical way. What if the rate of progress since then should continue for the next thirty years?—*Electrical Engineer*.

**STOCK QUOTATION TROUBLES.**—On the 31st of May the New York Stock Exchange, on the recommendation of its governing committee, discontinued the quotation service of the Gold and Stock Telegraph Co. and the Commercial Telegram Co., and on June 1 returned to the antiquated method of distributing quotations by messenger boys—known in old days as "pushing the pad." The reason assigned for this action by the Stock Exchange is, that it will lead to the suppression of the numerous "bucket shops" which rely upon the ticker service for the quotations that serve as the basis of their gambling business. The bucket shops flourished as usual, however. The Exchange soon learned that it had acted in the manner of the man who had cut off his nose to spite his face, and as gracefully as possible invited the two "ticker" companies to resume their accustomed places on the floor of the Exchange.

The Heisler Electric Light Company, 809 to 817 South Seventh street, St. Louis, has just issued a beautifully illustrated catalogue of their system of long-distance incandescent lighting. The standing and record of this company is a fitting and lasting monument to the pluck and determination of its president, Mr. Charles Heisler, who has by close application to duty solved the vexatious question of long-distance electric lighting. Every plant erected under the supervision of this company has called forth unstinted praise from both the owners and the operators thereof. The low speed and simplicity of wiring are advantages which recommend themselves to those desiring perfect systems. Copies of the catalogue may be had free upon application to the above address.

A travelling electric light has been used in Germany with much success. The arrangement is a very simple one. A dynamo, with an engine to drive it, is mounted on a wagon, something like that of a steam fire engine, containing boiler, fuel box and water tank, complete for a night's service.

When the enterprising ticker isn't ticking many a poor man may be saving his money.

## THE FIRST TELEGRAM.

MR. VAIL'S MEMORANDA CONCERNING THE EARLY DAYS OF TELEGRAPHY.

(From the *New York World*.)

In your issue of Sunday, May 12 last, you copied from the *Chicago News* an article headed "Mrs. Madison's Compliments. The First Message That Ever Was Ticked Over a Telegraph Wire," in which the writer stated that "it is due to the memory of Mistress Madison (wife of President Madison) that I correct an accepted historical statement as to the first telegraphic message ever sent over a wire. It is generally supposed that the words 'What hath God wrought' were the first four words thus transmitted. This is not true."

The writer then narrates an incident in support of his charge and claims as above, in which Mrs. Madison is credited with having sent from Washington to Baltimore the message: "Mrs. James Madison's compliments to Mrs. Wetherill," previous to that sent by Morse at Washington to my father, Alfred Vail (who was in charge of the Baltimore end of the line), which was the so-called historic first telegraph message. The facts in this matter are these: The line from Washington to Baltimore, constructed under the superintendence of my father, Alfred Vail, was not finished and in operation to the latter city until May 24, 1844, consequently the messages that then passed over the line could not have been the first messages, as the following narrative, being an article written by me and published in the *Century Magazine* for July, 1888, will pretty conclusively demonstrate:

"On the morning of May 1, 1844, the Whig Convention organized in Baltimore, and working connection was established for the first time by telegraph between Washington and Annapolis Junction (midway between Washington and Baltimore), Prof. Morse being at the former and Alfred Vail at the latter place. Morse sat that afternoon in the room at the Capitol at Washington, waiting for the signal from Mr. Vail, when suddenly there came an animated clicking at the instrument. He bent forward in his eagerness, almost devouring the little strip of paper that crept only too slowly from between the rollers of the register, until—the message completed—he rose and said to the friends who were present: 'Gentlemen, the Convention has adjourned. The train for Washington from Baltimore bearing that information has just left Annapolis Junction, and Mr. Vail has telegraphed me the ticket nominated, and it is'—he hesitated, holding in his hand the final proof of the victory of science over space—"it is—it is Clay and Frelinghuysen!"

"'You are quizzing us,' was the quick retort. 'It is easy enough for you to guess that Clay is at the head of the ticket, but Frelinghuysen—who the devil is Frelinghuysen?'

"'I only know,' was the dignified answer, 'that is the name Mr. Vail has sent me from Annapolis Junction where he had the news five minutes ago from the train that is bound this way bringing the delegates.'

"In those days the twenty-two miles from the Junction to Washington required an hour and a quarter in making, even for the exceptionally fast trains, such as that which was taking the delegates to Washington.

"Long before the journey was over the newspapers—enterprising even in those days—had 'extras' upon the streets and the newsboys were lustily crying the news the telegraph had brought flashing through twenty-two miles of space. A great crowd of people was at the station. The extras, with their cabalistic heading 'By Telegraph,' had whetted public curiosity to the keenest edge. Out of the train came the delegates, each one anxious to be foremost in sending abroad the inspiring news that fortune was with 'Harry of the West.' But

consternation struck them dumb when upon alighting they found in type before their eyes the very story they had believed exclusively their own, but which had preceded them 'by telegraph,' as they read in the headlines of the journals. They had seen the wires stretching along the side of the track all the way from Annapolis Junction into Washington and they had joked about it glibly."

Mr. Ralph Plumb, of Illinois, in referring to that journey from Baltimore to Washington, he being one of the delegates, wrote me as follows: "I remember the little shed at the junction, where we stopped on our way, and I saw the man (Mr. Vail) in it, who was ticking away upon a little brass machine. I saw him and I talked with him, for I wanted to know what strange thing he was doing, and he answered that he was telegraphing to Morse in Washington about our Convention, 'and he pointed to the wire overhead running in the direction of that city, 'over the first wire ever erected or used for public telegraphing, and the message I have just sent is the first news ever transmitted for the public benefit.'"

In the *Century Magazine* for April, 1888, is contained a very interesting and instructive article pertaining to the experimental days of the invention, and the story of the absolutely first telegraph message is therein told. Prof. Morse and Alfred Vail had spent the long weary months of the Autumn and Winter 1837-8, at Speedwell, Morristown, N. J., where were, and are still, situated the iron-works of Judge Stephen Vail, father of Alfred. The Judge had provided the means for the experiments, but success seemingly beyond reach, he had decided to withhold any further assistance, when on the 6th of January, 1838, he was sent for by the two enthusiasts. In the language of the workman who conveyed the message: "When I entered his room the Judge sat before the broad fireplace leaning his head on his cane, apparently absorbed in deep meditation. As I advanced, he looked up and said, 'Well, William?' and I answered. 'Mr. Alfred and Mr. Morse sent me to invite you to come down to the room and see the telegraph machine work!' He started up as if the importance of the message impressed him deeply, and in a few minutes we were standing in the experimental room. After a short explanation he called for a piece of paper, and writing upon it these words: 'A patient waiter is no loser. he handed it to Alfred, saying, 'if you can send this and Mr. Morse can read it at the other end, I shall be convinced.'"

He knew that Morse could not possibly be cognizant of the contents of the message, and hence that there could be no collusion between the experimenters, and at any event he had perfect faith in both; so that when the message was translated from the machine by Morse and handed to him, the duplicate in every word of his own despatch, he knew that the invention was a demonstrated success, and he then, perhaps, for the first time, fully realized its actual importance.

The unexpected result of the experiment overcame his usual equanimity, and he gave way for an instant, apparently wholly overcome by his emotions. He had scarcely seen or spoken to Alfred for six weeks, and the meeting under such auspicious circumstances was a most joyous one. In the exuberance of his happiness the Judge proposed to go at once to Washington and urge upon Congress the establishment of a Government telegraph. He was, perhaps, the most influential adherent in his portion of the country of the Van Buren Administration, then in power, and hence apprehended but little difficulty in effecting the desired result. But the event proved that the assistance of Congress was not so easily to be procured.

Of the mechanism used at the Capitol at Washington, and at the station in Baltimore, at the time of the completion of the first line, but one instrument remains in

existence to-day, and that is recording receiver used by Mr. Vail during the construction of the line, and afterwards at Baltimore, where upon the paper tape which came from its rollers was impressed and embossed the alphabetic characters (so-called Morse, but invented by Alfred Vail), which when translated, read, "What hath God wrought!"

My father preserved with much care this priceless memento of the days we have alluded to, and at his death bequeathed it to me, and some years since it was loaned to the National Museum at Washington, where it has attracted much attention.

STEPHEN VAIL.

Washington, D. C., May 31.

### THE QUICKEST CABLE SERVICE.

The Direct United States Cable Co. has made a new record in the time occupied in sending messages between England and New York, in conveying the result of the race for the "Derby" stakes to The United Press in the unprecedented time of two seconds. The transmission of the news between Epsom Downs and The United Press office in New York was continuous, that is to say the last letters of the name of the winner had not been sent by the operator at Epsom Downs before the first letters of the name were heard in the office of The United Press in New York; so that in reality the time occupied in transmission may be said, without exaggeration, to be incomputable. The same continuous transmission was observed over the various circuits radiating from the New York office of The United Press, whose clients throughout the country east, south and west, were thus put in instantaneous communication with the famous race course at Epsom.—*Rochester Herald*, June 6.

The cable circuit which accomplished such a remarkable record in the Derby result was made up in the following manner, which reflects creditably on the Direct Cable management in London and Superintendent Brown, of that company in New York: Beginning at Epsom Downs, where the sending operator had a view of the famous track, the circuit was made to the cable office at Valentia, Ireland, where another operator ticked off the letters over the cable as he heard them on the land line instruments thence to Halifax, N. S. The same operation was undergone at this point which carried the news to New York, and by that office repeated direct into The United Press office, where the operators in the latter office were awaiting the result on the various circuits connecting with Boston, Buffalo, Chicago, St. Louis, and intermediate points and the offices of the various newspapers served in New York City. Within two seconds of the time it had been received from the cable office or before the operator at the Epsom race track had finished the word "Donovan" it was already being sent to every office on the various circuits referred to. In all probability the result of the Derby has never been announced in this country before with such promptness and the Direct Cable and The United Press may well be proud of the great achievement.

It is proposed by M. Léon Roquet to get up a universal telegraphic language, in which often recurring words shall be designated symbolically by letters or figures which shall be the same for all languages.

The extensive adoption of lead-coated cables for sub-way electrical lines has given birth to an occupation which is in some sense a new trade—the electrical plumber.

There's talk abroad of holding an international electrical exhibition in Edinburgh next year.

It is now intended to produce electricity by wind power.

### THE McINTYRE ELECTRIC WIRE CONNECTORS.

The McIntyre electric wire connectors have the full endorsement of the best electrical experts in this country and Canada, and their continued and increasing use on the leading electric light systems is the clearest evidence of their merit. By the use of this novel device a perfect metallic contact, more enduring than the wire itself is made, without the use of solder, acid or heat, and is practically a hard soldered joint and better even than that in that it forms a joint with more than double the mass of metal. The joint thus formed is a point of least resistance to current, is weather-proof, impervious to moisture; hence will not corrode. A joint can be made with the "McIntyre connector" by any one with no practice in one-half to one-fourth the time required by the old method of using solder, to say nothing of the neat appearance of the joint when done, and it is surprising how rapidly one can make the joint after a little skill has been acquired through practice (see cuts in advertisement on another page.)

The terminals can be made for all sizes of wires for motors, dynamos and switchboards. The small lamp terminals are made for all kinds of lamps, viz., Edison, Sawyer-Man, United States and for all other makes of incandescent lamps or cutouts; telephone cords, &c.; patent lightning arresters for telephone switchboards as used by the Metropolitan Telephone and Telegraph Co.

Among the users and endorsers of the McIntyre connector are, the Edison Illuminating Co., of Rochester, N. Y.; Western Union Telegraph Co., Long Distance Telephone Co., Bell Telephone Co., Postal Telegraph-Cable Co., Metropolitan Telephone Co., Ohio Valley Telephone Co., Southern New England Telephone Co., Standard Underground Co., United States Government, Pennsylvania Railroad Co., Edison Electric Light Co., Inspector McDevitt, of Philadelphia, Sprague Motor Co., Heisler Electric Light Co., St. Louis, and many others.

These goods are kept in stock by all supply houses in New York and Philadelphia, Boston, Chicago and San Francisco.

### CABLE DISTURBANCES.

Some time ago Mr. A. E. Kennelly, of the Edison Laboratory, was detailed to locate certain faults connected with supposed imperfect earth in the Direct U. S. Cable at Halifax, N. S. After concluding his experiments he submitted a paper on the subject to the London Electrical Engineers. Vibration of the mirror spot due to electrical disturbances seemed to be the fault, and says Mr. Kennelly: "The only remedy that could be or has since been practicably available, without adding to the retardation of the circuits, was the reduction of the Morse battery power on one hand, and the sensitiveness of the Irish mirror on the other, as far as the operation of the circuits would conveniently permit."

A paragraph in Mr. Kennelly's paper reads as follows: "The Rye Beach shore end was at first laid very near to the Irish cable, and actually over it at one or two points. The cables were, however, subsequently separated, although they still necessarily lie at different points in close proximity. This separation of the cables was found to have sensibly lessened their interference."

The natural conclusion is, that if the two cables were widely separated no disturbance whatever would be apparent. The vibration of the mirror spot is obviously caused by the heavy Morse battery on the Rye Beach cable.

The New York Stock Exchange has given up the search for messenger boys who can actually run, and the stock tickers will be reinstated.

## WILLIAM C. PEARSE.

Mr. William C. Pearse, manager for The United Press, at Philadelphia, was born at Addison, N. Y., on October 24th, 1848. Soon afterwards his parents removed to Waverly, N. Y., and while attending school there, at the age of fifteen years, he ran away from home and entered the army as a drummer boy, serving two years in the 161st New York State Volunteers in the Gulf Department, under General Banks, and taking part in all the battles in which his regiment was engaged on the memorable Red River campaign, the capture of Mobile and others.

At the end of the war he returned to Waverly, and shortly after learned to telegraph in the Erie Railway office. After working in several offices on the Erie road he accepted a position in the train dispatchers' office of the Atlantic and Great Western Railway, at Meadville, Pa., and was soon made assistant dispatcher.



WILLIAM C. PEARSE.

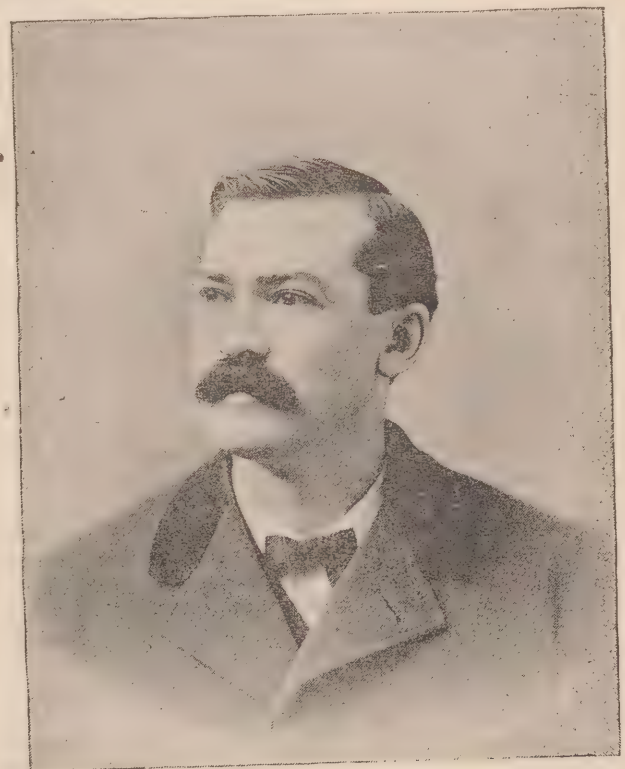
After spending two years in Meadville he returned to the Erie road and was appointed manager for the Western Union and the several railroad lines centering at Waverly. A few years later he came to New York and took a position in the Western Union main office where he remained until the American Union became a power in the telegraph field. He then offered his services to that company and was given a position as operator in their main office, but was shortly after made a chief operator, and at the time the American Union office closed was acting as night manager.

Upon entering the Western Union office again, after the consolidation, he was employed by The United Press Association, Limited (the predecessor of the United Press), to look after its business in the operating room. He was one of the first to advocate the leasing of wires by that association, and when the wires were secured he was placed in charge of them, organizing their telegraph service and acting as assistant to the general manager. When Mr. Walter P. Phillips became general manager of

The United Press, Mr. Pearse was requested to continue in the position he then held, but, believing that the new general manager would prefer an assistant of his own selection asked to be transferred to another position, and was appointed manager of the Philadelphia Bureau, where he has since remained, with the exception of about a year and a half spent in New York as correspondent for western newspapers. Besides holding a good position with The United Press, Mr. Pearse is one of the owners and publishers of a very successful weekly journal devoted to Society, Literature, Art, the Drama, etc. He is highly esteemed by all who know him and is a member of the Masonic Order, the Royal Arcanum and the Journalists' Club of Philadelphia.

## JAMES DOYLE.

James Doyle, the manager of The United Press at Baltimore, is native to the great anthracite coal region. He



JAMES DOYLE.

was born at Branchdale, Schuylkill County, Pa., on February 22, 1859, and is therefore now in his thirty-first year. His first introduction to the telegraph was at Otto Colliery when he was but twelve years of age, and with the kindly assistance of Mr. Frank P. Kendrick, the son of the general superintendent of the Philadelphia and Reading Coal and Iron Company, a gentleman for whom Mr. Doyle has always cherished a warm affection, the boy soon became an expert operator and was placed in charge of the office at that place. Subsequently he worked at nearly all of the important stations on the upper divisions of the Philadelphia and Reading Railroad, including Pottsville, Tamaqua, Mahanoy Plane, Shenandoah and Shamokin. Finally, in 1876, he quit his *alma mater* and entered the service of the Pennsylvania Railroad Company at Williamsport, whence he was transferred to Lock Haven, remaining at the latter place for two years. Mr. Doyle's close personal acquaintance with the Western Union began in 1878 in the main office of that Company at Philadelphia. Here his skill, ability and intelligence

soon placed him in the front rank. His residence in Baltimore has been continuous since 1881, where he was successively operator and night chief of the American Union and night manager of the B. and O. The late George P. Frick, first president of the B. and O. Telegraph Company accorded to Mr. Doyle the distinction of being the first telegrapher, after the general superintendent, engaged by his company, in the United States. A little more than a year was next spent with the Associated Press, and when Mr. Walter P. Phillips became general manager of The United Press he appointed Mr. Doyle manager of the Maryland bureau.

Mr. Doyle has enjoyed an enviable record both as a sender and receiver. His best sending record was made in Washington on the night of March 4, 1881, when he transmitted from the American Union office 2,410 words of a special to the Philadelphia *Times* in one hour, with the late George Connor on the Philadelphia end.

The first meeting between the famous George Eitemiller and the subject of this sketch is said to have been a most interesting event. Mr. Doyle has often stated that it was the warmest reception ever accorded him. The former was at Pittsburg on the sending side of the duplex; the latter, in Philadelphia, took care of the receiving side. The story goes that "Eite" intended to "put it up the receiver's back." The battle began at 9 a. m. and waxed hot until 5 p. m., during which time Mr. Doyle broke once, and that on the word "rye." The fastest hour of the day was from 11.30 to 12.30, the record being eighty-three average messages.

As a newspaper man Mr. Doyle displays the same perseverance, the same painstaking and energetic zeal that characterizes him as a telegrapher. He has a wide acquaintance throughout his adopted State, and there is scarcely a man in public life in Maryland to whom he is not known and with whom he is not acquainted.

Superintendent Brown, of the Direct Cable company, says, in reference to the paragraph of last issue, that the only way trouble occurs about a registered cipher signature is when the signature is registered at the office of one cable company and the message comes over another line. The case of "not known," is thus explained. As it is sometimes inconvenient to send by any particular line from European offices, the safest method is to register at all the lines here.

James Maloney, of Pittsburg, was to have fought Mike Costello, of Red Hook, N. J., near Bath Beach, Saturday night, but the Jerseyman was taken sick. Hugo Weiss, a Brooklyn amateur and a well known telegrapher of New York took his place and knocked out the Pittsburger in three rounds.

The Interstate Telegraph Company is suing the Baltimore and Ohio Telegraph Company at Baltimore, for \$50,000 damages in failing, according to contract, to provide for the Interstate Company when it disposed of its franchises to the Western Union Company.

John N. Cleary, an employe of the Municipal Electrical Lighting Company, of New York, who was last February disabled by an electric shock, due to the carelessness of the company's officials, was granted \$6,757 by the Supreme Court.

The Electrical Union is a new organization for Pittsburg, Pa., and its membership will consist of linemen, and those engaged in wiring buildings, running dynamos, etc.

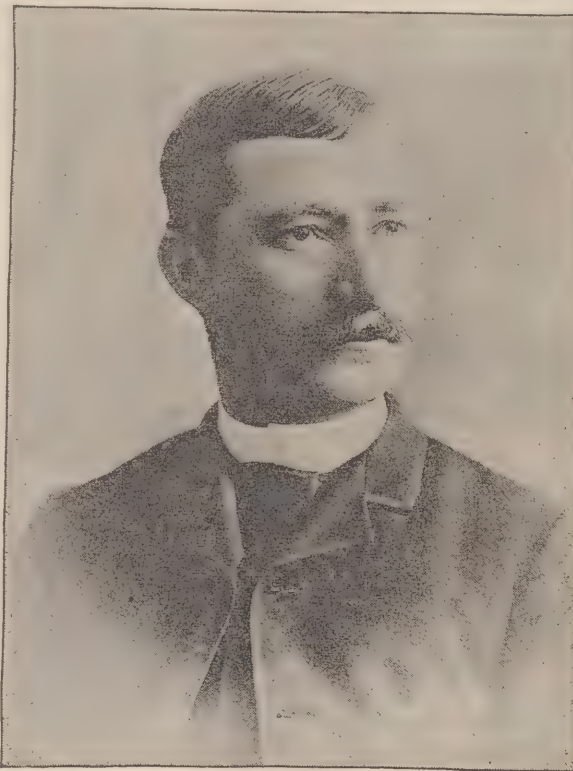
Whether execution by electricity is constitutional or not, it is certain that the strongest constitution in the world will not be able to withstand it.

Edison is the biggest single exhibitor in the great French exhibition.

## EDWARD DELANEY.

BY GEO. E. HOLBROOK.

It is with feelings of peculiar gratification that we are enabled to introduce, as the subject of our sketch, a gentleman who in his own quiet, unassuming way has done as much, perhaps, as any man in the craft to popularize telegraph papers in general, and the *ELECTRIC AGE* in particular, among the members of a profession of which he is so distinguished a representative. Edward Delaney was born in the town of Birr, Kings county, Ireland, on April 30th, 1859. At that place Lord Ross, many years ago, erected the largest telescope in the world. Through it Mr. Delaney obtained his first knowledge of astronomy. After the death of his father, who was a soldier in the British army, and was killed in New Zealand, Mr. Delaney, in 1870, came with his relatives to America and settled down at New Madison, Darke county, Ohio, where he learned telegraphy. As soon as proficient his services



EDWARD DELANEY.

were required by the Pittsburg, Cincinnati and St. Louis Railroad. After working at many different stations along the line, in all of which he gave the utmost satisfaction, he greatly surprised his old comrades by appearing before them in the uniform of a brakeman. For two years he was employed in the freight service and stood first in the line of promotion to a conductorship when, through the persuasion of his mother, he abandoned railroading altogether and entered the service of the Western Union Telegraph Company at Indianapolis, Ind. From there he moved South working en route at Louisville, Ky., Montgomery, Ala., and New Orleans, La. From all of these places he contributed regularly little squibs of an instructive or amusing character to the telegraph literature of that period, so that upon his arrival in New York, in 1881, he was considerably astonished to find that he scarcely needed an introduction. His writings had made him famous. When this journal was in its swaddling clothes Mr. Delaney's contributions, under the caption "DE Brevities," seemed to give it considerable nourishments

He watched its growth carefully, and rejoiced almost as much as did its editor to see the long flowing robe give way to a shorter dress. Its dress has been changed several times since then, but not so "The Brevity Man's" support Mr. Delaney's geniality of character, ready wit and love of fun makes him one of the most companionable of men. In an acquaintance covering a long term of years the writer has never seen him in a temper. His features are seldom in repose, being wreathed almost constantly in smiles, while his clear blue eyes, metaphorically speaking, laugh outright.

As a disciple of Izak Walton he is a howling success; indeed, few men could be more enthusiastic. In proof of this assertion the writer recalls the fact that a year or so ago Manager Dealy received by telegraph from Fort Hamilton the resignation of the gentleman whose features appear at the head of this article. His proclivities for fishing having got the better of his judgment he threw up his job to fish. A few days later he fished for his job and caught it at the first nibble. The writer, with no desire or intention of casting reflection upon the above statement, has always thought that instead of going fishing it was Mr. Delaney's purpose of joining the garrison. Next to New York, Fort Hamilton is about the most attractive spot on earth to him. Mr. Delaney is a member of several societies and also a prominent member of the New York Telegraph Club.

#### ABOUT POETRY.

"DE."

I am daily in receipt of letters from out of-town operators enclosing "Poetry" which they think I can persuade the editor of the AGE to publish. In nearly every instance the writer assures me that if the "poem" is published the subscription list will be greatly augmented and the editor will grow rich. I wish to state emphatically that the editor of the ELECTRIC AGE has no soul for poetry. He is a hard feeling matter-of-fact man.

A gentleman from Jersey writes me this week, that he has had a desire to write poetry ever since he was a small boy, and he fully believes that with a little encouragement from the AGE, he would soon be able to write "Pomes worth reading." He encloses a few verses which he kindly asks me to review and give him my opinion as to their merit. The first installment is of the pathetic order, rather interrogatory in its way but displaying great anxiety.

"When distant wires divide us  
And I am far away,  
Oh! who will sign my voucher,  
Next pay day."

The thought embodied in the above is sublime in its conception. Image the poet, perhaps shipwrecked on a barren island, starving slowly but surely to death. All hope of rescue gone, and then as if to add to the horror of his position he suddenly remembers that pay day is at hand—oh, horrible thought. We can imagine his feelings when he cries out in the deepest despair:

"Oh! who will sign my voucher,  
Next pay day."

In another verse he seems to think of the one he loved ere cruel fate overtook him and tore him ruthlessly from her arms. He admonishes her to keep his memory forever green, and in order that she may not forget his "Sine" he puts it this way still referring to the "distant wires" (whatever that may mean).

"When distant wires divide us,  
And thee no more I see,  
Remember that I love you,  
And I sign "Ke."

In the following verse the poet seems to have been rescued from the island. And has evidently experienced a dose of sea sickness. He graphically refers to it in the following lines:

"When I am on the ocean,  
And my stomach begins to throb,  
I'll throw up every thing I have,  
Except my job."

The tenacity of purpose expressed in the last line of this verse is worthy of commendation. He vows to cling to his job at the cost of his life almost. On the whole the poem is well written, the diction is passable, and while the metre is a little unique it is nevertheless rhythmical. But we are not satisfied that our poetical friend possesses true poetical instincts. He is altogether too practical. No true poet ever betrayed any anxiety over money matters. Read Byron, young man. Study Tom Moore, and above all, look to your grammar. Then come to the AGE office and be ordered out.

The flood of specials that poured into Pittsburg office was only excelled by the dam at South Forks. To Messrs. Bender and Stuart, too much praise cannot be given for the very able manner in which they as well as those under them performed their work. It was simply owing to the floods in Pennsylvania, fifty-five towns were isolated from the remainder of the world for several days. When the first wire was erected to Johnstown, there was a great rush of business awaiting it, but it was monopolized by the relief committee. Most of the despatches for the stricken city were forwarded by train from Pittsburg. They were handled daily by the thousands. Outside of the temporary office was posted a written list of telegrams awaiting claimants. As the wires were restored, the force of operators was gradually increased until some twenty circuits were manned and all of them kept extremely busy both day and night. The operators were sheltered in tents on the side of the hill. The bodies of manageress Ogle and her daughter Minnie, the operator, were found in the second floor of their dwelling when the water receded.

#### FAITHFUL UNTO DEATH.

Mrs. H. M. Ogle, the representative of the Signal Service, agent of the Associated Press, and for twenty-five years past manager of the Western Union Telegraph Company at Johnstown, Pa., is dead. At eight o'clock on that fateful Friday morning, she telegraphed the Signal Service Bureau at Pittsburg, that the river marked fourteen feet, a rise of thirteen feet in twenty-four hours. At 11 o'clock she wired: "River twenty feet and rising, higher than ever before; water in first floor. Have moved to second. River gauges carried away. Rainfall, 2 3/10 inches. At 12.33 p. m., Mrs. Ogle wired: "At this hour north wind; very cloudy; water still rising." Nothing more was heard from her by the Bureau, but at 3:07 o'clock that afternoon, she told the operator at Pittsburgh, that the dam had broken, that a flood was coming, and before she had finished the conversation a singular click of the instrument announced the breaking of the current. A moment afterward the current of her life was broken forever. She was a member of the T. M. B. Association.

The following is a complete list of the names of the Western Union Telegraph staff, who were lost at the disaster: Mrs. M. Ogle, manager; Miss Minnie Ogle, clerk and operator; Miss Grace Gorman, operator at Merchants Hotel; Miss Mary J. Watkins, operator at Johnson Works; Willie Gaither and James McAneeny, messengers; Line-man H. A. Jackson, of Derry Station, who was in the office with others was also lost. The only messenger saved was John Quinn, who is performing heroic work. The staff at present consists of twenty operators all told.

## THE OPERATOR AT JOHNSTOWN.

## MESSAGE I.

The torrent poured across the plain,  
Lapped torrents from the hills o'erhead;  
"It looks as tho' 'twere going to rain,"  
The laughing operator said;  
And then she wired—she loved her joke—  
"That reservoir may soon be broke,  
You'd better all get out your arks!"  
They laughed, forsooth, to hear her larks!

## MESSAGE II.

"There is a flood, and here's your proof  
*We're telegraphing from the roof!*  
Flee for your lives! the muddy foam  
Engulfs already many a home,  
The water's at our window-sills—  
The Dam has broken through the Hills!"

## MESSAGE III.

"*This is my last message*"—a lush  
Along the wire; a sudden rush  
Of waters—"Help!" Too late—they've swept  
Where two brave women dying wept,  
And weeping died, if they might save  
The prey of Conemaugh's wild wave!  
—*N. Y. World.*

NEW YORK CLUB ROOMS.—As there are a large number of persons connected with the telegraph and electric business, who have not any idea of the work or where the quarters of this club are situated, a brief description of the rooms will not be out of place. The New York Telegraph Club Rooms are on the third floor of the building situated on south-west corner Church and Fulton streets, running the entire length. They are well lighted and ventilated, and during the hot season, on account of their peculiar location will be very cool at all times. The two front rooms by removing the partition have been made into one with an arch in the centre, which greatly adds to the attractiveness of it. This large room is used for a library and reading-room. The walls are papered in handsome old gold pattern, and adorned with a large crayon portrait of President Holbrook, a handsome steel engraving richly framed of Walter P. Phillips, also one of D. H. Bates; group pictures of the chief operators of the Western Union and Postal Telegraph Companies, and two elegant oil-painted landscapes; the floor is covered with a rich and tasteful Brussels carpet, while chairs, settees, tables and book-case (capable of holding three hundred volumes—already nearly full) are finished in antique oak. Directly opposite the book-case stands a large beveled mirror running from floor to ceiling. On the mantle stands a beautiful parlor clock with cathedral gong, also several photographs of well-known old-timers. The second room will be for use of secretary and committees, but when not occupied by such, will be for members desiring to write letters, &c. It contains a handsome writing-desk, chairs, &c., carpeted same as library. On the desk for use of members can be found paper and envelopes, bearing the name of club across the top; pens and ink. On the wall hangs a picture of the cable steamer Mackay-Bennett. The third room is used for social purposes, in which are chess, checkers, &c. Chairs, tables and carpet same pattern as library. On the walls are several pictures, the most noticeable being the Western Union operating room taken in 1875, and a cable chart of the world, recently presented by Mr. George G. Ward. The fourth room is used for billiards and pool, fitted with table and all necessary adjuncts to a room of this character. The floor is covered with oil cloth of block marble pattern. The walls are adorned with several fine pictures, among them being one of the steamer Umbria leaving New York.

After looking over the rooms carefully one cannot but be impressed with the amount of time and labor the committees have given to have equipped and ready for occupancy in so short a time—barely three months.

The formal opening takes place June 18th, to which all telegraphers and those connected in any way with electrical pursuits are invited to attend, accompanied by their wives and lady friends.

POSTAL APPOINTMENTS.—Mr. George H. Usher, late assistant chief operator of the Western Union Telegraph Company, Buffalo, N. Y., has been appointed manager of the New York office of the Postal. Mr. Charles Shirley has been made assistant manager and Mr. J. W. Roloson, night manager. Mr. C. P. Flood has resigned. Quite a few changes have occurred in the operating force, which will be noted in our next issue.

DIED.—W. R. Jones, at Mankato, Minn., May 24, after three days' illness; aged 29 years.

[Mr. Jones was a widely known and respected member of the craft, and for several years worked in the St. Paul office of the Western Union, where he occupied the position of traffic chief for some time. He left that city in the summer of 1883, going to New Mexico, where he remained with the Santa Fe Ry. Co. until about a year and a half ago. He was universally liked by all who knew him. He leaves a wife and one child.]

W. R. Blackmond Division, 131, Order of Railway Telegraphers of North America, at a special meeting at Mauch Chunk, Pa., May 25th, elected the following officers for the ensuing year: Chief Telegrapher, D. H. Gearhart, Mauch Chunk; Assistant Chief, C. F. Portz, White Haven; Senior, T. S. Snyder, Treichlers; Junior, W. W. Hoffman, Allentown; Secretary and Treasurer, S. M. Downs, Mauch Chunk; Past Chief, E. F. Pry, Lansford; Inside Sentinel, James Gearhart, Mauch Chunk; Outside Sentinel, B. A. Metzger, Allentown.

Miss Frances Morris, a well-known lady telegrapher of New York, is prominently mentioned as one of the two female state inspectors of factories, where females are employed, to be appointed by Governor Hill shortly. Miss Morris has very materially assisted the legislature in the formation of the needed new laws and the papers highly praise the lady for the zeal and the efficiency displayed in her labors.

Mr. Thos. H. Grady, of the Western Union, 195 Broadway office, has been granted a patent on an electric alarm clock, which will soon be placed on the market by one of the clock companies. The electric bell and clock are combined, which gives it great advantage over the old methods. The alarm will sound until a metal plug is removed from the face of the clock. The dry battery is used.

The Western Union Company as usual issued a general order to superintendents and managers to send free all messages relating to measures and contributions for the relief of the Johnstown sufferers.

A challenge has passed between the New York and Boston telegraph clubs, and it is hoped a meeting will be arranged soon.

Mr. Douglas Smith has been appointed chief operator of the Postal Co. at Milwaukee, vice C. D. Hughes, returned to Chicago.

Mr. C. F. Sweeny, of the W. U., Jacksonville, Fla., force has been added to the "waiting list" at 195 Broadway.

A. G. R. & I. telegraph operator has been discharged for transmitting profane language over the wires.

## NOTES.

**BOSTON NOTES.**—During the winter the night men have worked but little extra, owing to the large number on the extra list. As a result, the desire to "scoop" this year is greater than usual. The fever will probably last till July 4th, after which time a night man looking for extra will be a rarity. The stairways of the building have been entirely rebuilt and repainted. The entries also are being repainted. Mr. Mike McGlinchy, brother of the inimitable John, has charge of the work, which reflects great credit on his abilities as a painter. The delapidated signs outside the building have been replaced with new ones, so that when completed everything will present a neat appearance. A full list of recent arrivals is as follows: J. J. Gibbons, Portland, Maine; F. M. Blake, Fitchburg, Mass.; D. C. Martin, Postal, City; S. E. Lonergan, New Haven, Conn.; Mr. Jardeen, Halifax, N. S., and Miss Alden, Middletown, Conn. Miss Sadie Ahern, formerly with the Postal, is now with the C. N. D., 35 Congress street. Mr. J. J. Sullivan, of the Shoe and Leather Exchange office, is confined to the house by severe illness. A. H. Donovan of the all-night force and H. V. Losea have changed tricks permanently. Since the suspension of the ticker service Mgr. Gillespie of the Stock Exchange has been getting a "roast." Mr. John A. Kenna, of the N. Y. quad, has been assigned as assistant at the Exchange.

**INDIANAPOLIS NOTES.**—The telegraphers appear to be extremely busy just now in electing Mr. Jerry Foley, clerk of the city. Foley is an old telegrapher and extremely popular. At the Postal Office Mr. F. W. Samuels is manager and Mr. O'Brien chief operator, with H. T. Cook and Mr. Yost days and Mr. Hunter nights. A. H. Crosby is at the Union depot. The W. U. personnel comprise F. A. Moore, chief operator, J. M. Taylor, wire chief, S. L. Douglas, timekeeper, S. R. Fulton, traffic chief, Miss D. B. Conkling, Miss O. B. Johnson, Miss M. F. Greely, Miss F. B. Greely, Mrs. E. M. Osborne, H. E. Wasson, D. A. Mahony, J. F. Stansifer, T. E. Cantwell, E. J. Cantwell, G. F. Coit, Jeremiah C. Foley, John C. Foley, E. S. Swift, C. E. Bannwarth, G. T. Farquhar, C. T. MacIntire, E. F. Maher, J. W. Price, W. H. Wright, M. Casey, J. M. Hogan, T. J. Haley, E. W. McMahan, R. B. Landis, B. A. Duffy. Night force—J. A. Fuller, night chief; G. W. Weakley, assistant; R. H. Carpenter, W. B. Crowe, L. P. Custer, R. B. Dungan, H. A. Godfrey, J. J. Maher, W. M. Atherton. Split Trick—R. H. Fallis, W. B. Fette, M. S. Allen, F. E. Hamlin, T. F. Sullivan and L. V. MacIntire, all night.

**UNION STOCK YARDS, ILL. W. U. NOTES.**—The second most important office in this district has a force of 15 operators, who are kept busy from 6 A. M. to 5:30 P. M., handling anywhere from 3,000 to 5,000 messages daily. The office, which has 40 wires, is managed by Mr. E. H. Holroyd, the well-known and popular manager, C. M. Glass and S. F. Weller, chief and assistant chief operators respectively. A. Swanson works the "hog" wire to New York; A. E. Hutchinson, St. Louis; Messrs. Wakerlin, Gates, and Miss Julia Murphy the "Ch" wires, while J. H. Worth and others look after the way wires. Messrs. M. Y. Holly and M. A. Dillon handle the C. N. D. department. C. S. Darrach, D. W. Swenie, B. F. Martin and J. W. Ward are in charge of the book-keeping department. Wm. Williams, Geo. Hunter and T. Williams run the receiving and delivery departments. Mr. Wm. Omelia is manager of the U. S. Y. & T. Co's., Exchange building office. "C. T." office, the headquarters of the U. S. Yards R. R. Switching Ass'n., with 22 pony wires of as many different railroads is in charge of Mr. Frank Gass, Mr. Wm. Conroy, assistant, John Martins and T. F. O'Connell, operators. This office is elegantly fitted up, has a 100

wire board and 30 sets of new instruments. Mr. F. H. Ketcham, recently manager of the B. & O. and formerly in charge of the Mutual Union and also the Postal Company's offices here, has been appointed postmaster of this city, quite a lucrative position. He has our congratulations. Some 30 members of the 150 operators employed within the yards have formed a brass band, and with a little practice will furnish good music. The AGE, only recently introduced here, is well liked.

**CHICAGO, WESTERN UNION NOTES.**—The first quarterly statement of our Aid Association shows a balance on hand of \$146, with 83 members in good standing. This number should be more rapidly increased as it is well worthy the approbation of a profession for whose sole benefit it was organized and whose solid adhesion it will eventually command. Already the society has done much in aiding the sick and in visiting them, but its paramount object can only be attained by a cheerful, hearty and energetic co-operation of the fraternity here, to whom we earnestly appeal to join us, if from no other motive than that of pride in our success. The New York Aid Society has a membership of over 500; that of Boston, 350; and that of Philadelphia, 300; and shall Chicago lag behind? Mr. Charles Weaver of this office lost a number of relatives and friends in the Johnstown flood. The complete interruption of all the wires south-east caused an enormous amount of foreign business to come this way, and a few of those who had been waiting here for several weeks to go to work were taken on. There are a number yet on the outside, and as the outlook for the bucket shops getting Chicago grain quotations much longer is rather blue, the chances for everybody being put to work is very small. Last week \$111.00 was quickly raised in the main office for the Johnstown sufferers. Nearly as much more was contributed privately by individual members of the profession, making a respectable total upon which our daily papers favorably commented. Gen. Eckert visited the operating department last week in company with Messrs. Clowry and Tubbs. He seemed to be pleased with the appearance of the room and especially the Wheatstone. Only a few of the personals of the day "W" force can be gotten in this issue. Messrs. Trunkel, O'Connell, and Smith guide the perforated slip on the overland, New York and Kansas City, respectively, a few of the punchers are Mr. and Mrs. Rowan, the Misses Flanders, Brown, Wells and Hardy, late of Omaha, Messrs. Murray, Pearson, Garritty, Munger, Greenman, Murphy and Gunn. Among the copyists are the Misses Doctor, Jahn, Thompson, Conley, Butler, McGlennon, Anglin, Meehan, Lee, Koehler, Thomas, Stanmyer, Mansfield, Wales, Trant, Simpson, Boothman, Ullrich, Sutter, Buckley, McKenna, Cumming and Poretto. The majority of these ladies are good typewriters, and turn out work as neat as their appearance. Mr. C. M. Davis, who for the past year has been chief of the St. Paul and Cincinnati division days has resigned. Harry Knight has been appointed in his place, and our old friend, Mr. John D. Walker, has been placed on the floor to assist on the loops. We are heartily glad to see Mr. Walker promoted, and he has the best wishes of all. Mr. C. R. Napier has been appointed chief of the Eastern division nights. Mr. E. E. Friend was married last week to Miss Belle Logan of this office. Mr. and Mrs. Friend have our congratulations and best wishes. The many friends of Mrs. Beale sincerely sympathize with her in the loss of her husband who died June 1st. A number of the fraternity attended the funeral on the 8th inst. to Grace-land cemetery notwithstanding the inclement weather. Mr. A. McCoy has returned after a two weeks' illness. Among recent additions to the force are Messrs. W. C. Smith, Georgia; McLaurie, Phila.; Bishop, Cincinnati; Milliken, Atlanta; Globinskey, Michigan; Cook, Springfield; Shaley, St. Louis; Jackson, St. Paul; Reddick,



Sioux City; Dunn, Omaha; and Stafford, New York. Mr. W. Foad has gone to Toronto; J. Ryan to Bloomington and C. E. Tracy to Atchison. Jake Thompson has disappeared. Can anyone tell us where? Miss Mary McDonald is a recent addition to the city lines from "Yd" office.

C. P. R. R., WESTERN DIVISION NOTES.—W. W. Maguire, of Ignace, is on a vacation. He is relieved by Mr. Edwards. We still find our old friend James Ferguson in Winnepeg Yard, assisted by Mr. McLaren. Mr. Hallett who has been on a vacation, visiting friends at Port Arthur, has returned West. E. F. Booth, who has been stationed at Cartier for the past three years, has resigned to go to Montana. Mr. Doonar, from Ramsay, replaces him at Cartier. EASTERN DIVISION NOTES.—It is rumored our highly respected chief despatcher is soon to join the army of benedicts. M. J. Donovan, who has been agent at Heron Bay for nearly three years, has been transferred to Donald, B. C. Transfers:—Joe Morrow, Middleton to Heron Bay; C. W. Hemsworth, Trudeau to Middleton; R. Currie, Heron Bay to Trudeau; W. Louetit, Trudeau to Heron Bay. F. W. Peters, our newly-appointed agent, has been promoted to the agency at Winnipeg, vice W. E. Belcher, resigned to go with the Northern Pacific. Mr. Longworth from Gretna appointed to Port Arthur. Neil McDougall, operator in agent's office, left a few days ago to appear as witness in the big suit, McLennan vs. C. P. R. The Heisler Electric Light Co. is putting in their incandescent system at Port Arthur. H. E. Leslie has left us to accept a more lucrative position in New Westminster. Success to him. C. Eggett promoted to West Fort, D. Signac from Carlstad replacing him at Tache. B. S. Jenkins, superintendent telegraphs, Winnipeg, paid us a visit a few days ago. C. P. R., Eastern Division Notes.—Our highly esteemed chief despatcher, H. F. Trenouth, at Schrieber, left us a few days ago for Port Hope, where he was married to Miss Maggie Hewston. They will go on an extended wedding tour, taking in on their way the General Convention of Dispatchers, to be held at Indianapolis, June 12th. Mr. E. E. White is most ably performing the duties as chief in Mr. Trenouth's absence. It is rumored that two or three of our young bachelor friends at Schreiber will shortly follow the good example just shown them. In a tug of war there on May 24th, the bachelors were badly beaten.

NEW YORK WESTERN UNION NOTES.—Prominent among the recent arrivals here is Mr. Ralph W. Pope, the distinguished electrician, who has accepted for the summer months a position on the 5:30 to 10:30 p. m. force. The leading question here now is: "Are you going to attend the New York Telegraph Club's reception on the 18th?" And the reply thereto is very distinctly in the affirmative. Miss Lizzie McMahan and Mrs. Montgomery have been home on sick leave. Mrs. Ames has returned. Her husband, we regret to say, is not so well as when last reported. "Come down" was the laconic message carried by one of the check boys one night last week, but when it was handed to one of the biggest men in the office he tumbled with a "dull, sickening thud." Miss L. M. Murphy and Miss Marston are relieving at broker offices. Miss Carrie Macy has been appointed on Washington Market wire with Mrs. Fones. The following ladies have been assigned to the split trick this month: Misses A. E. Miller, May Finley, Jennie Fitch, Regina Burck, Bertha Burck, Mamie Cassidy, Lottie Wiggins, Lillie Shannon, Nettie Alberts and M. Barry. Miss Horton has resigned and gone to California. Miss Hall of the Post Office wire has resigned for the summer months. We regret to learn that Miss M. E. Trenneman's absence for several days past was due to the death of her little sister. Miss Florence Miller has been quite ill. Her absence was greatly missed. Miss McGill has been transferred to the Man-

hansett House, Shelter Island, L. I., for the summer. Much sympathy is expressed for Miss Corby, whose father died quite suddenly a few days ago. Sunday excursions aboard the magnificent steamboat Sirius are becoming immensely popular. Conspicuous among those who have taken advantage of the opportunity to enjoy a delightful sail up the Hudson are the Misses Daley, Donovan, Hall, McNally, Sinsabough, Robertson, Finn, Ahearn, Fellgraff, Uth and Carroll, and Long Island Chief Jones and Traffic Chief Stephenson. Ed. W. Morrison has changed places with Mr. John Smollin, who for a long time past has been at the Chicago *Times* bureau. The latter is now on a vacation, but will report at the main office upon his return to town. I have often heard the remark made to new men who were in a hurry to start reds, "Wait till I get the red ink," but I never thought the color of the ink would materially change the monetary classification of a message. In this case it seems to have done so, and had not the error been promptly discovered, the whole course of a youth's life might have been changed. A recent addition among the check boys was filing business on one of the heavy circuits when he came across a black message written with red ink, which he promptly filed on red hook, where, in a short time, it was found by the operator. Because the message was written with red ink, the boy, for the life of him, couldn't see how it could be a "black." Mr. Chas. D. Kemp, one of the best telegraphers in New York, for some time employed at Police Headquarters, but of late stationed at the main office, has joined the police force and is duly installed as "one of the finest." On the 10th inst. all previous records made on quads. in this office were broken by the handling of 1,491 messages between 8 o'clock a. m. and 5:30 o'clock p. m. by Messrs. Geo. Ford, William Tucker, Al. Nace and Charles Bowtelle. Night City Line Chief Robinson wears a smile as broad as the switch, and all because of the arrival at his house of a little boy. Miss Lulu Lisle has gone to Ocean Beach, N. J., for the summer. Mr. McCawley has been added to the 7 to 4:30 trick, vice G. W. Skidmore 6 to 3. W. S. Smith is a recent addition to the 6 to 3 trick. Amory E. Parmentier has taken the 5:30 to 9:30 trick Wednesday and Saturday evenings, vice Fallon resigned.

DETROIT NOTES.—Late changes are: Messrs. McMillan, extra, to regular nights; Linden, extra, to split trick. Late arrivals and additional to split trick are: Messrs. Hancock, Roche, Beebe; Misses Nolan, Smith and Gregory. Still later arrivals, at the homes of the proud fathers, are Masters Beach and Thompson; weights, respectively, thirteen and nine pounds. Charley Risdon's boy, born a few weeks since, was a girl; but Charley is just as happy.

WINONA, MINN., NOTES.—This is a city of 25,000 inhabitants, where quite a telegraph business is handled. Miss M. Thomas is manageress of the North American office and is quite popular with the business community. Harry Hanley is operator, Miss Sophia Halsey having resigned her position with this company. Mr. Chas. S. Keown, formerly of the Postal, Chicago, is here representing a Chicago commission house and is meeting with success. They control a direct Chicago circuit. The W. U. personnel will be mentioned later.

ROME, GA., NOTES.—At the W. U. Mr. Chas. G. Woodruff is manager, Messrs. Herbig and Gentry handle the messages, and E. H. Howze receives press. Departures: Smith, Marshall and Milliken, for Chicago. O. A. Quigley works for a bucket shop. At East Tenn. office, in East Rome, we have Ezra Goodwin, chief; Brown, 2d, and A. E. Reed as dispatchers; Messrs. C. M. Perly and H. Walters as operators. V. H. Cain handles trains for the C. R. & C. R. R. The O. R. T. have a flourishing lodge here and are doing good work. The Postal Co. have erected their poles this far, and are now working between here

and Gadsden, Ala. The wire stringers are following close behind them, and in a few days we will have a competitive line, which we hope will come to stay.

WICHITA, KANSAS, NOTES.—The Western Union Telegraph Company have just moved into their spacious new office in the Sedgewick Block, one of the finest business blocks in the city, and the quarters are very pleasant. The room is 60 by 250 feet, the office wires being run to each table from the ceiling, the new 50 wire Spring Jack switchboard being enclosed in an elegant case, and set out three feet from the wall, and everything is as complete as can be made. Foreman J. C. Hurd made the change on Sunday morning last, and to his credit be it said that "30" was taken on night report in the old office at 4 a. m., and at 7 a. m., the new office opened its doors for business; not a wire was interrupted, and chiefs at other points could not tell when the move was made. Mr. Hurd is the oldest lineman in service in the employ of the W. U., having been with them for a great many years. The changes since last notes are as follows: Night Chief Bowers away on visit for two months; Night Report man, G. I. Knapp, takes his place, while Mr. Knapp is relieved on report by Mr. I. K. Sampey, lately of Cleveland, Ohio. Mrs. E. M. Elder has resigned day report, and gone to work in a broker's office, being relieved by A. L. Porter, lately of Pittsburgh, Pa. Other late arrivals are: O. T. Crooks, from Keosauqua, Ioa. Manager Hackett takes a well-earned rest on the first, after three years of very hard work, without the loss of a day from his desk. Mrs. Hackett accompanies him on a visit to relatives. Business is booming; we have now three brokers' offices that loop on the Kansas City quad. There is every indication of good crops in Kansas this year, and if it proves true there will be an increase of fifty per cent. in the amount of business handled here in the next six months. The Age is not being patronized as it should be. Too many of the boys depend on reading "the other fellow's copy." Mr. B. C. Elder is the agent, and will be glad to accept subscriptions from any point.

TRANSFERS.—Frank Ross, Oil City, Pa., to Birmingham, Ala.; Harry Beeton, Belleville to St. Catherines, Ont.; H. Brooks Nixon, Helena, Mont., to Fowler, Ind.; James A. Dillon, Little Rock, Ark., to Omaha, Neb., for the W. U.; D. L. Kane, Chicago to Deming, N. Mex.; L. B. Pearson, Deming, N. Mex., to Chicago, Ills.; E. W. Dodge, Gold Creek, Mont., to White Cloud, Iowa; A. P. Mitchell, Raleigh to Asheville, N. C., as manager of the W. U. office; J. K. Witzel, W. U. to P. R. R., Pittsburgh, Pa.; W. C. Myrick, Wescasset to Richmond, Me.; G. P. Straley, St. Louis to Chicago, for the Postal Co.; H. H. Hoover, Williams, Ariz., to Marfa, Tex.; M. W. Raiford, Jacksonville, to Orange City Junc., Fla.; Chas. E. Brennan, Springfield, Mass., to New Britain, Conn.; Mabel B. Howe, Cincinnati, O., to Denver, Colo.; W. A. Richardson, W. U., to Norfolk and Western Telegraph office, Norfolk, Va.; Harry Stevens, Muncy to Coudersport, Pa.; H. C. Biggs, Savannah, Ga., to Philadelphia; Ward D. Webber, Little Rock to Hot Springs, Ark.

Higgins—I hear you lost a pile on 'Change yesterday.  
Wiggins—You heard right.  
"Were you a bull or a bear?"  
"Neither, I was a jackass."

First Belle—I hear your father has failed or at least lost heavily in Wall street.

Second Belle—Yes, poor dear; he can no longer light his cigars with crisp five dollar bills, but has to use one dollar bills. It is just awful.

Mr. J. H. F. Walker, of the W. U., Norfolk, Va., is lying ill at Pelham, N. C.

ELECTRICAL EXECUTIONS.—It is stated that three Westinghouse alternating machines have been bought by Mr. Harold P. Brown, for use in electrical executions at the New York State Prisons at Auburn, Clinton and Sing Sing. The machines have been delivered to Gen. Austin Lathrop, the superintendent of State prisons. The current is to be administered to the strapped criminal by means of electrodes fixed on his head and feet. One criminal is already awaiting execution by electricity.

The Friendship Boat Club, a prominent Harlem institution, held their Twenty-second Annual Picnic at Washington Park, Decoration Day. It was very largely attended and a very successful affair. Among the well-known knights of the key present were: Wm. Newman, J. J. Smollin, P. J. Soden, Oliver Hart, T. F. Murphy, D. S. Dunham, J. W. Hodnett, T. Hegenbotham, Wm. Cooke, Frank English, Wm. Auld, E. Felleman, Ed. Morrison, Wm. Roach, Wally Brasil, Pete Durham, Johnny Wynne, Tom Hannon. F. E. McKiernan and J. F. Maguire.

The Public Grain and Stock Exchange Base Ball Club journeyed to Springfield, Mass., on Decoration Day, and there met and defeated the Tibbetts & Co. Grain and Stock Exchange Club, of Boston, by a score of 10 to 5. The game, after being stopped several times by showers, was finally called at the end of the sixth inning. The Boston boys, like their representative in the League, are hard losers.

Station Agent F. C. Jobst and Operator Burell were on June 4 murdered at Silver City, Mont. and the two murderers were, on the following day, killed by a sheriff's posse. Robbery was the motive for the dastardly crime. Charles Burell was a new arrival at that point from Michigan.

Mrs. S. E. Ostrom, wife of Mr. Ostrom, manager of the Postal, 25 Broad street, is an expert shot. On Decoration Day she hit the bull's-eye of a target, with a rifle, 10 times out of a possible 13, at a distance of 70 feet.

Superintendent Gill, of Philadelphia, Colonel F. Anderson, of The United Press, and General E. S. Greeley, of New York, were passengers on the steamer City of Paris, which left New York June 12.

When too large a current is taken from any cell, the electro-motive force goes on dropping for some time, after which it rises slightly, and seems to tend toward a fixed value.

Two travelling platforms of ten tons capacity, moved by electricity and mounted on girders, are used to carry visitors around the machinery hall of the Paris exposition.

Generally speaking, an increase in the percentage of phosphorus in iron wire means a decrease of conductivity, which can also be said of manganese.

The application of electricity to the transfer of motive power to considerable distances has of late made great progress in Austria-Hungary.

A fleet of small twin-screw passenger boats, sixty feet long, propelled by electricity, is to be placed on the Thames this summer.

If all the telephone wires in this country were stretched in a continuous line they would go seven times around the globe.

Mr. A. G. Saylor is acting superintendent of the W. U., Philadelphia, in the absence of W. B. Gill, in Paris.

Thos. F. Murray, of the Postal, 91 Wall street, New York, has resigned.

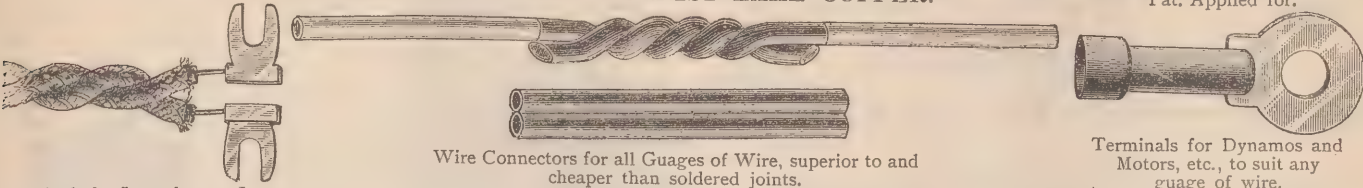
There is to be an electric road connecting Bay Ridge and Coney Island.

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Please mention this paper.

To those who are enterprising and waiting for "something to turn up," we would say: "Get to work and turn it." Vain wishing and waiting for sinecures are seldom realized. Their wear and tear on the brain is worse than hard work. If you wish to turn something and thus earn the price of your labor, communicate with the ELECTRIC AGE Publishing Co. for subscription terms, and go to work and secure all your acquaintances who are not now receiving the paper, but are dependent to keep posted upon seeing neighbors' copies. Thirty cents is the commission allowed on a yearly and fifteen cents on a six-

monthly subscription. Every one within your reach not now enrolled, can positively be secured if you go about it in the right manner. Quite a number of our agents are paying their rent out of the commissions earned, and indifference and lack of get up and get there are the only drawbacks to this not being accomplished at every central point in the country. Those who are at places not now taken care of by agents should lose no more time but endeavor to build up an agency second to none. It will pay you to give this subject serious consideration.

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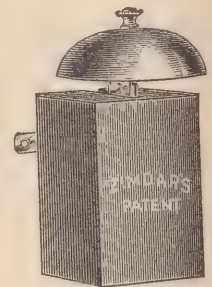
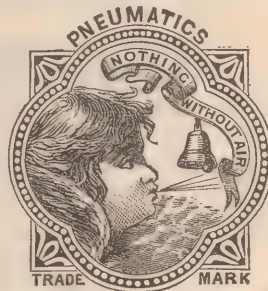
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One little fellow from Connecticut writes; "I can climb trees, play baseball and other outdoor games as well as other 14-year-old boys."

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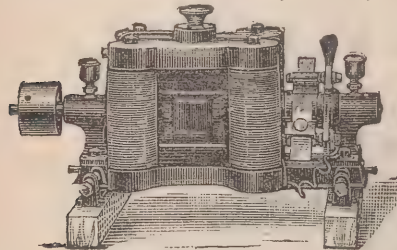
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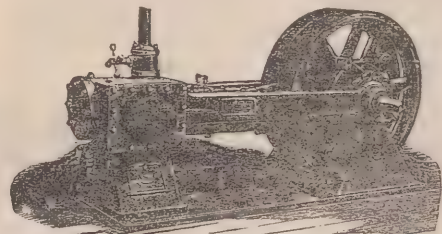
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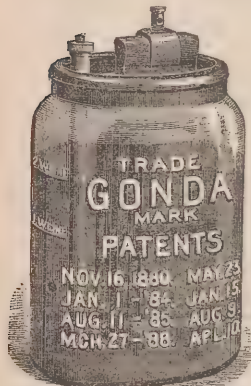


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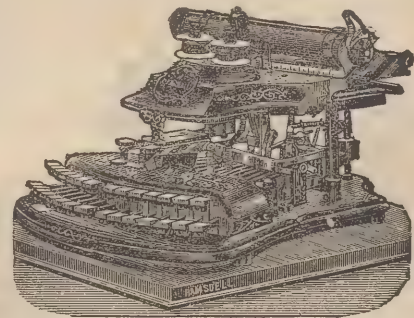
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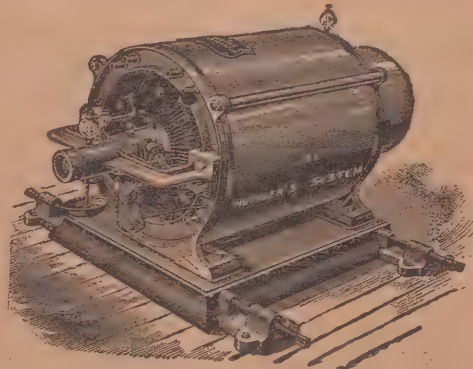
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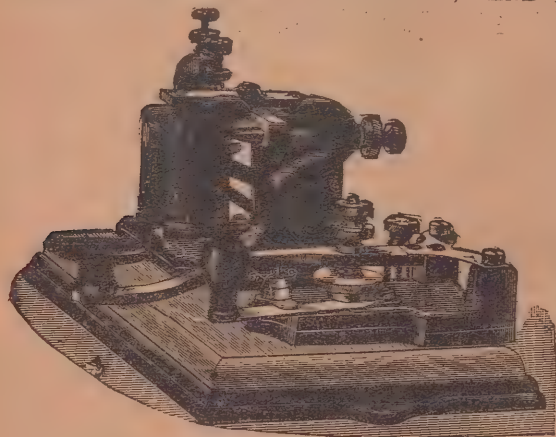


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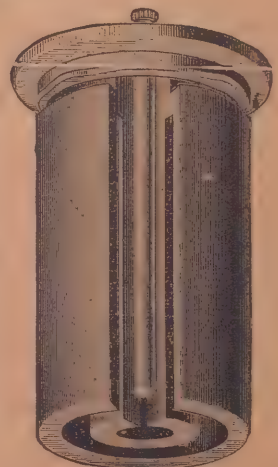
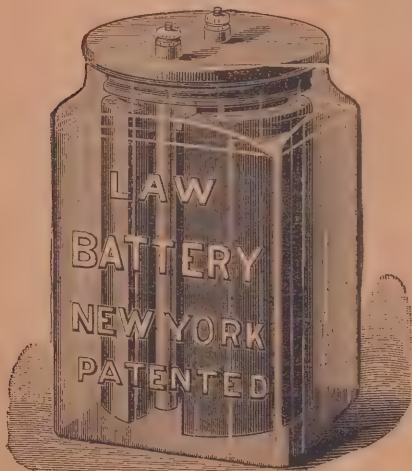
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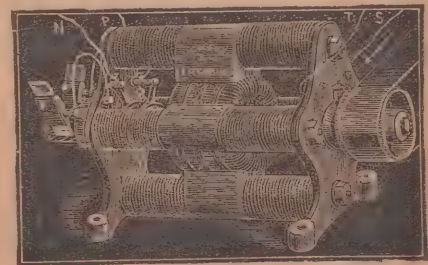
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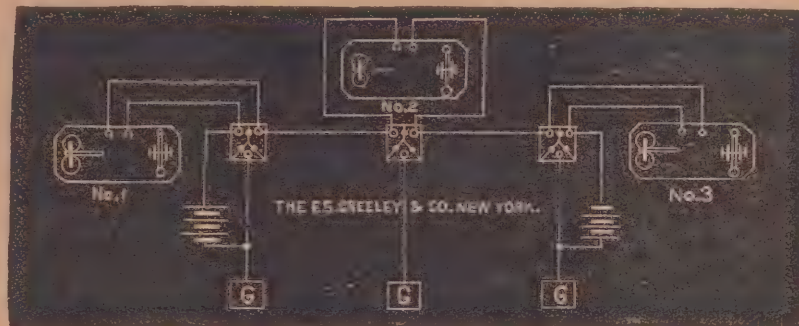


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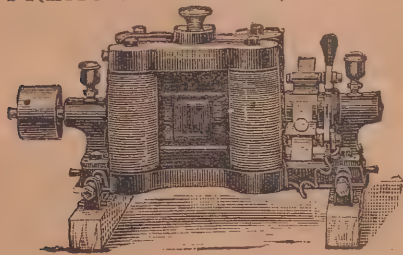
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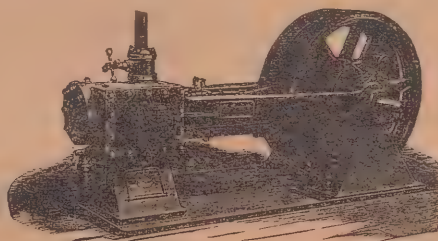
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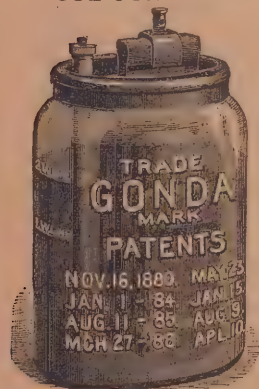


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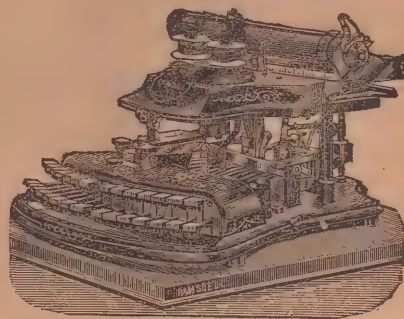
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## FOUNTAIN AND STYLO PENS.

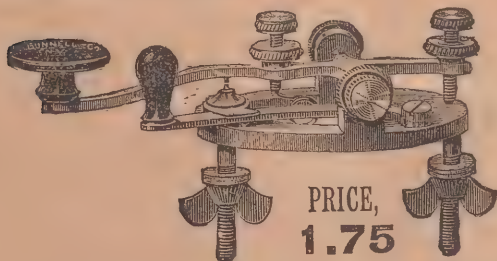
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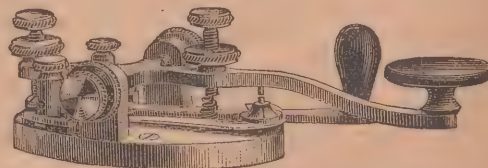
**J. H. BUNNELL & CO'S**  
**STEEL LEVER** SOLID TRUNNION **KEYS.**



Over 73,000 now in use.

THE ONLY PERFECT KEY.

J. H. BUNNELL'S PATENT,  
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Legless Pattern Steel Lever Key.

A Beautiful and Perfect Key suitable for use on fine desks, or wherever a Legless Key is preferable. PRICE, carefully boxed, and sent, prepaid by mail, to any part of the United States, \$2.25.

This form is especially convenient for operators who wish to possess their own private key, as it can be readily placed anywhere or removed without boring holes.

Telegraphers cannot fail to have noticed that upon the introduction of the BUNNELL STEEL LEVER KEY over eight years since, it at once achieved a vast popularity, such as never before attached to any specialty in Telegraph Instruments, and that this popularity has continually increased, and is still increasing.

It will also be noticed by Telegraphers, that since the STEEL LEVER KEY was introduced, a brood of "improved" keys has been hatched and put forward from various sources from time to time each one made to look as much like the STEEL LEVER KEY as possible, or made with some kind of a "steel lever," or "patent lever," and in every case claiming all the merits possible and impossible that language could describe. Most of these "improved keys" have become exterminated by the force of their own worthlessness. Years of practical test in the use of THOUSANDS of BUNNELL STEEL LEVER KEYS throughout America demonstrates their perfection and popularity. BE NOT DECEIVED BY THE ABSURD IMITATIONS.

THE BUNNELL STEEL LEVER KEY is more durable, and in every respect better than any other for rapid and perfect sending for the following reasons:

The Lever is only one-half the weight of the ordinary brass lever as generally made.

The entire Lever and Trunnions together being made of but one piece of fine wrought steel, the common defect of loose trunnions is avoided, the strength of a heavy brass lever is obtained with much less weight of metal, and, by the perfect bearing which the solid trunnion gives, together with the use of hardened platinum points, sticking is absolutely prevented.

The size and proportions are such as to make it the most perfect operating key possible to obtain, either for the hand of the skilled and rapid expert, or the beginner.

Price, \$1.75. Finely Finished, and Lever Nickel Plated.

Steel Lever Keys sent by mail, post-paid to any part of the United States or Canada on receipt of price, by Registered Letter or Money Order.

SEND FOR OUR NEW CATALOGUE No. 10 OF MARCH, 1889.

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**SHAVER MULTIPLEX TELEPHONE**  
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T. W. Osborne wrote 179 words in one single minute on the CALIGRAPH, the Champion Machine of the World.

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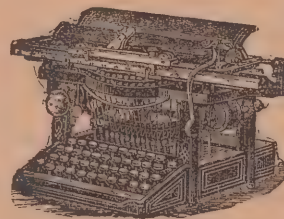
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## THE ELECTRIC AGE.

Published on the 1st and 16th of Every Month.  
BY THE ELECTRIC AGE PUBLISHING CO.

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REGISTERED CABLE ADDRESS, "ELECTAGE," NEW YORK.

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J. J. SEITZ, Agent G. N. W. Tel. Co., Hamilton, Ont.

NEW YORK, JULY 1, 1889.

The French tribunals have made up their minds that the stringing of wires over a house is an injury to the proprietor of the house, for which he should be paid.

The Peckham Street Car-Wheel and Axle Company's new shops at Kingston, N. Y., are being equipped with the latest tools and machinery for manufacturing wheels for the electric motor trade.

The Cleverly Electrical Works of Philadelphia are making a specialty of small sizes of Perret Motors, a number of which have been installed throughout that city, and are giving excellent satisfaction. These motors are noted for their good work.

A report comes that a novel use of electricity has been made in India to prevent the entrance of snakes into dwellings. Before all the doors and around the house are laid two wires connected with an induction apparatus. Should a snake attempt to crawl over the wires he receives a shock of electricity that either kills or frightens him into a hasty retreat.

The name of M. Gaston Planté, who died in Paris May 23, has become historical through his researches on the effects of secondary currents and the apparatus for producing the same, which he termed secondary batteries; he devoted twenty years of his life to these investigations, and he may be truly called the first inventor of the modern storage battery. All who personally knew M. Planté pronounce him a kind-hearted, genial man, always ready to assist electricians with good advice.

Dr. Moser (*Eder's Jahrbuch für Photographie*) draws attention to the following curious phenomena: The leaves of an electroscope are caused to diverge by charging with, say, 150 cells. On allowing a ray of direct sunlight to fall on the instrument the divergence is increased, and it returns to its original amount when the light is cut off. A common match (sulphur with phosphorus tip) will glow in the dark when brought close to a charged body such as the cover of an electrophorus. The mercury in a capillary electrometer falls when a ray of sunshine falls on it, just as it does when connected to the zinc of a battery. The effect is distinctly electrical, not thermal, as it vanishes when the upper and lower mercury columns are short-circuited by a wire.

The electric fountain at the Paris Exposition is composed of 33 vertical jets and 14 parabolic jets, comprising nearly 300 spouts.

Mexico has a railway system of 4,650 miles, and the telegraph system, under the control of the Federal Government, of 11,100 miles.

At a recent meeting of the Board of Electrical Control a report was read showing that 1682 poles and 1140 miles of wire had been removed from the streets since Jan. 1.

Managers of the small telegraph offices are not expected to occupy their time teaching the art of telegraphy to students, and it certainly does not reflect credit on any such official who would allow private lines to be run into the main switchboards of the company, so that students may copy from the main lines direct.

C. R. Hosmer, manager of the Canadian Pacific Telegraph Company, recently made a trip over the line, giving it a careful inspection. He says wonderful progress has been made in the last two years, and that the outlook for the coming year is excellent, owing to the general prosperity noted on all sides.

Mr. E. A. Leslie, the well-known ex-general superintendent of the Baltimore and Ohio Tel. Co., is making a big success of the Manhattan Electric Light Co of New York, of which he is the general manager. When the plant is completed it will be the largest and best equipped electric light station in the country. Mr. E. T. Barberie, another well-known telegraph man, is the electrician.

Secretary Fleming, of the T. M. B. A., is urging the several agents towards the 4,000 mark. He says one application per month, from each agent, will enable him to exhibit at the next annual meeting a roll of 4,000 members in good standing. The T. M. B. A. has a reputation second to none among the co-operative life insurance associations, and telegraphers and telephonists seeking cheap and reliable life insurance should not go outside the ranks.

Harold P. Brown, the electrician who is in charge of the arrangements for carrying out the law for the execution of the death penalty by electricity, does not look like a man who would choose killing as his method for acquiring fame. He is a slender, blonde young man, with a very pleasing expression of countenance and an almost perpetual smile. The way he got into the killing machine business was through his enthusiasm in opposing the use of the alternating current in practical electric work.

*Electrical Instrument Making for Amateurs.* A Practical Hand book. By S. R. BORTONE. Cloth, 175 pages, 59 Illustrations. Price, \$1.20.

In this work the author has attempted to guide the novice in his attempts at the construction of the more useful pieces of electrical apparatus. No attempt has been made to describe the production of highly finished "brass and glass" instruments. Such a high degree of finish requires a technical knowledge of French polishing, lacquering, burnishing, etc., as is not usually possessed by the amateur. The tools used are supposed to be of the simplest description, such as may be found in any home. Not one of the instruments described necessitates the employment of a lathe or other expensive tool in its manufacture; though of course, much truer and finished circular work can be done on the lathe than in any other manner. But the instruments produced as described in this way may be relied upon to act efficiently; and this is, after all, the end for which every instrument is constructed. It must be borne in mind that this work does not profess to teach the science of electricity; and no attempt is made to enter upon the domain of scientific speculation.—From the Preface. For sale by THE ELECTRIC AGE PUBLISHING Co., 5 Dey St., New York.

## NATURAL ELECTRICITY.

An extraordinary tale comes from Burmah. Mr. Ronald H. King, an electrician well known to the Burmese, while on a prospecting and shooting expedition in the island of Labuan, is said to have discovered a mineral from which electricity can be obtained without apparatus of any kind whatever. The mineral is described as being in the form of a black stone, of excessive hardness, and very great specific gravity, being nearly as heavy as platinum. A small block, in the shape of an irregular cube, measuring 4.3 inches one way by 5.2 inches the other way, was brought away, and, on bringing it into the testing-room, a strong effect was noticed upon the galvanometer. At first it was thought that the mineral was an ordinary load-stone, but on tests being made, it was found that the force was more akin to that of an electro-magnet, and that a strong current would flow when the mineral was connected in a circuit. Further tests revealed that a difference of potential of 47 volts could be detected at the extremities, the internal resistance of the mass being 20 ohms. The block appears to waste away very slightly, leaving a slight gray powder upon the surface when connected up for some time. The electrician now uses the block to light a couple of incandescent lamps in his laboratory!

**GERMAN-AMERICAN CABLE.**—Germany is negotiating with Belgium for the laying of a new telegraph cable from Ostend to Portland. Germany has long been dissatisfied over having to communicate with America either through France or England, and now that practically new relations are established with the United States, through the Samoan treaty, she is all the more anxious for independent communication.

A decision was rendered by Judge Tuley, of Chicago, last week, which vitally interests 2,000 stockholders of the defunct Great Western Telegraph Company, who are scattered about in nearly all the Western States. In effect it gives them an opportunity to show themselves not liable for a fictitious indebtedness of the company by enjoining the receiver, E. R. Bowen, from collecting an assessment of 35 per cent. on stock subscriptions of nearly \$3,000,000.

Two New York telegraph operators have recently closed their keys for good and accepted positions on the police force, where, no doubt, the pay is higher and promotion more speedy. The knowledge of telegraphy will certainly better equip them to perform conscientious duty to the city.

Experiments on the use of the external sheathing of cables as part of the conductor in contact with the earth, have resulted in the conclusion that such methods cannot satisfactorily be employed.

The story that the electric light on the Eiffel tower "makes all Paris as light as day" was originated by a boss liar. Ten thousand electric lights would not accomplish that end.

According to a Georgia item "Greensborough has a rooster that climbs a tree by using his spurs as a telegraph lineman uses his leg-spikes in ascending a telegraph pole."

It is believed that the electrical equipment of the Department of the Interior can hardly be equaled in the world for safety and efficiency.

The ground plate for a lightning arrester should have the shortest possible connection between it and the earth.

There is an increasing demand for the standardizing of all electric light fittings.

The lamp is said to be the most dangerous part of the electric light circuit.

## A MAGNETIC FIELD.

If, while the electrical current is flowing through a wire, a delicately poised magnetic needle be carried about it, the needle will tend to place itself at right angles to the general direction of the wire. It may be easily shown that the region about the wire is a magnetic region, commonly called a magnetic field. In order to do this, the wire may be made to pass vertically through a sheet of smooth paper which is held in a horizontal position. If, then, while the current is passing, some iron filings be sprinkled over the paper, and the latter be gently tapped, so as to assist the movements of the filings, they will arrange themselves in concentric circles about the wire.

When the current is interrupted the region about the wire is no longer a magnetic field, but it may be restored as often as the current is renewed. This simple experimental fact lies at the foundation of many electrical appliances with which we are familiar. The magnetic field about a single conducting wire is, however, generally too feeble to serve for many purposes for which it would otherwise be useful.—*Professor C. F. Brackett.*

**TELEGRAPH DEED RECORDED.**—A deed was recorded, June 19, between the Baltimore and Ohio Telegraph Co. and the Western Union Telegraph Co., whereby the Baltimore and Ohio Co. conveys to the Western Union all its right, title and interest in and to all its telegraph lines and property of every nature and description. The consideration is \$1, and the entire discharge of the Baltimore and Ohio Company from the obligation to issue the \$6,000,000 of bonds provided for in its contract with the Baltimore and Ohio Railroad Company.

The unification of all the Edison Electric Light companies has just been completed, the new company being known as the Edison General Electric Company, which is capitalized at \$12,000,000. This company holds the stock of the various Edison companies, against which its stock and certificates of the Farmers' Loan and Trust Company are to be issued, the object being, it is said, to get rid of the complications arising by reason of the business being conducted by the several companies, although under this new plan these companies will not go out of existence, but each will preserve its separate autonomy.

The American engineers visiting England are chiefly impressed with the superior solidity and finish of English engineering work and the extreme backwardness in the speed of elevators and in the adoption of the electric light. But England is ahead of America, they think, in keeping clear of overhead wires.

It is said that Edison, the famous inventor, has just patented a clock which, when it reaches 12 o'clock, shouts out "dinner time." All that is wanted now is for Edison to invent a dinner to go along with the clock.

It has been suggested to abandon the term candle power as being already meaningless and to substitute a standard affording us an expression for the luminosity of radiation.

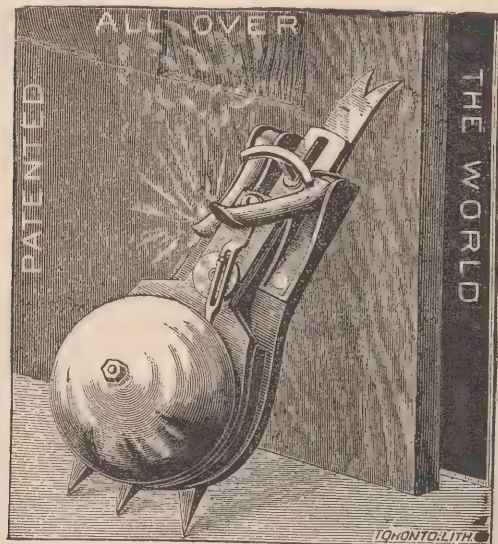
An electric motor, adapted to propelling vehicles upon streets, is said to have been successfully invented at Indianapolis.

From whatever point of view the storage battery system is examined, argument in its favor becomes more convincing.

Efforts are being made to prevent the execution of the Buffalo murderer by electricity.

## NEW PATENT BURGLAR ALARM.

The necessity for better protection against the depredations of burglars and sneak-thieves has been everywhere recognized, and inventors have given this subject much thoughtful consideration.



This is a cut of the latest production of their ingenuity in this direction.

The object attained by the inventors is a simple and portable "Burglar alarm and door fastener," which can be conveniently carried in the pocket or valise when travelling, and can be readily and easily applied to any door, giving a decided alarm should the door be tampered with.

Being automatic in action, it is only necessary to place it in a leaning position against the door to prevent intrusion.

It is especially serviceable to ladies when travelling or when at home alone.

The E. S. Greeley & Co., New York, are the sole agents.

It is very desirable to avoid by all means the heating of phosphor-bronze wires, as this leads to a decrease of the breaking strain; and consequently some means of joining had to be sought for which might replace the method of soldering used for iron wires. Moreover, experience has shown that some local action is set up between the tin solder and the iron wires, which in time leads to a weakening of the joint; such action would of course be still greater with phosphor-bronze wires, owing to the greater affinity of tin and copper. The best substitute for solder is a copper amalgam prepared as follows: Freshly precipitated copper oxide is heated in a tube in a stream of hydrogen until it is reduced to metallic copper. When thoroughly cooled, this fine copper powder is moistened with dilute sulphuric acid and well mixed with mercury, and is then washed. A simpler plan, though not such a good one, is to obtain the copper powder by reducing copper sulphate by means of metallic zinc. In making use of this amalgam for joining wires, it is pressed closely round them and allowed to set. On this account a twisted joint is not very well adapted; a Britannia joint is better, as the amalgam penetrates inside the binding wire. But the best joint is made with a tube connection, the two ends of the wires being turned up at not too sharp an angle and secured with binding wire; the amalgam is then pressed well into the tube, where it sets quite hard.

## THE FUTURE OF ELECTRICITY.

Thomas A. Edison said in an interview with a reporter of the *Pittsburg Dispatch*: "You ask me about the future of electricity. It is the coming motive power. It will be used on all railroads some day, but the point is to get an economical engine. My theory is to have immense dynamos located all along the line of the road, and have the electricity conveyed from these stationary engines to the locomotives by wires through the rails. For example, I would put two big engines between New York and Philadelphia, and enough power could be furnished to whisk the limited at the rate of 100 miles per hour.

"That is the point I have been working on for years, to convert heat directly into electricity without the intervention of boilers, steam and all that. What an enormous amount of expense could be saved if this could be done. Think of putting something into the heat of that natural gas fire and making electricity out of it. It can be done. I feel it in my bones, and just now I have a suspicion that I am on the right track, but it is a pesky problem, one that can be worked out only in time.

"I have been experimenting with an electric road in New Jersey. I had rails laid as they put them down on railroads, but the machine would run off the track in going around the curves. I then raised the curve to an angle of forty degrees and the motor went around all right. It looked as if the engine would topple over, but it didn't. You know in a centrifugal machine you can make a car go clear around a circle in the air without leaving the track."

Mr. W. H. Cole, the electrical engineer, of New York city, has accepted the general managership of the Fottrell Insulated Wire Company of Philadelphia, a company organized to manufacture aerial, underground, submarine, telegraph, telephone and electric light wires and cables of any length or size required, with conductivity and insulation guaranteed. It is a most extraordinary thing to announce to the public that a wire, insulated without an atom of rubber, with no protecting armor on the outside, may be placed in the ground and covered up and used in ordinary arc circuits, with a surety of its working for an indefinite time; that it is actually impervious to the action of the acids and gases, as well as moisture, in the earth; that action of heat has no effect on it; that time perfects rather than destroys the insulation, and that the insulation does not harm the wire. The factory is located at Bristol, Pa., where Mr. Cole can be found at any time.

An electrical shoal-water indicator has been devised by two Mexican inventors. It consists of a strong cylinder filled with shot, so that when hung by a cable from a ship it will remain perfectly upright in the water. Embedded in its center is a glass or vulcanite tube half full of mercury, the two ends being closed by metallic plates, which are in communication, by insulated wires carried by the cable, with an electric battery and bell on the deck of the ship. The action of the apparatus is as follows: When the vessel approaches shallow water the cylinder drags on the ground below, and is consequently no longer upright, but is thrown on its side. This causes the mercury in the tube to touch both the metallic plates attached to that tube, as above explained; the electrical circuit thus becomes complete, and the warning bell on the ship instantly rings.

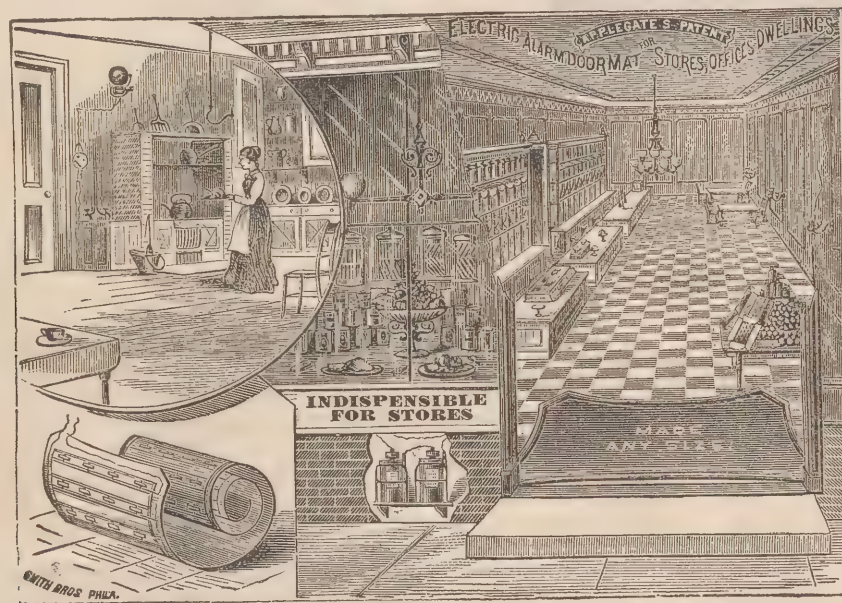
The Brown & Sharpe Mfg. Co., of Providence, R. I., has issued a new pamphlet on the construction and use of the hand lathe. Some of the processes described are not known in connection with hand lathes to many machinists. Copies may be had on application.

It cost \$5,000 to cable a speech by the President of Chili to Europe.

## ELECTRIC FLOOR MATTING.

A RELIABLE PROTECTION AGAINST BURGLARS.

Applegate's Electric Floor Mat Alarm Manufacturing Company, which is represented in our advertising columns, has placed on the market probably the best alarm extant, for protective purposes. The engraving herewith illustrates the manner in which the device is used for various alarm purposes. The matting is composed of a system of fixed wires and springs attached to a thin flexible material, from which pieces may be cut any size or shape to order. By a slight pressure of the foot upon any part of its surface, an electric current is closed or opened as the case may be, in connection with an improved alarm instrument, by means of communicating wires. These wires can be regulated by means of a switch, to strike the alarm once, to vibrate or not sound at all. This electric matting can be concealed beneath the carpet, or attached to windows, doors, shutters, screens, etc., according to necessity. This alarm has given general satisfaction to banks, mercantile houses and private residences. It can be procured at any electrical supply house or of the manufacturers, 35 and 37 Market street, Camden, N. J.



ELECTRIC FLOOR MATTING.

**A NEW CABLE.**—The Telegraph Construction Company has signed a contract for laying a cable direct from Europe to Buenos Ayres. The Government of the Republic guarantees 5 per cent. to the shareholders. The number of messages now sent through the Brazilian Submarine and the Western Brazilian to the territory of the Republic is said to be sufficient to pay at least 4 per cent. on two millions sterling. A new company will be started to take up the contract. The Telegraph Construction will be the vendors, and Sir John Pender the chairman.

All American electricians visiting Paris this summer, and desirous of attending the session of the International Congress of Electricians, should put themselves in communication with M. Mascart, *président du comité d'organisation du Congrès*, 44 Rue de Rennes, Paris.

The Electro-Automatic Transit Co., of Baltimore, Md., claim to have attained a speed of three miles per minute with their electric motor car.

A Portland (Oregon) man examined an electric motor recently and said it worked all right, but that the electricity smelled dreadfully. The motor had just been varnished.

## DEATH OF WILLIAM F. SWIFT.

William F. Swift, secretary of the Brush Electric Company of Cleveland, O., died at his home in that city June 14th. He had been ill for several months, but until a few weeks ago it was hoped with confidence that he would recover. Mr. Swift was born in Ravenna, March 7, 1852. In 1867 he removed with his parents to Ashtabula, and soon afterward began his newspaper experience by acting as correspondent of the Cleveland *Herald*. His excellent work received proper recognition in 1872, when he was given a place on the local staff of that paper. He was in a short time made city editor, and soon afterward resigned to accept a situation with the Chicago *Inter-Ocean*. Six months' experience in Chicago was followed by his return to Cleveland, when he became city editor of the Sunday *Post*. He resumed the city editorship of the *Herald* a short time after. In 1880 he became city editor of the *Leader*, and less than a year later he accepted a position with the Brush Electric Company. He first traveled in the South and in Mexico establishing electric light plants, and upon his return to Cleveland was elected secretary of the company. He spent the winter of 1887-88 in New

York, establishing an eastern office of the company, and at that time he suffered severely from throat trouble. His lungs became affected, and from March to June, 1888, he was in Texas, and after a brief stay in Cleveland, following his return in June, he went to Santa Fe, N. M. He returned from Santa Fe five weeks ago, after having received assurances from the doctors there that his lungs were all right, but it was found upon his arrival in Cleveland that he was in the last stages of consumption. Mr. Swift was married to Miss Flora M. Chichester in Cleveland in 1879, and is survived by Mrs. Swift and three children. The funeral took place on the 14th inst.

The Shaver Corporation have recently completed a Mechanical Telephone Exchange at Georgetown, S. C. The longest circuits connected through the central office is  $1\frac{3}{4}$  miles.

The only fruit, they say, that will grow on telegraph poles, is the electric current, but it requires great care in handling.



## A NOVEL LIGHTER.

The accompanying cut illustrates a new form of an electric cigar lighter, automatically controlled, made by the Novelty Electric Company, 50 to 54 North Fourth street, Philadelphia. It can be attached to any form of gas burner, if fitted with a flexible tube and allowed to hang free. The action is exceedingly simple. By merely catching hold of the bulb at the base of the burner and lifting it to the cigar held in the mouth, the gas is turned on and at the same time ignited by an electric spark. Letting the bulb fall back into its former position extinguishes the light by turning off the gas. As an ornament it is very attractive. Every part is full nickel-plated, and the workmanship is superior to that of most articles of this nature. The wires are all concealed and cannot get out of order by ordinary treatment. Its life is practically infinite. A coil and two cells are furnished with each lighter, together with printed instructions detailing the manner of adjusting the device.



The above company have also just placed on the market a very unique article—a circular buzzer—which in itself is one of the finest at present on the market, being about one-half the size of the ordinary article, and giving a very distinct and loud sound, making it much preferable to the present bell alarm and doing away with that sharp, ear-splitting ring. It is very pretty in appearance. The Novelty Company are the patentees and sole manufacturers of both the above articles.

**TELEGRAPHING FROM A MOVING TRAIN.**—A test was made June 19, on the Raleigh and Gaston Railroad in the presence of a number of prominent railroad men, of a process recently invented by Baylus Cade, for telegraphing to and from moving trains. The current is maintained by means of a drag which is attached to the car and which slides over a set of wires laid along the track. Messages were received from the offices at Raleigh and Greensboro, while the train was running at the rate of thirty miles an hour.

Frank Maier, a well known Wall street telegrapher, recently recovered \$850 damages, for injuries received during the progress of a game of billiards in the Atlantic Garden. It seems an employee of that establishment opened a trap door on the opposite side of the billiard table without warning the players; Mr. Maier, engrossed in the game, did not notice the opening, fell headlong into the cellar, receiving injuries necessitating the amputation of a finger. The case was tried in a Brooklyn Court, resulting as above.

The electric conduits in Paris are about five feet high, two and a half feet wide and of masonry lined with cement. They contain naked wires, insulated only by porcelain knobs, and are built under each sidewalk parallel with the boulevard.

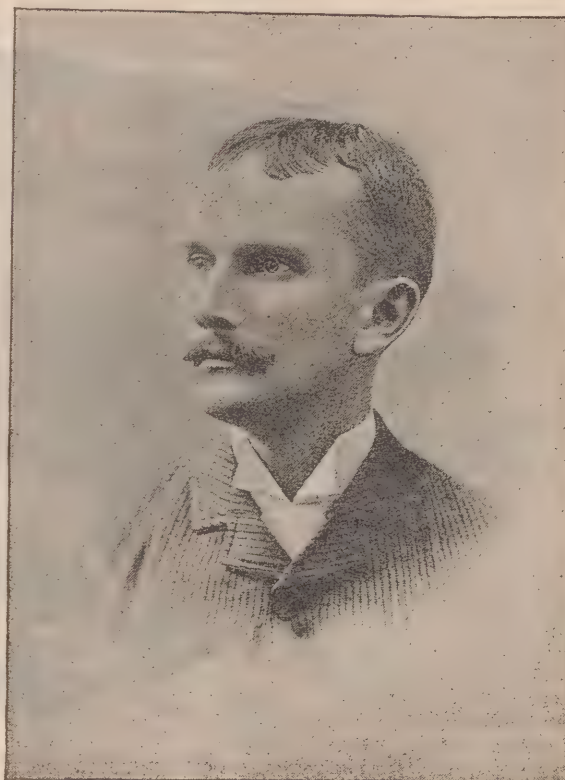
All the managers, officers and operators of the American District Telegraph Company in Philadelphia, will be given vacation leave with pay under the new management of President Charles Hartman Kuhn and General Manager George J. Jervill.

Electricity has disposed of its first Victim in New York State. "Parson" Howard, the "electric sugar sharp," has been found guilty of grand larceny and will go to the penitentiary.

It is reported that the Dominion Government is to sue the G. N. W. Telegraph Company at Hamilton, Ont., for delivering letters.

## WALTER H. STRATTON.

Mr. Walter H. Stratton, manager of The United Press at Buffalo, N. Y., was born at Port Hope, Ont., September 27, 1857. At the age of fifteen he had mastered the art of telegraphy, and in 1873 accepted a position with the Dominion Telegraph Co., at Toronto, Ont., and from thence he went to St. Catharines, in the same year. In 1875 he returned to Toronto, where he was subsequently appointed assistant chief operator and night manager of the Dominion Telegraph Company. In the fall of 1887 he resigned as night manager and proceeded to New York, where he remained in the service of the Western Union Tel. Co. until 1880, when he was transferred to Buffalo. In December of that year he accepted the position of assistant chief of the American Union in that city, which he held until the absorption of the company by the Western Union, in the following April, when he was forced to return to the Western Union. He was assigned to the State press wire in September, 1881, and held the position until July



WALTER H. STRATTON.

19, 1883. He accepted the managership of The United Press in August of the same year and has been connected with that enterprising corporation ever since.

**T. M. B. A.**—The T. M. B. A. shows figures that compare favorably with those of other co-operative insurance societies. With a growth in membership from 2,089 in 1881 to 3,316 in 1888, and in deaths from 22 in 1881 to 33 in 1888, the cost of insurance has decreased from \$12.45 per \$1,000 to \$11.09. This is contrary to the general run.

Mr. A. J. Voyer, of the Bell Telephone Co., Boston, has resigned to accept the managership of the Commercial Union Co., at Albany, N. Y.

Chief operator J. E. Pettit, of the Postal, Chicago, Ills., was recently at Canso, N. S., testing the Watson relay on the Atlantic cable.

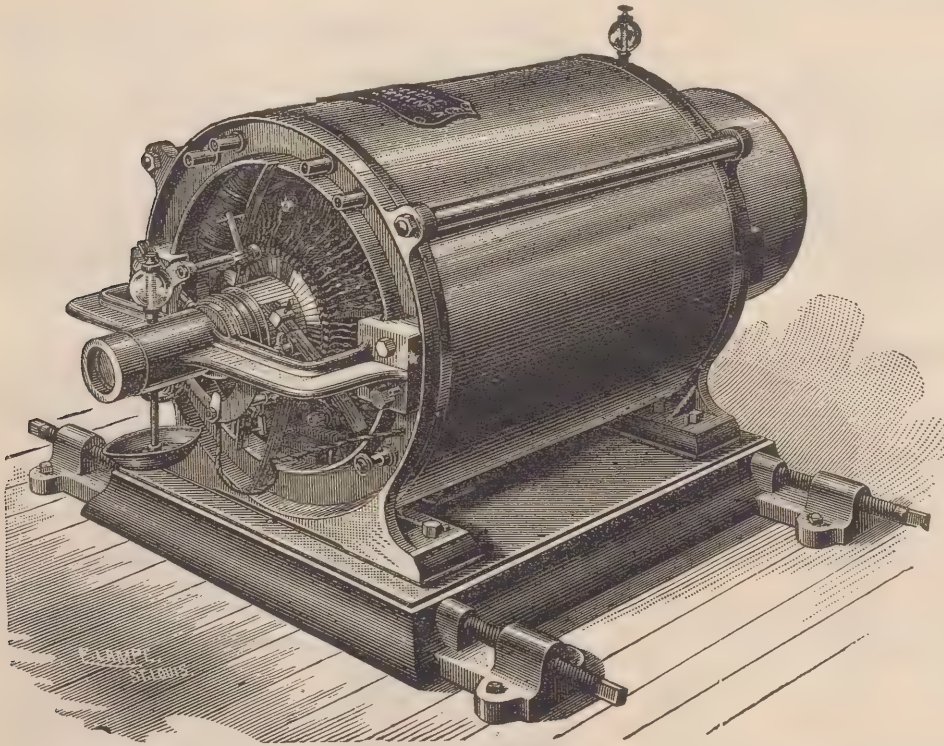
## THE HEISLER INCANDESCENT LIGHT IN CANADA.

It has hitherto been supposed that the arc lamp was far better adapted for outdoor lighting than the incandescent, the superiority of which, for indoor illumination is now universally acknowledged. It begins to look, however, as if the incandescent lamp would prove a strong competitor for outdoor illumination. We have in mind several cities which have changed their street lighting from arc to incandescent, and which are convinced that a decided improvement has been made. One of the most recent cases of this kind is reported from Sault Ste. Marie, Canada, and is of more than ordinary interest.

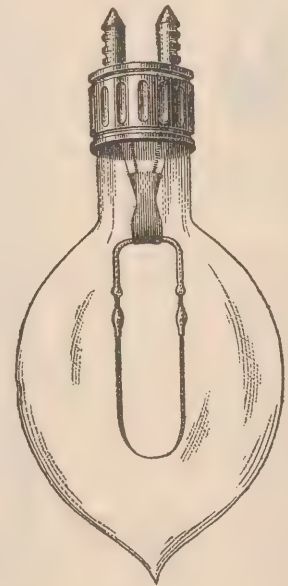
It seems that "the Sault" had made a contract with the Ontario and Sault Ste. Marie Water, Light and Power Company for sixteen arc lamps, for the illumination of streets and other public places. It so happened that soon after the signing of this contract a circular describing the Heisler system of incandescent lighting accidentally came into the hands of one of the officers of the company. The

of their real mission. In spite of this, they were everywhere received with the greatest courtesy, and every facility was afforded them for a thorough study of their problem.

The Wabash (Ind.) Company, operating a Heisler plant, went so far as to raise steam, specially to exhibit the system. At this place an employee reported an experience which is worth repeating: "One evening the regulator showed that a lamp had been extinguished, and I went to see the cause. It was raining very hard at the time, and when I reached the post carrying the extinguished lamp I found a telephone wire had broken our wire. Being hurried by the rain, I, without stopping a moment to think, picked up the ends of the broken wire, and instantly the whole current, through the most favorable circumstances, flashed through me and laid me out. I was pretty well shaken up, but not hurt, and attended to my work the next day." Pointing to an arc dynamo near by, he said: "Had that old dynamo been running, I should have been sent into kingdom come on a flash of lightning." So far as in-



THE HEISLER DYNAMO.



HEISLER INCANDESCENT LAMP.

peculiar features of the Heisler system, and the superior advantages which it offered led to further investigation, the result of which was so satisfactory that the company was convinced that a mistake had been made in adopting arc lights. The council was therefore asked to reconsider the matter. Inasmuch, however, as no cities in that immediate vicinity had, up to that time, been lighted by incandescent lamps, the council hesitated, but was finally induced to appoint a special committee to visit places where the various systems were in use, with a view of examining into their respective merits, and special adaptability for use at "the Sault." This committee consisted of the Mayor, Councilor Collins, and P. C. Campbell, business men of high standing and wide experience, and they undertook the task assigned them with the determination to get at the bottom facts. In the course of their travels they visited Detroit, Toledo, Fort Wayne, Wabash, Indianapolis, Vincennes and St. Louis. At all of these places they pursued their investigations in a quiet, but thorough manner, preserving a strict "incognito" and giving no hint

investigations could show, no other accident of any kind has been met with anywhere since the introduction of the Heisler light, and no fires have resulted from its use.

Without going into further detail, it may be added that the committee returned fully convinced that the change to the incandescent system should be made. This was accordingly done, and the town has now one hundred incandescent street lights in place of the sixteen arc lights, at about the same cost. Every store in the town is using the light and those who have compared the arc with the incandescent light of the Heisler system, do not hesitate to speak in the highest terms of the latter and testify to its great superiority. A proper regard for safety and comfort dictates the use of a light which is steady and does not oppress the eye. The ideal of night illumination is a mellow, soft light, evenly distributed. It has been shown that this cannot be obtained by the method of placing a few strong lights on high towers, or by suspending them at intersections of the streets, leaving the alleys and a large area of the streets in almost total darkness, as com-

pared with the limited area of light. The Heisler street lamp gives a steadier light than any indoor light in use, and the system possesses the incalculable advantage of distributing the light uniformly over a given space with no greater outlay of power and capital than would be required to poorly light the same town by the arc system.

The Sault Ste. Marie Company is using 250 thirty-candle power light dynamos, and find they run beautifully, there not having been the slightest mishap since starting. Those laboring under the delusion that the incandescent system is not adapted for street lighting should visit the rival "Saults" on either side, the American lit by the arc system, the Canadian on the other side by the Heisler incandescent. The difference is so great that the visitor will be convinced that the incandescent here used is unsurpassed for street lighting. The appearance of the Canadian Sault is brilliant in the extreme, so much so, that its rival across the river admits that the Canadians are ahead in that if in nothing else. The demand for the Heisler system in Canada has increased to such an extent, that the erection of a manufactory there is shortly to be commenced by the company.

We append some extracts from the local press, which may be taken as fairly indicating the drift of local senti-

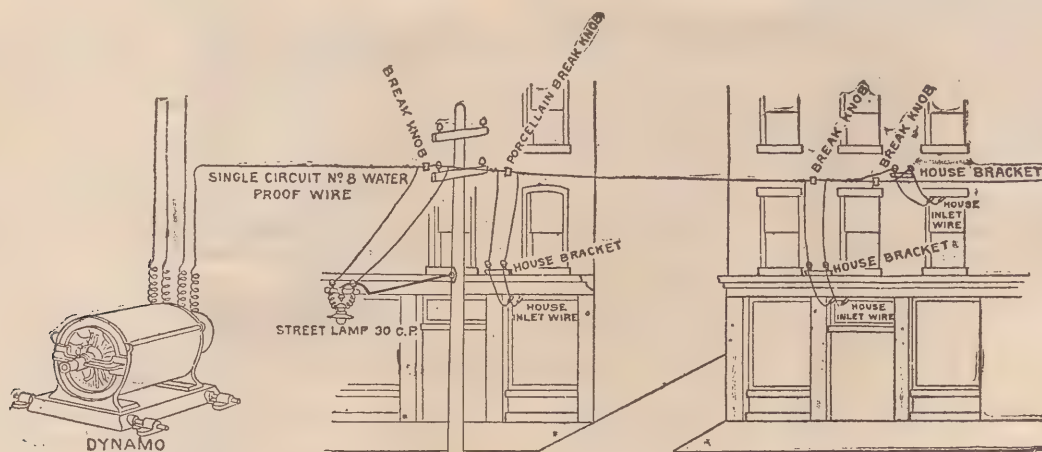
perfect electric light extant; say this much after an extended visit to the United States and our own experience with it in this town.

"E. BIGGINGS, Mayor."

This telegram was a reply to an inquiry from a neighboring city, asking for information in regard to the adaptability of the Heisler light for street and general purposes.

Messrs. Gebbie & Co., of Philadelphia, have in press and will soon publish a new and copyright translation of "Babylon Electrique," by A. Bleunard, under the title of "Babylon Electrified." This translation by Frank Linstow White, will have all the original illustrations by Montader, and be comprised in one handsome volume 8vo., at a popular price, which we believe will give it a large sale, both among those interested in electricity, and others interested in Mesopotamia, the cradle of the human race.

Moore Bros., of 106 Liberty street, whose advertisement appears in another column, are still busy supplying their patrons with \$1.75 Bell Outfits, which include bell, battery, push-button and fifty feet of wire. The goods are first-class in every respect. Those desiring the best of everything at the lowest wholesale rates are invited to give this firm a call.



HEISLER INCANDESCENT ELECTRIC LIGHT SYSTEM.

ment. The *Algoma Pioneer* of November 9, states: "Apart from all other considerations, the Heisler light specially commends itself for lighting the 'Sault,' where we have a wide area of sparsely occupied streets, which it will be both difficult and expensive to light with arc lamps; whereas on the contrary the Heisler system, with its light and unchangeable wire, can be run along almost every street and added to at the pleasure of the rate payers with comparatively little cost to the company, while nearly all the taxpayers will receive an equal share of the light. For beautifying places of business, it is just what is wanted."

An extract taken from *The Sault Express*, November 17, reads: "In our march of improvements and progress we are keeping pace with the times, when we have adopted the Heisler incandescent electric light system for lighting our town. Every one who has compared the arc lights, no matter by whom manufactured, with the incandescent light of the Heisler system, will not hesitate to testify to the superiority of the latter." That the good people of Sault Ste. Marie have not been disappointed in their expectations, the following telegram will show:

"SAULT STE. MARIE, ONT., April 13, 1889.

"The Heisler gives complete satisfaction in every respect. I heartily commend its adoption as the most

St. LOUIS ELECTRICAL EXHIBITION.—It has been decided to hold an electrical exhibition at St. Louis this fall, in connection with the regular industrial exhibition. Mr. Fred H. Whipple, of Detroit, Mich., has been appointed manager of the electrical department.

How to make executions execute in carrying out the death sentence upon murderers is becoming a vexed problem. Scientists insist that the electric method will not kill, and some eminent physicians are now hanging people for their health. Here's a state of things.

The process of electric welding has materially aided many industries, and several companies have been formed to carry on the business. It is also being introduced in many establishments where it is proving a great saving and giving most satisfactory results.

Vallee Bros. have removed to their new quarters, 17 North Sixth street, Philadelphia. Their new store is fitted up to meet their rapidly increasing business, and it presents a very imposing appearance.

Telephones with iron diaphragms are much more powerful in intensity than in cases where the diaphragm is of albumen or copper.

Eugene Phillips, the wire manufacturer, has opened a factory in Montreal, Canada.

## THE TRAIN DISPATCHERS.

The second annual convention of the Train Dispatchers' Association of America, at Indianapolis last week, says the *Railway Service Gazette*, was a continuation of the good work commenced at Louisville, Ky., one year ago. The convention was well attended, probably as many as 140 dispatchers being present, previous to the adjournment. These included many of the best known and most successful train dispatchers in the country, and represented a very large number of those persons who at Louisville, one year ago, established a just claim to the glory of having inaugurated a movement that is even now splendidly successful, and which must go on from year to year increasing the usefulness and efficiency of the American Train Dispatching Service, and in continually elevating the honorable position of train dispatcher.

No mistake was made at Indianapolis. The proceedings of the convention from first to last, were characterized by harmony, prudence and wisdom. Every delegate seemed to feel the responsibility devolving upon him, and all labored faithfully to advance the best interests of the association and the train dispatching service. All the work was open and above-board, and there was not a single intrigue for selfish purposes to blot the clean pages recording the proceedings.

While the convention had a great deal of work to do, there was no rest from hard labor until that work was finished. The value of some of that work can never be fully estimated. The carefully prepared papers written by Messrs. Case, Pond, Dowd, Blanton and Stevens, have a greater value to the train dispatching service, the railway companies and the public, than the whole of the inane existence of the old Train Dispatchers' Association. To several of the gentlemen named every American train dispatcher will always be a debtor.

The Indianapolis convention has given a sure guarantee for the triumphant success of the Train Dispatchers' Association of America. It will not be very long until nearly all train dispatchers are members. And here may be a danger.

The great success of the movement has been the legitimate outcome of the worthy and patriotic purpose of those who organized the association at Louisville one year ago. The Indianapolis convention was inspired by the same noble spirit. There have been some members of the old association and some other dispatchers who have stood aloof and scoffed. These will now hasten to find a place within the folds of the association. They will become its most vociferous supporters, and if possible its leaders. While the association is inspired by the same spirit that animated the Louisville and the Indianapolis conventions it will prosper.

PHILADELPHIA, W. U. NOTES.—Arrivals: J. A. Parkinson, N. A. Munz, and Andrew Swan, St. Louis; Henry Hill, Delmar, Del., V. G. Hudgins, Eagle Rock, Va.; W. F. Jacoby, Ft. Washington, Pa.; W. C. Ash, Coatsville, Pa.; Mrs. McCormick, New York; P. B. Duff, Downingtown, Pa.; Theo. Koenig, Pittsburgh; John Hurley, Miss Alger, A. Clayton, Miss May Christie, city. This company will open a magnificent office in the rotunda of the Grand Opera House in a few days. Mr. J. L. Parker, late with W. U. in Stock Exchange, has joined the Postal force at that place. Mr. Arthur Dare, who mysteriously disappeared about the time of the floods, has been heard from. He was married on June 6th, to a young lady resident of Eagleville, Pa. We all join in our best wishes. Mr. Robt. Atkinson has been appointed branch office relief. Messrs. McKeever and Koenig were sent to Williamsport to assist in raising the business blockade at that point, caused by the recent floods.

## THE NATIONAL ELECTRIC LIGHT ASSOCIATION.

This Association has issued a bulletin which promises to be of great use as a means of communication and intercourse between the members, enabling them to get and give information and to learn what the secretary and the various committees are doing. In the first issue, Mr. A. V. Garratt, the secretary, gives details of arrangements for the Niagara Falls meeting, in regard to which Mr. B. Rhodes, chairman of the executive committee, is actively making plans. Headquarters will be at the International Hotel, and the sessions will be held in the new Casino adjoining. Indications are that the attendance will be large and that many of the members will be accompanied by their wives and friends.

The Bulletin contains also lists of the officers, committees, honorary members and members.

Mr. Garratt invites all who have ideas on the subjects that they consider should be brought up at the Niagara Falls convention, to write to him suggesting topics and probable authors of papers. The secretary's office is now at 18 Cortlandt street, New York City.

The date of the convention is August 6th, and Mr. Garratt is already issuing the blank forms for those who desire to avail themselves of concessions in railway fares.

A POPULAR CHIEF.—William H. Jackson, Southern Traffic Chief, at 195 Broadway, New York, was born in Wellington, Ontario, January 3, 1854, at which place he learned telegraphy at an early age. When fourteen he went to Utah and worked at Granger Station, on the Union Pacific railroad, for about two years. Returning to Canada he worked as operator for the Grand Trunk railroad and the Montreal Telegraph Co. for about three years, filling positions at Toronto, Ottawa, Kingston and Montreal. From the latter place he came to New York, and on August 1st, 1873, was employed as operator by the Western Union Co., at 145 Broadway, going with them into their new office, 195 Broadway, in 1875. Being a strictly first-class operator he worked various heavy circuits until November, 1887, when he was appointed traffic chief of the southern division, which position he now holds. His administration of the affairs of this important division has been alike creditable to himself and beneficial to the company. While requiring from every man a strict performance of duty his unfailing courtesy and strict sense of justice has commanded the respect and good-will of every man subordinate to him. Mr. Jackson is now serving his second term on the Executive Board of the Telegraphers' Mutual Benefit Association; he is also a member of the Executive Board of the Telegraphers' Aid Society and Auditing Committee and of the Gold and Stock Telegraph Insurance Co. Mr. Jackson is a member of Dr. Talmage's Church in Brooklyn. He is a consistent Christian gentleman in all that the word implies, and in his business and social relations a credit to himself and an honor to the profession he represents.

J. H. Barnes, of Blacksburg, S. C., is engaged in plug-teaching. His inducement card is anything but convincing to one who knows as to the principal's ability to teach the art to any one. The youths of South Carolina will soon realize Barnes is misrepresenting facts.

The Western Union officials at Chicago have been called upon to produce certain telegrams bearing in the Cronin murder case, and they have very wisely refused to produce the same.

T. M. B. ASSOCIATION.—Mr. J. E. Palmer has been appointed agent of this association at Ogden, Utah, vice C. B. Goodell resigned.

L. G. Garrett, of Pittsburg, has invented a type-writing machine that writes by words instead of letters. It is of ordinary size, and has but fifteen keys.

## ELECTRICAL PATENTS GRANTED MAY 28, 1889.

- 403,944 Electric gas lighter; Joseph H. Lehman, Philadelphia, Pa.  
 403,955 Porous cup for batteries; Clarence B. Noble, Cleveland, Ohio.  
 403,957 Secondary battery; John B. Price, Wollaston Heights, Mass., assignor to The Electrical Accumulator Co., of New York.  
 404,139 System of electrical distribution; George Westinghouse, Jr., Pittsburgh, Pa.  
 404,149 Trolley for electrical railways; David A. Ainslie, Richmond, Va.  
 404,165 Telegraph; John Burry, New York, N. Y., assignor of two-thirds to James E. Munson and Aloys Wirshing, both of same place.  
 404,170 Electrical signaling apparatus; John P. Coleman, Swissville, Pa.  
 404,226 Fire and Police signaling apparatus; Arthur C. Robbins, Brooklyn, N. Y.  
 404,306 Process of electric riveting; Elias E. Ries, Baltimore, Md.  
 404,324 Electro-dynamic motor; Charles J. Van Depoele, Lynn, Mass.

## GRANTED JUNE 8, 1889.

- 404,457 Railway signal; A. Jackson Wisner, Philadelphia, Pa.  
 404,465 Electric motor; Charles S. Bradley, Yonkers, N. Y.  
 404,470 Voltmeter; Leon Daft, Plainfield, N. J.

## GRANTED JUNE 11.

- 404,822 Induction coil; Fred. H. Brown, Fort Worth, Texas, assignor to the Magneto Telegraph Company, of New York.  
 404,894 Electrically controlled engine; James E. Byrne, Brooklyn, N. Y.  
 404,895 Electric elevating machine; James E. Byrne, Brooklyn, N. Y.  
 404,902 Electrical distributing system; Thomas A. Edison, Menlo Park, N. J.  
 405,089 Electric self-winding clock; James H. Gerry, Brooklyn, assignor to the Self-Winding Clock Company, New York, N. Y.  
 405,211 Quadruplex Telegraphy; Charles D. Haskins, Brooklyn, N. Y., assignor to the Western Electric Company, Chicago, Ill.  
 405,221 Testing apparatus for switchboards; William E. McKivitt, St. Paul, Minn.  
 405,235 Municipal signal apparatus; John C. Wilson, Boston, Mass., assignor to the Municipal Signal Company, Portsmouth, N. H.

POSTAL NOTES.—The following appointments have been made: F. E. McKiernan, chief of south and west; C. J. McCarthy, assistant chief, south and west; Wm. Davis, night chief; J. A. Henneberry, assistant night chief; F. F. Norton, all night chief. Arrivals: J. J. Keating, S. J. Wilson, J. McDonald, J. D. Wooten, C. B. Squires, C. E. Davis, R. L. Kitts and Mrs. Sandberg. Departures: H. T. Macauley, J. H. McEntee, E. A. Hawley, J. J. Burke and Miss Minnie E. Kirk, who was married on the 26th instant to Mr. Daniel McGirr, a member of the Gorham Mfg. Co. Miss Kirk, for a number of years, worked the Baltimore wire and was quite popular. One hundred friends were royally entertained at Mazzetti's parlors; among them Messrs. McKiernan, Mallen, McNulty, Berder and the Misses Guthman, McGregor, Annie and Bessie Conway, Cortissoz, Diamond and Gumaer. Her departure from the office is much regretted.

## WORD-COUNTING MACHINES.

A telegraph operator in Minneapolis invented a word-counting machine which may be used by itself or attached to a type-writer. It is much the same sort of thing as a pedometer, only it is more accurate. It is as large as a small clock. The works are inside the nickel case, on one side of which is the face. The machine will count up to 2,500 words, and can be used for any number of times it passes the 2,500 words. There are two hands like the hour and second hands of a watch. Every time a word on the typewriter is finished the same motion which spaces for the word registers on the word-counter; when the second hand counts up to twenty-five words the large hand moves forward a quarter of a space. The face is divided into twenty-five spaces, one for each hundred words, and a glance at it shows at once how many words have been written.

The use of the word-counter is not limited to type-writing machines, but it can be used in writing and in dictation by keeping it at hand and making a slight pressure at the end of each word. Some operators attach it to their desks and work it with a string fastened to their feet. It is a useful invention, especially in telegraphy and in making an article of a specified length. These devices can be purchased at the office of the *ELECTRIC AGE*, 5 Day street, New York. Send for catalogue.

Mr. O. L. Fogle, the well-known telegraph operator, of Columbus, Ohio, has just published a volume of musical selections, entitled "Standard Selections for Male Voices." Competent critics pronounce it to be the best book of its class which has been published. Mr. Fogle has quite a reputation as a singer, having appeared in most of the prominent church choirs of that city at different times, being a member of a number of quartettes and singing clubs.

Mr. Leo Miller, of the Postal, Philadelphia, gave us a call last week. Mr. Miller enjoyed his brief vacation on his bicycle. He only acknowledges taking one "header" during his journey through Pennsylvania.

Mr. Albert S. Ayres, the old-time, well-known, gilt-edge, yard-wide, all-wool telegrapher, of the New York bureau of The United Press, was in Washington, D. C., last week, in the interest of his company.

Mr. S. B. Lambdin has taken a brief trip to Washington and Virginia. On his return he brought with him his sister, and had the pleasure of showing her around the great metropolis.

The wife of Mr. Joseph W. Wood, of the Associated Press, Boston, died June 14. Mr. Wood has the sympathy of the entire profession in his sad loss.

Mr. G. F. Weidman, formerly of the Commercial Telegram Co., is now secretary to the president of the New York, Susquehanna and Western Railroad.

The Postal Telegraph Co. have opened offices at Richmond and Norfolk, Va., where they expect to handle considerable business.

DIED.—G. P. Riley, the Albany operator, whose attempted suicide was reported in the last issue is dead. He died June 19.

Miss Sadie Henderson, of the G. N. W. Tel. Co., has gone to her home at Almonte to spend a two months' vacation.

R. C. Jones, of Jackson, Tenn., was in town visiting friends last week and gave us a call.

Mr. Terence Conaty, of 195 Broadway, has assumed charge of the Hotel Kaaterskill office, for the season.

## PHOTOGRAPHS OF PROF. MORSE'S BIRTHPLACE.

PRICE, 50 CENTS. POSTAGE PREPAID.

We have made arrangements to furnish any one desiring the same photographs of the house in which Professor Morse, the inventor of the electric telegraph, was born. The house is situated in Cambridge, Mass., and bears an inscription to the above effect, which can be readily discerned in the photograph. As the house is old and likely to be torn down very soon, the opportunity to procure this valuable souvenir should not be delayed. Address The Electric Age Publishing Company, 5 Dey street, New York.

Baltimore division, of the O. R. T., held its annual meeting last week, and elected the following officers: John T. Considine, past chief telegrapher; James B. Finnan, chief telegrapher; Geo. A. Kirby, assistant chief telegrapher; W. O. Hiltabidle, secretary and treasurer; Wm. Nolan, J. H. Roberts, F. C. Webb and H. H. Tille, other offices. Jas. B. Finnan, W. O. Hiltabidle and T. J. Sullivan, were elected delegates to the Cleveland convention. This is Mr. Finnan's third term as presiding officer and delegate. Under his able guidance much good work in paying weekly sick benefits to members has been accomplished, and an accumulation amounting to almost \$1,000 is in the local treasury.

Mrs. H. M. Ogle, chief operator at the telegraph office at Johnstown was the widow of Charles Ogle, of Company A, Tenth Regiment, Pennsylvania Reserves, who was killed at the second battle of Bull Run. He was a son of Charles Ogle, of Somerset, the Congressman whose fierce assault upon the Van Buren administration made him famous. Mrs. Ogle's daughter Minnie, who perished with her mother in the Johnston flood, was the girl operator whose "last message" is referred to in the poem printed in the last issue.

The Postal office, formerly at 49 Broadway, has been moved to No. 31 Broadway. The new office has been fitted up magnificently and it is equipped to properly handle the immense amount of business created in the lower part of Broadway. Mr. John Costelloe is the efficient manager, assisted by an able corps of operators.

Mr. F. A. Coleman, of the Windsor Hotel, New York, sends us two photographs of himself and son on his bicycle. Mr. Coleman evidently thoroughly enjoys the "wheel" and recommends all operators to try its healthfulness.

Superintendent of Construction Lawton, of the Southern Postal Telegraph Co., is looking after the extensive building operations of his company in South Carolina. Mr. Lawton is a well-known New Yorker.

Dr. Thurston, the superintendent of the Madras museum, is visiting the European electrical establishments to find a suitable light to be used in twenty fathoms of water for the use of the pearl fishers.

Mr. E. H. Johnson, has retired from the presidency of the Edison Electric Light Co., to devote his energies actively to the affairs of the Sprague Motor Company.

Mr. Frank B. Beach, of the W. U., and agent of the ELECTRIC AGE, Detroit, Mich., is the happy father of a thirteen-pound boy, born to him on June 1.

A few days since \$32.50 was subscribed to Mayor Grant's "Johnstown Relief Fund" by the employees of the Central Cable office.

A. C. Crawford, of Philadelphia, accepted a position with the N. J. R. R., at Atlantic City, and will go there June 16th.

TELEGRAPHY AND TELEPHONY IN 1888. According to the *Journal Télégraphique* the number of telegraph stations in the world showed an increase last year of 7,200. The year also saw the opening in Germany of the 10,000th Government telegraph office. In telephony a great increase also took place. In the United States there are at present 750 telephonic systems, with 200,000 subscribers. In Europe, Germany stands first; England next; then come Sweden, France, Italy, Switzerland and Russia.

A few days ago several men from the electric light station dug a hole for an electric light pole opposite one of the finest residences in Malden, Mass. The owner of the residence, in the meantime, secured a man and told him to go up into the woods and dig the first tree he could find, and hurry back and place it where the hole for the electric light pole was. Before the men commenced to raise the electric light pole, the owner of the residence invited them to come into his cellar and take a drink, which they all did. There the owner detained them long enough to allow the man sent for the tree to come back and plant it. The others did not dare to remove the tree, so they put the pole into their wagon and drove off.

At a called meeting of Dallas Division No. 24 of the order of railway telegraphers a few days ago, the following officers were elected for the ensuing year: J. C. Langley, chief telegrapher; M. E. Glass, secretary and treasurer; F. E. Rockwell, assistant chief telegrapher; W. L. Moore, senior telegrapher; J. G. Worrall, junior telegrapher; R. L. Darling, inside sentinel; W. S. Eldridge, outside sentinel, and H. C. Wineland, past chief telegrapher; J. C. Langley was elected delegate and M. E. Glass, alternate to the grand division, which met at Cleveland, O., June 20.

The race pool rooms in Boston have been heavily swindled. In the third race at Gravesend, a few days since, knowing ones played the horse Mucilage heavily to win. The result of the race as received at the various pool rooms was: Mucilage, first; Civil Service, second; Padishah, third. The pool rooms paid out on Mucilage, and later found out that some one had tapped the Western Union wire, for the result of the race was exactly reversed. The rooms lost over \$20,000. No one has discovered the author of the tapping.

Mr. J. E. Janney, Western Union representative of the AGE in Philadelphia, suggests that at least a portion of the money collected for the Johnstown sufferers among the telegraph fraternity be given to the family of the line-man who lost his life during the flood. He reports the case a most deserving one, while the general fund is beyond the family's reach, owing to their being residents of another town.

A charge was lodged against a receiving operator for incompetency. The case was finally carried to the general manager of the company for adjudication. When the papers in the case left the latter's hands they contained this expression. "It's difficult to copy when you're being criticised; it's easy to criticise when you're not copying."

The many friends of Mr. J. C. Berrett will regret to hear that he has resigned the presidency of the Aid Society and the day force of the W. U., Philadelphia. It is understood Mr. Berrett will locate at San Jose, Cal., where he owns some mining property which he will develop.

Mrs. Professor Morse, wife of the inventor of the telegraph, with her daughter Leila, from Berlin, Germany, is in New York, visiting friends. It is expected both ladies will remain in America for at least two months to come.

J. B. Stewart has been appointed superintendent of the West Shore R. R., vice S. S. Bogart, resigned.

## NOTES.

NEWARK NOTES—PENNA. R. R.—As regular extras at Market street station we have Messrs. E. E. Rickert, J. R. Frazer and M. L. Harner, and as sub. extra O. B. Le Van, late of Central R. R. of N. J. Danl. J. Hamilton was back with us for a short time but has accepted the managership of Postal office at 179 Market street. Taking the offices as they come, we find A. Bennett, W. G. Eichenberg and T. J. Dunn filling East Newark Tower; T. S. Smith, V. P. Schenck and Rich. Grondyke doing same at tower East End Passaic; T. E. Chandler, Wm. Purcell and D. J. Burns at Centre Street Junc.; Mose Ritter at Market Street Station (Commercial); G. H. Cooper and Jack Boles at Green Street Block signal; P. J. Rowe and J. A. Galbraith at Pennington street; Geo. Butler and J. J. Daley at Coal Pockets, South Broad street—all in Newark; at Ticket office in the station, John D. Smith, who is an ex-operator, now selling tickets last trick at P. R. R. office, cor. Market and Broad streets; Frank Mather looks after the telegraphing and is assistant ticket agent; J. A. Rief, W. U. operator, few days on P. R. R. as sub-extra, now assisting at Postal main office.

ST. JOHN, N. B. NOTES.—Nothing new happening here. Can. Pac. Tel. Co. is doing a rushing business with American and Upper Canada points. They have only two offices in New Brunswick yet; none in Nova Scotia. But they are preparing to build on to Halifax and to Canso to connect with the Mackay-Bennett cables. St. John is to have a great summer carnival and electrical exhibition beginning July 22d and continuing ten days. Nearly all the Electric Light and Electric Novelty Manufacturing Companies in the United States, Canada and England are to take part in the exhibition. Preparations are being made to receive from 15,000 to 20,000 visitors.

RICHMOND, VA., NOTES.—Mr. Joseph Marshall, formerly chief operator of the Southern Telegraph Co., but more recently of the W. U. all-night force, has been appointed day chief operator of the Postal Company. Mr. J. M. Creamer, of Baltimore, has accepted the position of quad chief. W. P. Cline, formerly assistant chief operator, has been appointed night chief, *vice* W. C. Walstrum resigned to accept the position of Superintendent of Telegraph of the Norfolk & Western R. R. Co.

WICHITA, KANS., NOTES.—Manager Hackett has been away for fifteen days on leave of absence, during which time his work has been looked after by Mr. Elder. Mr. G. I. Knapp is now taking care of the book-keeping department. Mrs. Elder has returned to day report, Mr. Porter relieving her at the broker's office. Night chief, E. S. Bowers, is east on a visit to Indianapolis relatives; he will be gone until August 1st. Chief operator, B. C. Elder, has resigned to go with the Postal Telegraph Co., at Des Moines, in a similar capacity; it is not as yet known who will relieve him. Mrs. Elder remains here for a short time, then will take a vacation and visit her home. Mrs. Hackett, the book-keeper, who is visiting friends in Iowa will return in a few days.

HUTCHINSON, KS., NOTES.—Latest arrivals: H. Horst with the Santa Fé, A. J. Fessenden, with Underwood & Co.'s Packing House and Miss Williams with N. K. Fairbanks & Co.'s Lard Refinery. Frank Chain is off for the East on a vacation; he will remain with his parents near Chicago for a few weeks. Construction of the new railroad, the Hutchinson, Oklahoma & Gulf, is being pushed with rapidity; this line, with headquarters in this city extends, or will extend, through the Indian Territory to Galveston.

BOSTON NOTES.—The check and error clerks were recently made happy by a notification that they would hereafter

be paid extra for Sunday work. This is the first time for over four years the clerks here have been paid for Sunday work. We sincerely congratulate them on this restoration, and we consider it a just and commendable action on the part of the management—even at this late day—to grant this much desired and highly appreciated reform. It is to be regretted that our baseball nine have languished into a kind of innocuous desuetude; practice has almost entirely been abandoned lately, and it is to be feared if we are to meet the New York team on the diamond we will be left *hors du combat*. To prevent such a catastrophe we exhort our nine to resume practice immediately and diligently. At the last meeting of the Aid Association the revision of the Constitution was completed; among the most important changes are the increase of the death benefit from \$50 to \$100; the initiation fee from \$2 to \$3; and the number necessary to constitute a quorum from ten to fifteen members. Before the close of the meeting it was voted to adjourn until the first Sunday in October, when a large attendance is expected. Eddie Burke, a pool-room operator, has got so interested in horses that he invested in horseflesh himself and struck a streak of luck. The horse he bought once had a high record as a pacer, but met with an accident and was not afterwards properly cared for. Mr. Burke secured him for a moderate sum and sent him to pasture, where the wound was cared for and rapidly grew well. He has since been tested and paced a mile in 2.20. Wm. B. Derby, past cashier of the Mutual District Messenger Co., pleaded guilty to the charge of embezzlement brought against him by the Western Union Co. and was sentenced to three years in State's Prison. M. F. O'Donnell has returned from a short but enjoyable vacation spent at the lively town of Weston, Mass. Some new poetical pieces have appeared in the Signal wire book. If the AGE could devote the space to their publication its readers would find them in metre and rhythm equal, if not superior, to those of the Spring poet from Jersey spoken of by "De" in the last issue. Many changes are expected to take place here soon, as the summer offices are about to open, and some who cannot get a vacation any other way will take advantage of the opportunity to get some good sea or mountain air by accepting a summer office. Mr. P. J. Delahanty, of Worcester, well known here, is a recent addition to the extra list, as is also J. Fallon, from New York. Mr. N. H. McQuarrie has resigned to engage in other business. Mr. W. J. Clark has accepted a position with the Postal. Mr. J. J. Benelisha has gone to Narragansett Pier, R. I., for that company. Mr. Lonergan, of the extra list, has returned to New Haven. Mr. Chas. Alden has been enjoying a vacation, relieved by Mr. J. L. McLaughlin. There are two very desirable day tricks vacant; it is not known at present who the fortunate ones to receive the appointments will be. The operator who works a day trick in Boston office may well be considered a fit subject for congratulation; and it is hoped that the mantle will fall on deserving shoulders in both cases.

WINNIPEG C. P. NOTES.—A short time since we were favored with a visit from our popular general manager, Mr. C. R. Hosmer, who was returning from an extended trip to the Pacific Coast, looking after the interests of the Pacific Postal Telegraph Co., as well as the C. P. R. system, both of which companies he is general manager. While here, he saw that the increase of business was such as to necessitate the quadruplexing of No. 4 Wire to Montreal, which is now used as a duplex, and the springing of a wire from Walsh to Swift Current, N. W. T., with the view of making the latter station a repeating office for the Rocky Mountain business instead of Medicine Hat, which at present is the relaying point. Superintendent Jenkins and Inspector Edwards, while on a tour of inspection of this division, combined pleasure with business,

and employed their leisure time fishing. Mr. Jenkins upon his return did not forget the benedict operators of this office, each of whom was presented with a splendid specimen of his catch of salmon trout. The C. P. R., following the footsteps of their competitor, the Great North Western, have organized a City Call Service for the benefit of its patrons. We wish the enterprise every success. The telegraphers of this city have organized a baseball team, and so far has beaten every club that has had nerve enough to face it, and in all probability it will issue a challenge to the 195 ball players next season. Arrivals: W. F. Muth, from Cataract, Ont.; R. K. Cairns, Langenburgh, N. W. T.; Harry Masters, promoted from delivery clerk. Departures: Thomas Masters and Sid. Flagler for New York. C. M. Oliver gone to G. N. W., this city. The G. N. W. Tel. Co. seem to be doing a good business. Mr. Lyman Dwight, son of the president of that company, has lately been appointed superintendent for Manitoba. The telegraph department of the Northern Pacific and Manitoba Railway Co., now in operation throughout this province, will come under his control. We are glad to see that the officials of this company have rewarded the long and faithful services of Mr. Thomas Golding by appointing him local manager. Mr. Nelson has received the appointment of day operator, his position being filled at night by Mr. Oliver from the C. P. R. Mr. F. M. Thompson, the Winnipeg agent of the ELECTRIC AGE, will be pleased to receive subscriptions from all parts of this province

NEW YORK CLUB NOTES.—The following members have been appointed for the term of one year to serve on the House Committee: Messrs. Greene, Lounsbury, Watts, Brannin and Powers, with Holbrook and Hann as *ex-officio* members. On the Music Committee are: Louis N. Kirschbaum, M. F. O'Brien and Les. Miller. Baseball Directors: J. H. Lounsbury, Alex. Cutair and J. H. Robinson. Members desiring to join our Dramatic Association are invited to send their names at once to Leslie Miller, who will form a company and begin rehearsals at an early date. He may be addressed at the club rooms or at 195 Broadway. It is believed that we possess plenty of talent and Les. is the man to bring it out. The formation of a Glee Club is also being discussed, and those of a musical turn of mind (and voice) will aid the project very materially by sending their names to the president, Mr. G. B. Kirkpatrick, operator in the W. U. office, Boston, has presented this club with a picture of Prof. Morse's birthplace, for which the members feel especially grateful. To Mr. James D. Reid the thanks of every member of this club are extended for handsome pictures of Prof. Morse and Mr. William Orton; also for several valuable contributions to the library. As an evidence of the esteem in which this club is held by the press it is worthy of note that the New York *World* and *Staats-Zeitung* each contribute a copy of their paper daily.

The cable chart of the world presented by Mr. Geo. G. Ward, is among the most useful works of reference in the possession of the club.

We feel indebted to Mr. Ralph W. Pope for the numerous electrical papers he weekly places upon the library table for the benefit of the members.

Those outside the club will please not forget to remember the fact that though comparatively young, it is growing rapidly. P. S.—But it won't slop over. The N. Y. T. C. is not built that way.

Ed. F. Stevens, manager of the N. Y. Tel. B. B. Club wears a smile as broad as from first base to third, and all because his charming little wife presented him with twins. The club now has a mascot—Yes! Two of them.

The club desires to express through THE AGE the deep gratitude of its members to Mr. Frank W. Jones for his voluntary and unlooked for munificence, which is fully set

forth in the following, received by the President on Wednesday last:

NEW YORK, June 25, 1889.

GEO. E. HOLBROOK, Esq., President.

Dear Sir:

I am pleased to see by the ELECTRIC AGE that the fraternity has organized a New York Telegraph Club. I wish the club success, practically to the amount of inclosed check, sentimentally to a much greater degree than I can express.

Very respectfully,

F. W. JONES.

Mr. Jones evidently is a believer in the old adage that in unity there is strength. A few more friends such as this would make us very muscular indeed. The face value of the check is \$25.

TORONTO NOTES.—The management of the G. N. W. has given us back our extra, and the boys are happy; although there is not much of it going, it is encouraging to know that we get paid for what extra time we work. Business is on the increase and better times are expected. Mrs. W. Dee, *nee* Sanderson, left a few days ago to join her husband, an ex operator, at Victoria, B. C., and on her departure was the recipient of a beautiful wedding present from the operators. Miss Sadie Henderson has returned to duty after a three months' illness at her home in Almonte, Ont. Sadie is looking herself again. Geo. Kirby, of Chicago, is on the extra list in C. P. R., and Ed. Grimes, of Kansas City, will probably go to work for the same company. Mrs. J. A. Barnes, *nee* Riddall, of San Francisco, is back again and expects to make Toronto her home. Wm. Foad and R. McCartney are late arrivals, and have been added to the day force. Mr. J. S. McClelland, of the St. Catherines *Star*, formerly of New York, was in town last week. Mr. Alf. Cullen has resigned, and is now with the W. U., St. Paul, Minn.

BALTIMORE NOTES.—Mr. Geo. W. Morris, of the Postal, gave a reception at the home of his parents here, June 1, in honor of his 21st birthday. Mr. Morris was the recipient of many presents from the operators and his numerous friends, the most notable being a beautiful gold pen, handsomely engraved, with an ivory handle, appropriate for the occasion. Mr. Wells made the presentation speech. Supper was served at 12 o'clock and the boys enjoyed themselves hugely. As Mr. Morris was about to take his seat at the table Mr. Wooden presented him with a handsome basket of flowers. Mr. Morris responded in a neat speech. During the course of the reception Mr. J. B. Ward rendered some fine selections from the opera "Mascot." His singing was highly appreciated by all. Among those present were Mr. and Mrs. Morris, H. C. Wooden, J. B. Ward, W. V. Ardisson, Geo. R. Wells, Jr., John Lawler, F. A. Hilmer, H. G. Siegman, D. Hill, G. E. Tweatt, Eugene Stumpp, B. Kethe, J. Schoifle, W. Powell, Samuel Morris, Wm. E. Morris and many others.

CHICAGO WESTERN UNION NOTES.—Wire-chief Kissinger is in New York to look into and familiarize himself with the dynamos. It is said that dynamos will shortly be placed in this office to replace the 30,000 odd cells of gravity battery now in use. A young operator from Michigan, who recently went to work here, sat in to operate one of the heavy way wires, and having occasion to stop, the sending office said "min. cust." There were no insects fluttering in his vicinity. Mr. H. C. Stough, of Colorado, passed through here last week on his way to the Cleveland O. R. T. Convention. He was the guest of Mr. A. F. Sherwood while here and expressed himself as being highly pleased with the Colorado climate. Mr. H. A. Culver is subbing for Mr. H. Smith at the *News* office, working their Milwaukee leased wire. Mr. Smith is in Canada on a vacation. Mr. Roger J. Mullen, of The



United Press office, has just returned from Arkansas, where his mother has been seriously ill. "Bob" Jones, well known here and in New York, paid us a visit a few days ago. He is railroading in Jackson, Tenn., and it evidently agrees with him. Mr. G. L. Boyle and Mr. M. E. Clare, operators of this office, were recently admitted to the bar. They have our sincere congratulations. Mr. J. H. Tate returned from Wisconsin last week, where he married a Miss Rhodes of Viroqua. Congratulations again. Among the heavy wires in the city lines are the two to the Palmer House worked by Miss Laing and Miss Schachamayer, who handle from 650 to 700 messages daily. Miss Walker handles 300 messages daily on the South Water street wire. The Kinzie street wire, manipulated by Miss Wright, also carries 300 daily. Among recent arrivals are: Mr. Cranley of St. Paul, and Messrs. Tyler and Mull of Springfield. Mr. C. S. Andress has returned from a vacation. Mr. G. Hammond has departed for St. Paul, Mr. J. Ryan to Bloomington, Mr. Geo. Smallbone to the Postal, and Mr. F. C. Swain to a pool-room. Our old friend, Mr. Geo. Root, from the Postal, is working nights. There are still some twenty men waiting to go to work. Business, for this season, appears to be dull, and our friendly advice to all outsiders is, unless you can afford to wait, perhaps a month, it is unwise to come here and apply for work.

NEW YORK W. U. NOTES.—A writer in one of the daily papers, in describing the appearance of the office after dark, portrays an all night man asleep at his desk and another tilted back in his chair calmly enjoying a smoke after his night of labor. As a matter of fact the all night man does nothing of the kind, but would you blame him if he did? A vote of thanks awaits the first official in the service to allow these men the privilege of smoking between the hours of 1 and 6 o'clock a. m. The demolition of poles in the immediate vicinity of the office, which order was promulgated by His Honor the Mayor, has served to deprive the newspapers not only of loops but of their operators as well. Those formerly employed in the *World*, *Sun*, *Times* and *Tribune*, as well as those heretofore engaged in handling the matter filed at the Chicago *Inter-Ocean*, Chicago *Times*, Cincinnati *Commercial Gazette* and Philadelphia *Ledger* bureaus, not infrequently work side by side. Just when the loop service is to be reestablished is hard to say. Miss Alice Robinson has returned from West Point, where she has been on a pleasure trip. Chris. J. Fallon has resigned and gone to Boston. Miss Smith has taken the summer office at Lake George, N. Y. Charles P. McCutcheon has been transferred to a pool room. Miss Cassie Hagerty, who sailed for Europe on June 29, was the recipient, just before the departure of the vessel, of a handsome ring from her friends Miss Millie Patterson, Miss Sadie Fellgraff and chief operator Lant Jones. J. T. Collins and Mr. Yackley have been transferred from the split trick to the waiting list. Miss Ganung has accepted the office at Massepeque House, Oyster Bay, Long Island, for the summer. Lon Bartholomew, E. P. Buell, J. J. Kistler, J. P. Seeley, J. J. Murray and Mr. La Faye have been added to the day force. Miss McLean will rusticate for the summer at the Quogue House, Quogue, L. I. J. H. Collins has resigned. Miss Maggie Mernagh will relieve at 9 New street during the month of July. Miss Lissie Brown has been transferred from the Public Grain and Stock Exchange to the Octagon House, Seabright, N. J. Miss Carrie Macy has resigned to accept a better position in Boston. The following named gentlemen have been added to the waiting list: Joseph Cahill, Carroll F. Sweeney, Paul R. Wiggs, Frank H. Wiggs, William H. Richardson, (2d), Charles E. Burroughs, Wilmot E. Giffen, F. W. Kinne, Joseph P. McNeill and William G. Hassler. Mrs. J. Burke has resigned and gone to Chicago. The reason why Clay Danforth and James

Tomkins now wear a smile instead of a frown on the first Cincinnati wire is accounted for by the suspension a few days ago of an electric light directly above their heads. Their favorite solo "Out of the darkness into the light" is singularly appropriate. Miss Hattie Watson will summer at the Howland House, Long Branch. J. F. Adams having relinquished the 5.30 to 9.30 trick, Wednesdays and Saturdays, it has been accepted by F. M. Aldrich. Miss Jennie Schlessinger will preside for the summer at the village office, Long Branch. Miss Kindstrom has also gone to Long Branch for the summer. The following gentlemen have been transferred from the waiting list to the split trick: M. H. Collins, P. J. Byrne, D. Delaney, L. E. C. Moore, P. H. Boldrick, A. B. Wynne, J. W. Gilds, Jos. W. O'Leary, John F. Murray, R. Powers, Louis Meloche. The latest acquisition to the force in the city department is Miss Lillie McBride, of Newark, N. J. Miss McGill has gone to the Manhasset House, Shelter Island, for the summer. The office at the Hotel Brighton, Long Branch, will this season be in charge of Miss Millie Hauser. Miss Lena Allen has gone to the Indian Harbor Hotel, Greenwich, Conn. Miss L. Rose, who for some time past has been on the sick list, has returned to work. A look of blank surprise overspread the rugged features of that veteran old-timer Hamilton Fitchett, night chief of the Erie and Jersey divisions, as he stood in the presence of some 30 or 40 of his office associates in Room 59 a few days ago and received from them through their spokesman, Chief Operator John B. Sabine, a substantial token of their esteem in the shape of an imported French marble clock, on top of which was a statue of Sir Isaac Newton, together with a pair of beautiful ornaments for the mantle representing Italian Gypsies. Mr. Sabine, always the personification of happiness on every occasion, fairly out-distanced himself on this one. When Mr. Fitchett found time to do so he restrained the flow of joyous tears that welled to his eyes and in a voice as calm as circumstances would permit, thanked his friends for the compliment they had paid him. Fearing that he did not do himself justice on that occasion he requests your correspondent to extend to the contributors to the testimonial his heartfelt thanks, together with those of Mrs. Mollie Montgomery, the estimable young lady operator to whom on the following day he was married. Miss Erbeling has been transferred to the new Grand Hotel, Catskill Mountains, for the summer. Mr. A. C. Robbins after a severe tussle for two weeks or more with inflammatory rheumatism has resumed work. The ovation he received plainly showed that he was missed. The many friends of Clem. Foster will regret to learn of the death of his mother which occurred a few days ago. In his hour of bereavement the sympathy of all is extended. Master Sterling of the Race Bureau has displayed to excellent advantage his marked ability as a draughtsman in the new diagram of that department which has been recently framed and suspended over Chief Operator Mitchell's desk. Frank S. Ames, one of the most genial, whole-souled fellows it has ever been our pleasure to meet, is dead. Stricken some time ago with the dread disease—consumption—he took up his abode at Dobbs-Ferry-on-the-Hudson, where he has for two years past, when in a physical condition to do so, presided over the office at that point. While of course his condition was precarious his death was not looked for for some months to come. The announcement of his demise, therefore, which was somewhat tardily posted on the bulletin board came with a suddenness that was almost shocking. Indeed a large number who upon their arrival at the office felt an inclination to attend the funeral, were prevented from doing so on account of their inability to reach home and change their clothing before the departure of the train. Deceased was buried at Peekskill, June 21. His funeral was largely attended.

FORMAL OPENING OF THE NEW YORK TELEGRAPH CLUB.

For more than fourteen hours, from 10 o'clock a. m. till 12 midnight, an almost incessant throng of operators and their friends entered and left the rooms of the New York Telegraph Club, 48 Church street, on the occasion of the formal opening, Tuesday, June 18th. Extensive preparations, looking to the adornment of the same, had been going on quietly for several weeks. Such well-known telegraph people as Mr. D. H. Bates, Mr. Walter P. Phillips, Mr. Geo. G. Ward and Mr. James D. Reid had embellished the walls by the presentation of pictures, etc., while several members contributed articles of *bric-a-brac* in addition to choice volumes for the library. The rooms were profusely decorated with flags loaned for the occasion by Mrs. John B. Taltavall. A piano placed in the rooms but the day before added greatly to their appearance and aided very materially in rendering the comfort of the guests all the more enjoyable. Among the photographs now in possession of the club few, if any, had a more charming history than that of Prof. Morse which, but a few years before his death, was by him presented to Mr. Geo. K. Wolcott, one of the oldest operators in the office who, having retained it till the present time, graciously yielded it to the custodian of the rooms.

The hour at which the meeting was to have been called to order found the rooms so densely packed that ingress and egress was entirely out of question. At 8.45 o'clock, thirty minutes behind the schedule time as shown by the programme, the opening exercises commenced. These consisted of an overture by Master Harry Phillips; the presentation of the keys by the chairman of the governing committee, their acceptance by the president, followed by an address by the oldest living telegrapher, Mr. James D. Reid; a song by Miss Bulger; a recitation by Ed. Delaney the "Brevity Man;" a solo by the well-known tenor, Mr. D. W. McAneeny, and an address by Mr. W. J. Dealy, manager of the Western Union Tel. Co. Immediately upon its conclusion a recess of thirty minutes was ordered by President Holbrook for the purpose of enabling the guests to partake of refreshments. This was served in a painstaking manner by the well-known head-waiter of the lunch-room, Mr. Martin Dunn, who excelled himself in adding to the comforts of all.

After the ladies had adjourned to the billiard-room, where the tables filled with delicacies were spread for their refreshment, the gentlemen remained in the library and reception room and spent their time in music and song. Earlier in the day the ladies of 195 Broadway presented the club with an elegant silver pitcher and goblet which, occupying as it did the desk before the president, attracted a great deal of attention and elicited considerable applause.

Following the intermission Miss Susie Stephenson won praise of a high order for the highly edifying manner in which she rendered a soprano solo. The address of Mr. W. L. Ives was well received as was also a tenor solo by Mr. D. W. McAneeny. The closing remarks were made by second vice-president, Conrad Meyer, and were roundly cheered. Mr. George H. Usher, the new manager of the Postal, had the honor of heading the new register book with his autograph. Mr. Usher was heartily received by the members.

Manager Dealy spoke as follows—Mr. President, Ladies and Gentlemen: When the worthy vice-president, Mr. Conrad Meyer, told me of this meeting, I believe he said reception, he added that I must come around and help to receive. It has been some time since I did any receiving, and I can assure you I have no desire to be rushed by such experts as have just handled the key, so if it be quite as agreeable I shall ask that you will not press too hard, but that instead, you will allow me to send a short special to the N. Y. T. C.

No gathering of telegraphers is complete without that best beloved of men, Mr. James D. Reid, and none I am sure could be favored with a kinder flow of soul than that with which he has favored us to-night. I know not exactly why it is, nor how it is, but somehow since I entered these rooms I have kept repeating to myself, the lines of an Irish poet:

"I knew by the smoke that so gracefully curled  
Above the green elms, that a cottage was near,  
And I said if there's peace to be found in the world,  
A heart that was humble might hope for it there."

I like that sentiment, and by a slight adjustment, it may be recognized in another form:

"I knew by the call that passed merrily round  
From Fulton and Church, that a club room was near,  
And I said if fraternity's bond can be found,  
A heart that was right would be charged with it there."

This is one of the most pleasant meetings I have ever attended, and in noting that there are so many ladies with us, I cannot help but also note how the times have changed. A few years ago the mere mention in the presence of ladies of what is usually termed "the club," would be a signal for a storm; if we attempted to cut out, or patch by explanations, lightning would seem to strike from all directions, crosses would multiply, patience would fail, balance would be lost, resistance would be useless, and in despair we would almost wish ourselves underground. But since the dawn of THE ELECTRIC AGE, nothing has been so remarkable as its progress, and as a consequence we now experience none of the difficulties which in days gone by so seriously threatened our happiness and peace. The ladies now are always with us, ever ready to encourage and to cheer, and by their generous gift of this handsome silver pitcher and goblet, they have given sterling expression to the favor in which they hold your club.

Whatever will bring together for social enjoyment, recreation, exercise and study, those whose every-day life is so identified with the business and domestic interests of the world, will benefit not only those who are so brought together, but also the community at large. You seem to have everything here for your comfort, pleasure and profitable pastime. In one of the rooms I noticed a map of the cables of the world; you can there to your *Heart's Content*, review the *Field of energy* and science. Here you can talk over your experiences and impart to one another the knowledge you have gained, or switching off to your library you can discuss the character of a novel, or connect up the scenes of a history, join in a ramble with the poets, or changing again you can stroll through what you have made a veritable gallery of art. All praise and credit are due to the promoters and managers of this club. That there is a necessity for it is proven not only by its existence, but also by its already large membership. By your gymnasium, base ball, etc., you will become better physical men; by your library, more studious and better informed men; by your chess, naturally more thoughtful men; by your receptions and entertainments, more social and more sociable men; and in a word, by your club and its influences, better men generally. The more I think of the combination, the happier it seems to be for the improvement of the physical, mental, social and moral forces, which all will admit are four good corners for a first-class quad; work it to its full capacity, and if at any time you should happen to be short of a sender, I know of one who congratulates you on what has already been done, and whose best wishes will always be with the New York Telegraph Club.

MR. WM. L. IVES spoke as follows—Mr. President, Ladies and Gentlemen: After such a feast as you have had given you by the distinguished "Father of the Boys," whose ever pleasant face shines out in its brightest lustre when he stands before the men he has been interested in

and identified with for so many years that have come and gone; no banquet, no picnic, no social gathering, whatsoever it might be, would in no way be complete without his presence, and I truly hope that we may long have him with us. Again you have been feasted; when did you ever miss one when Mr. Dealy was upon the programme? I remember but a few months since, when the president of a social club, of which he is an honored vice-president, introduced him as the chairman of that banquet night, He had only said "Mr. President and Gentlemen," and immediately followed them two words that sent a very pleasant electric shock of true and sincere friendship down the line of "Martinelli's Banquet Hall, such as will long be remembered by those of the craft present upon that happy night. With outstretched arms, as if he would gather us all within their fold, rang out those grand words, full of meaning, fuller with joy, radiant with hope, "Seventy-Three!" Although I cannot electrify you in the same happy manner that he did, with his permission I to-night borrow those magnetic words and pass them through this circuit of friends, "Seventy-Three!" to the members of the New York Telegraphers' Club, and to one and all of you present to-night. This is the first social, as well as moral club that has been started, I believe, and from what may be seen to-night, it would fully indicate that its success is most certainly assured.

When the ladies place their shoulder to the wheel it means "we are with you." In this beautiful gift presented by them to-night, we see their gentle nature flowing out in kind wishes for the building up and making a grand success of our undertaking. Where will you find a woman whose sympathy and whose helping hand and willing heart does not go out in overflowing measure to assist any enterprise that they know is for a good and moral purpose. I wish these rooms were large enough to hold every one of them from all the offices in this city, and I hope that this club will in the near future prepare a reception for the ladies of the fraternity, thus showing them, as they already know, that we appreciate them in the office, out of the office, yes, wherever we find them. They are our guiding star, and in their faith we become strong. If I had the time and ability I would paint a picture upon the very walls of this club room "Dedicated to the Ladies of America," to their virtue, fidelity and courage, and I would group these handsome ladies who are with us to-night, in letters of gold upon the forefront of the picture: I crown them the queens of the craft.

I remember, in 1870, when I was addressing a Labor Union in behalf of the boys, I wanted to end up my remarks with a quotation that I thought would convince my hearers that we owned almost the world, but that at that time it was heavily mortgaged; in other words, I wanted to give them not only a striking but a stirring ending. There were only two lines in it, but I got stuck at the fourth word of the first line. I tried it again with the same result when our old friend Ira Bellows, who was also one of the orators upon the said occasion, said: "Bill, let her go and let me get at them;" but Bill didn't let go, but went on with another speech giving them something that he possibly had left out, all the time thinking what in the name of goodness that quotation was. It came after a time when I made my ending in the same good shape as did our friend, Tom Greene, in his maiden speech before this club the other night. Well, Mr. President, I was nicknamed "Old pent up Utica," and carried the honor for many years, until I got my promotion to that of "senator."

That quotation was:

"No pent up Utica contracts our power,  
A boundless continent is ours."

So I say to this club to-night, you have commenced a grand work and it is unlimited. It will be far-reaching in

the direction in which you aim it, and its moral as well as its social advantages that shall be gained from it will insure a temple for the boys as solid as the rock, with unity within and fraternal friendship to one and all without.

Prominent among those whose names were registered were: A. R. Brewer, W. C. Humstone, R. W. Pope, J. H. Dwight, T. Brennan, R. G. Stephenson, W. J. Holmes, E. Delaney, E. F. Kirby, G. E. Baker, James M. Sherwin, A. M. Guest, J. H. Baker, J. I. Buxton and wife, J. Brant, E. V. Wedin, J. H. King, S. S. Stephenson, Estella E. Hearne, Mrs. J. Hearne, Kittie Stephenson, Mrs. R. G. Stephenson, A. I. Guy, Nellie F. Harrington, D. W. McAneeny, Mrs. M. Scheen, P. J. Tierney, Miss L. J. Allen, R. J. Uth, S. W. Fellgraff, R. J. Marrin and wife, G. F. Jones, J. T. Logan, Wm. Hook, R. E. Wark, J. P. Finley, Robert Morton, M. H. Collins, N. D. Webster, J. P. Feeley, J. H. Robinson, R. J. Murphy, J. J. Keating, Miss Emily Finn, Miss Maggie Ahearn, F. J. Finn, Wm. L. Ives, A. A. Offutt, Annie Moorhead, Minnie Glover, M. A. Delaney, J. F. Skirrow, Ham Fitchett, J. B. Taltavall, G. W. Hurd, W. H. Jones, Wm. H. Moffett, J. J. Donnelly, Jos. Knittle, H. P. Nelson, John P. Monohan, Hugh A. Moody, James P. Cullen, E. J. Hamilton, J. H. Montgomery, J. Tuck, F. W. Barlow, M. E. Taylor, Mrs. E. W. Firmin, Mrs. C. S. Foster, Jr., Thos. Brennan, R. A. Lane, Mrs. J. C. Watts, Miss Julia Marks, Miss Lizzie Platt, Miss Josie Watts, W. H. Watts, Henry Hall, D. H. O'Brien, T. E. Fleming, M. J. O'Leary, W. C. Burton, Jas. D. Reid, Thos. G. Kennedy, J. J. Callahan, E. J. Murphy, E. F. Richardson, S. M. Fones, W. J. Dealy, J. B. Phillips, Geo. E. Holbrook, F. W. Griffith, J. F. Howell, B. B. Palmer, E. E. Brannin, J. R. Powers, T. J. Dunn, J. C. Watts, L. F. Miller, D. H. McParland, P. J. Byrne, Geo. W. Hann, E. R. Adams, G. H. Dickinson, C. F. McCrum, J. F. Bergin, T. W. Greene, Geo. H. Usher, May C. Finley, S. W. F. Bulger, M. E. Robertson, Geo. A. Finn, Minnie J. Garey, C. M. Harty, J. M. Dorsett, Mrs. J. J. Burke, Miss McMullen, Miss Nicol, Marie Fancell, J. C. Robinson, C. M. Holmes, G. Ward, F. J. Stacom, Thos. F. McLaughlin, P. N. McCawley, George F. McCrea, C. S. Foster, Jos. Russell, T. F. Foley, Clarence Cross, Wm. L. Geehr, T. C. Ashcroft, F. R. Blanchard, Peter Gries, L. Timmins, T. J. Floyd, J. H. Graham, M. J. Landy, F. Secore.

THE TELEGRAPHER NON-SUITED.—Kansas City, June 19. In the suit of E. L. Randall, a telegraph operator who sued the Chicago, Rock Island and Pacific Railroad company for placing his name upon the discharged list, claiming \$25,000 damages, Judge Gibson, of the circuit court here, non-suited the plaintiff on the ground that the discharged list was a privileged communication which it had the right to send to officers of the telegraphic service, whose province it was to supervise the employment of operators and pass upon their fitness.

LINEs REBUILT.—Assistant-Superintendent Lamb, of the Western Union, San Francisco, says that the lines will be rebuilt between Portland, Oregon and Astoria. The object is to get the line away from overflowed lands and out of the way of banks likely to be washed out by the river, so as to avoid interruption to communication. The present line, which was built in 1876 or 1877, runs from Portland to Vancouver, thence along the old road to Kalama, thence to Oak Point, where it crosses the Columbia river by cable to the Oregon shore.

TELEGRAPH BLUNDERS.—"Mr. S. had to be here" for "No shad to be had," shows that the receiving operator is not always at fault; but "6 Amherst signals" for "6 A. M., hoist signals"; "Pamour circuits O. K." for "6 A. M., our circuits O. K." and "Toham, Va." for "Lee Hall, Va." clearly prove that even first-class men may sometimes be deceived.

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THE ROE FUND.—John Roe is said to be no better in body, but much improved in mind, and now converses cheerfully with his friends. The following subscriptions for his benefit have been added since our last report: from Owego, N. Y., James F. Dee, \$2; P. J. Brew, A. N. Beach, A. W. Parmelee, Horace Yother and C. W. Daggett, 50 cents each. Total, \$4.50. From the Springfield, Mass., telegraphers, \$3. Amount last reported, \$420.15. Total to date, \$427.65.

OPERATORS WANTED—Six good, sound railroad telegraph operators wanted immediately. Must be strictly temperate. Apply to S. B. Rumsey, Supt. Low Grade Division A. V. R. R., Reynoldsville, Penna.

MARRIED.—Mr. David Fair, ticker inspector of G. N. W. Telegraph Co., Toronto, Ont., and Miss Lizzie McHale, of a prominent branch office, were united in marriage at Stratford, Ont., on Monday the 24th inst.

DIED.—A. T. Lee, train dispatcher and chief operator of the L. M. R. R., Xenia, Ohio, died June 5.

Mr. R. W. Mossman, formerly of the Commercial Telegram Co., now represents the Pittsburgh *Dispatch* at the New York end of the wire.

Mr. J. J. Benelisha, of Boston, has accepted the Postal managership at Narragansett Pier, R. I.

To those who are enterprising and waiting for "something to turn up," we would say: "Get to work and turn it." Vain wishing and waiting for sinecures are seldom realized. Their wear and tear on the brain is worse than hard work. If you wish to turn something and thus earn the price of your labor, communicate with the *ELECTRIC AGE* Publishing Co. for subscription terms, and go to work and secure all your acquaintances who are not now receiving the paper, but are dependent to keep posted upon seeing neighbors' copies. Thirty cents is the commission allowed on a yearly and fifteen cents on a six-monthly subscription. Every one within your reach not now enrolled, can positively be secured if you go about it in the right manner. Quite a number of our agents are paying their rent out of the commissions earned, and indifference and lack of get up and get there are the only drawbacks to this not being accomplished at every central point in the country. Those who are at places not now taken care of by agents should lose no more time but endeavor to build up an agency second to none. It will pay you to give this subject serious consideration.

Mr. E. Maynard, Ortega 28, City of Mexico, desires the address of W. J. Furgerson; last heard from was with the Northern Pacific R. R.

## J. S. TOWNSEND,

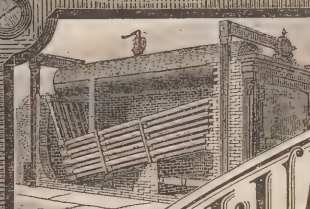
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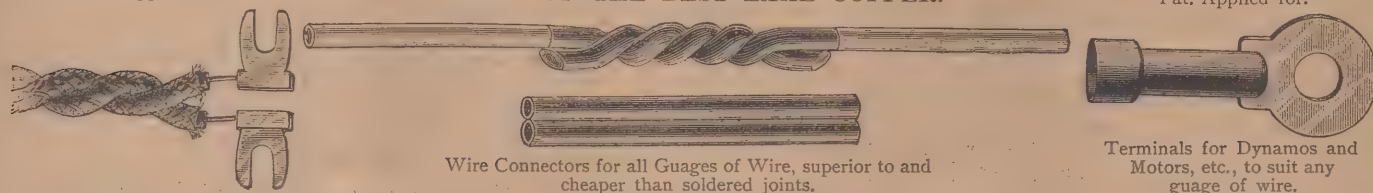
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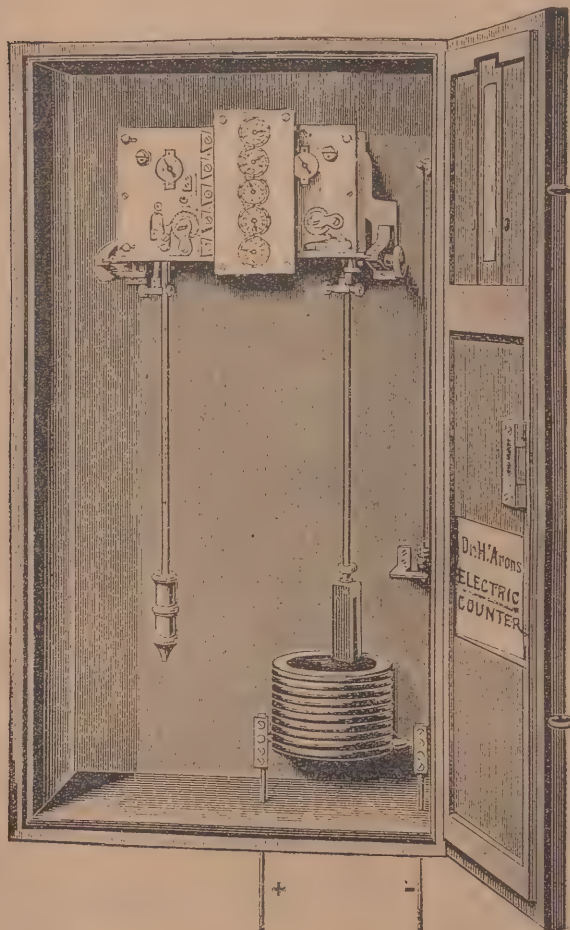
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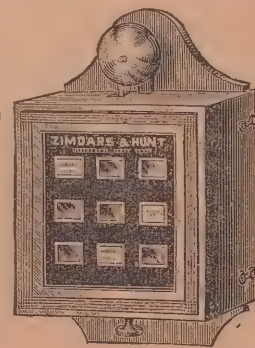
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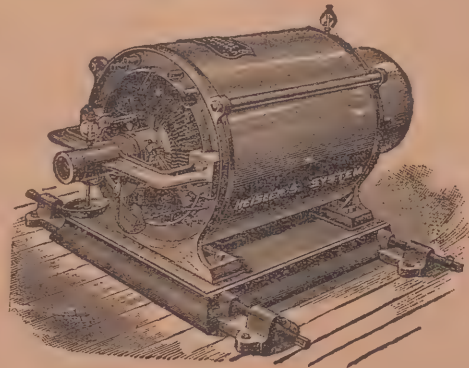
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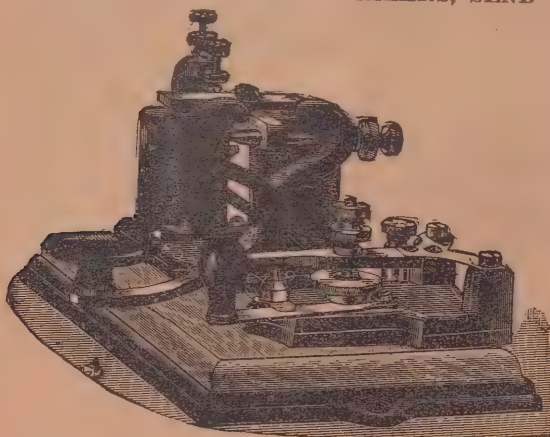


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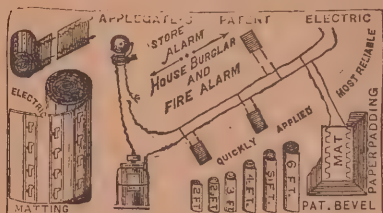
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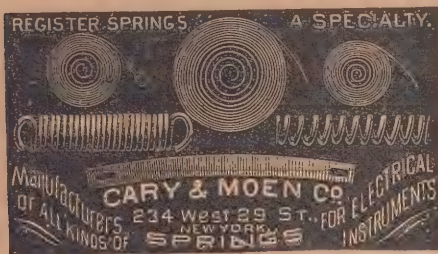
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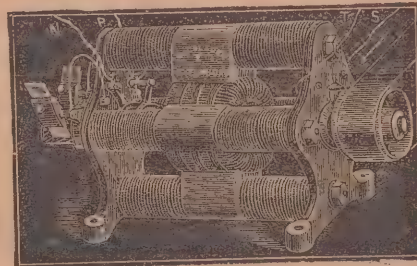
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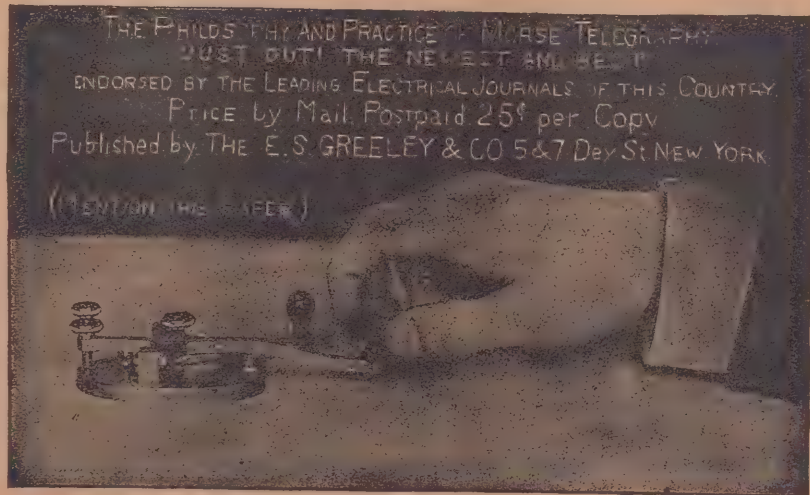
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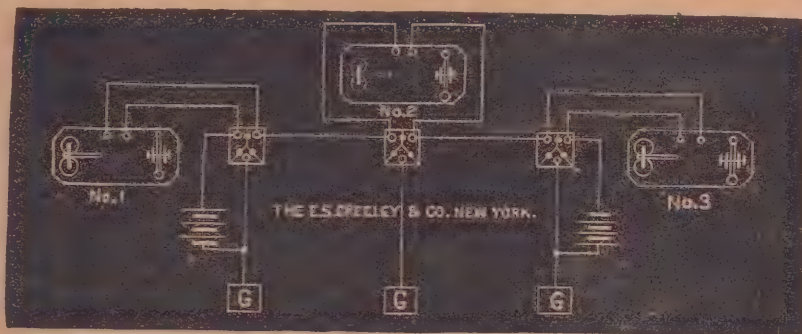
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The following diagram from the *Philosophy and Practice of Morse Telegraphy* gives an intimation of its scope.



**DIAGRAM No. 19.**

Diagram No. 19, showing three Home Instruments or other short line combination sets, connected up on a grounded circuit with Excelsior Lightning Arresters at three distinct offices. The Switch Pin in this case, while instruments are in use, must be kept in the "dead hole," which is the hole in the center of the middle plate.

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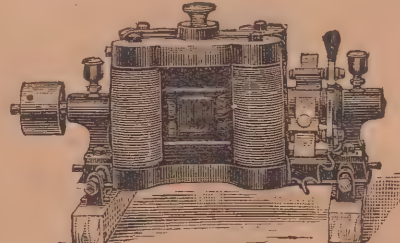
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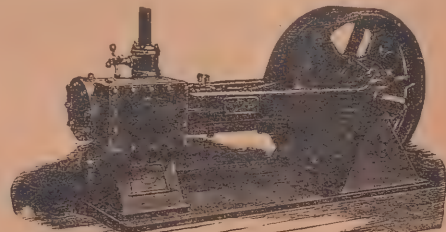
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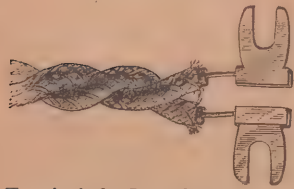
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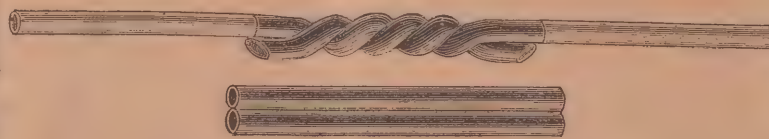
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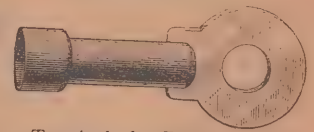
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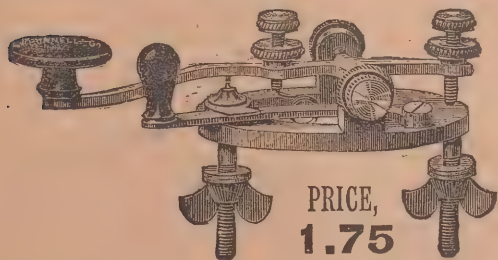
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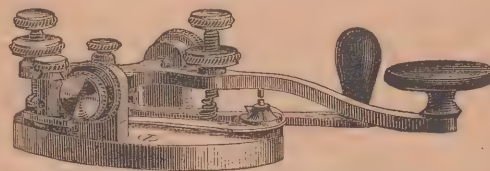


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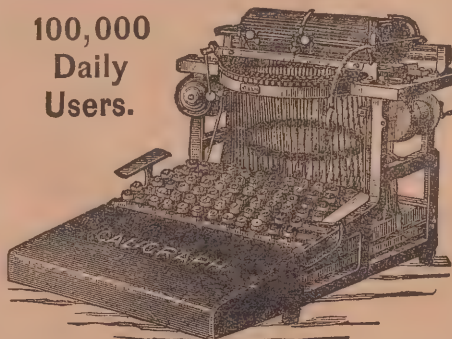
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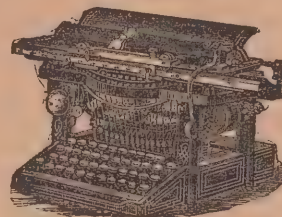
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NEW YORK, JULY 16, 1889.

American central stations are said to be far in advance of those on the other side of the ocean.

Steam fire engines worked by electricity are proposed. They are light enough to be drawn by one horse.

The new electrical engineering building at the College of New Jersey is to be constructed entirely of brick. No iron will be used.

The Empire and Bay State Telegraph Co. are stringing four new wires on their pole line between New York and Boston for leased wire purposes.

The New York and New Jersey telephone line through the city limits of Newark, N. J., contains 170 wires. We doubt if this number can be beaten in separately strung wires.

The increase in the amount of tonnage passing through the Suez Canal is claimed to be due in a great measure to the lighting of the canal by electricity, admitting of its use by night as well as by day.

The court decided against St. Louis in a suit against the Western Union for \$5 each per year for poles. It was decided that the city cannot impose the tax, although it can regulate the placing of the poles.

In experiments on the production of electric currents by bending metal wires, it is proved that the greatest development of current is produced by the elongation or compression of a nickel wire wound in the form of a spiral spring.

The English railways are using the electric light on their trains. The Midland have the dynamo in the rear guard's van, the driving gear being attached to the axle of the front pair of wheels. The light was found to be quite steady and strong.

Mr. Wm. Maver, Jr., the well-known electrician and author, is writing an electrical work for Messrs. J. H. Bunnell & Co., the electrical supply establishment of New York. It is intended to thoroughly cover every subject of interest to the telegraph fraternity. It will be distinctly a work on American telegraphy.

In Paris the "theatrophone" is soon to be introduced. It will furnish drama and opera to subscribers by wire. The cables will be run through the sewers of Paris, and complaints of the sewage are bound to increase after the instruments are in full operation.

Abroad conductors are being laid underground and insulated by placing the bare wires in glass tubes, which are protected by a layer of cement, outside of which is an iron pipe. This method is cheap, gives a high degree of insulation, and water cannot penetrate.

It is probably unknown, but nevertheless a fact, that the telegraph companies are greatly affected in a financial sense by the great sugar trust more than any other line of business. Before the trust was formed, when some twelve refiners were competing for trade, it was a common thing for the large brokers to send off one and two hundred messages each all over the country, offering big lines of sugar at special prices. It is safe to say that the Western Union and the Postal Companies are each out of pocket at least \$25,000 a year since the trust was formed, in 1887.

## ELECTRICAL CURRENTS.

We have in the case of electrical waves along a wire a disturbance outside the wire and a current within it, and the equations of Maxwell allow us to calculate these with perfect accuracy and give all the laws with respect to them.

We thus find that the velocity of propagation of the waves along a wire, hung far away from other bodies and made of good conducting material, is that of light, or 185,000 miles per second; but when it is hung near any conducting matter, like the earth, or inclosed in a cable and sunk into the sea, the velocity becomes much less. When hung in space, away from other bodies, it forms, as it were, the core of a system of waves in the ether, the amplitude of the disturbance becoming less and less as we move away from the wire. But the most curious fact is that the electric current penetrates only a short distance into the wire, being mostly confined to the surface, especially where the number of oscillations per second is very great.—H. A. Rowland.

## GOOD WHOLESOME ADVICE.

(BY G. W. CHILDS, PHILADELPHIA.)

Every thinker knows that the man who would succeed must do more work than he gets paid for, in every profession and trade. We take it for granted that the man who will do only \$20 worth of work a week because his salary is but \$20 will never get more than \$20 a week, for the simple reason that he has never shown his employer that he is worth more. We figure it that an employe who means to succeed has to do from 10 to 20 per cent. more work than he gets actual pay for. This he has to do until he reaches a certain point, and having reached that point he will find that by as much as his income has increased, by so much has the demand for amount and intensity of his labor diminished. To put this theory into figures, we will say that a boy receiving \$3 a week should do \$4 worth of work; the boy receiving \$5 a week should do \$7 worth of work; when he gets to be a man and receives \$20 a week, he should do \$30 worth of work; a man receiving \$30 should do \$40 worth of work, and so on until, say, the salary reaches \$75, and then the laborer can give himself somewhat of a rest, that is to say, about \$50 worth of work will satisfy his employer. Labor brings its market value, and is seldom overpaid, oftener underpaid. It is the experience—the "Know How"—that brings the money.

## THE CLARK ELECTRIC LIGHTING SYSTEM.

The accompanying illustrations show the new apparatus of The Clark Electric Company. The dynamo has been mentioned in these columns before, but as now presented shows some points of interest in details such as an unusually long and deep commutator, provided with two independent brushes on each side, either one of which is well able to carry the current, thus allowing the brushes to be changed or turned over while the machine is in operation. The shaft as will be seen is very strong, is made of cast steel and runs in gun-metal bearings. The armature cores are made of iron wire, insulated with cotton and wound into the proper form. A better division of the iron is thus obtained than by making the cores of sheet iron rings with insulating material between them; but as the core in this method of construction is laminated

in both directions instead of only in one, its magnetic resistance is somewhat increased, which is a serious objection to such cores in most machines. In these machines, however, the pole pieces of the field magnets are presented not only to the outside of the armature, but to its inner surface as well, and by this means an enormous increase of the polar surface is secured, which is claimed to render the wire cores of these machines more effective than a sheet iron core. The machines are shunt wound, and are claimed to be the only high tension arc light machines so constructed. They are calculated throughout to secure the highest possible efficiency, and it is stated that after a long run no portion of the machine is ever found uncomfortably warm to the hand.

The Arc lamps shown in cuts Nos. 3 and 4 are storm proof and do not require any hoods or other clumsy devices to protect them. The binding posts are on the under side of the case and will not become short circuited by sleet or snow. The switch is also on the under side of the case, where it can be seen by the person operating it. These lamps have been exposed to the worst storms of the past winter, and, although at times completely covered with ice and snow, they have never failed to start when the current was turned on. The movement is claimed to be the most powerful ever put into a lamp. The moving parts are heavy in

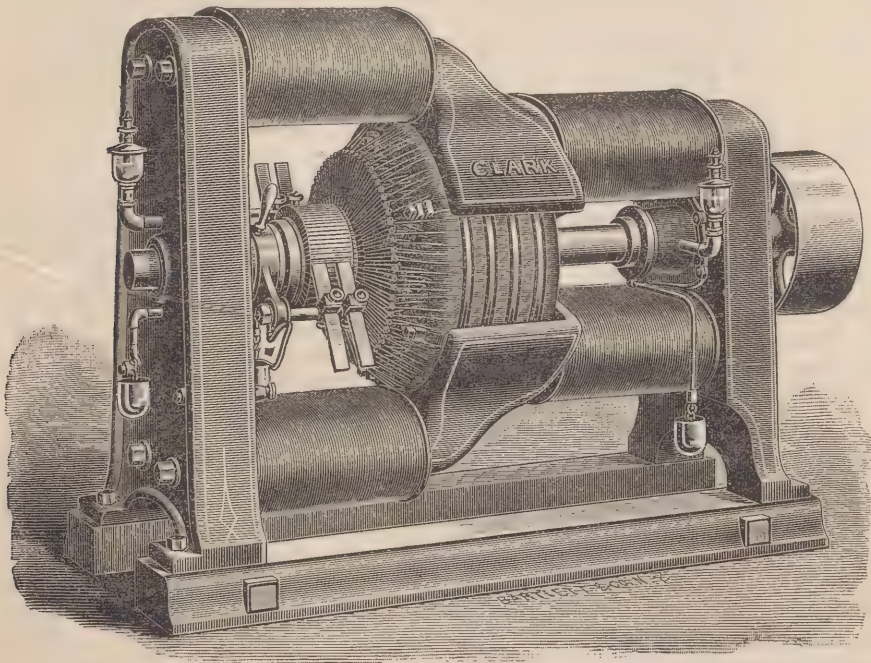


FIG. 1.—THE CLARK ELECTRIC COMPANY ARC DYNAMO.

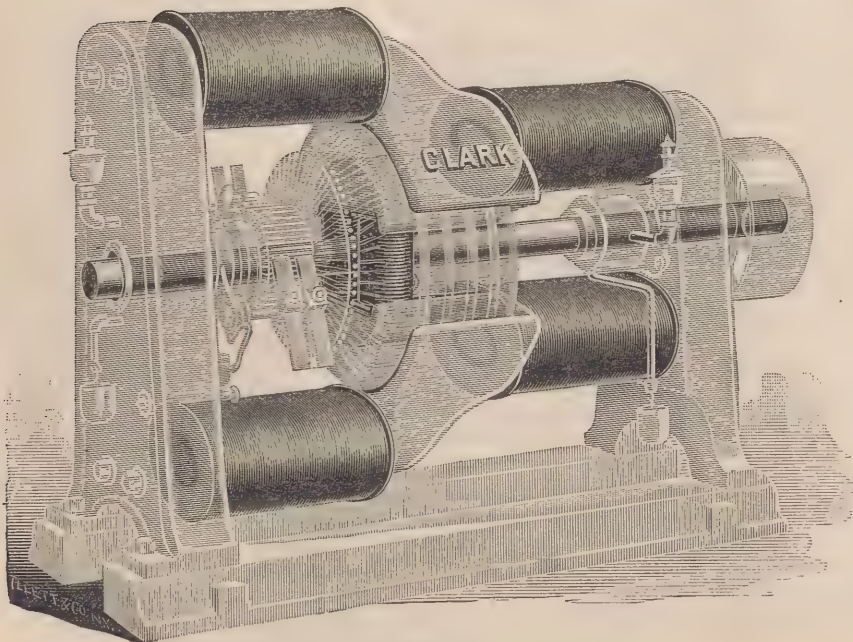


FIG. 2.—THE CLARK ELECTRIC CO. ARC DYNAMO, SHOWING INTERIOR FIELD.

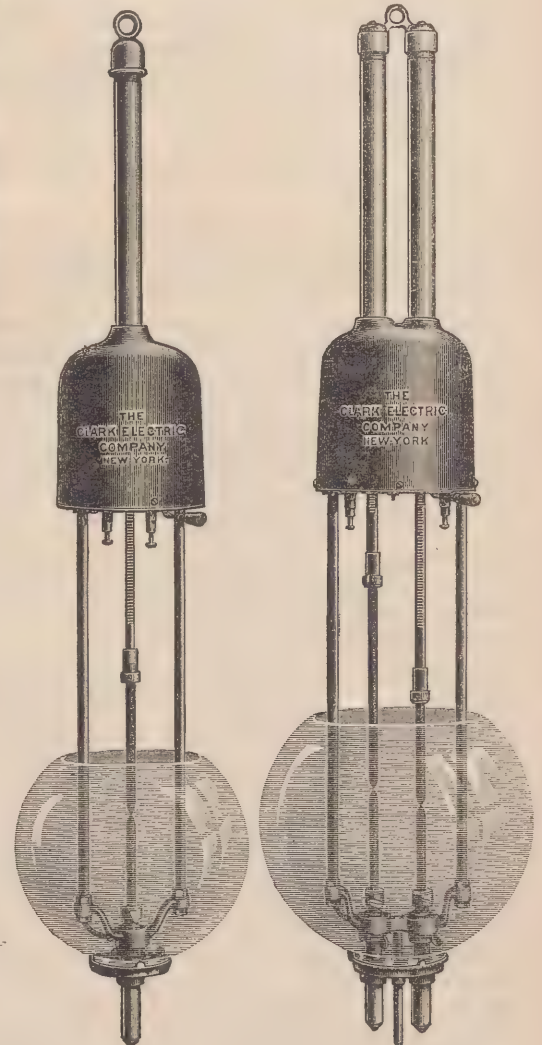


FIG. 3.—THE CLARK ELECTRIC COMPANY SINGLE LAMP.

FIG. 4.—THE CLARK ELECTRIC COMPANY DOUBLE LAMP.

proportion, the carbon holding rod weighing alone 16 ounces

Figure 5 shows the new Automatic Regulator, patent on which was issued June 4, 1889. The principles on which this apparatus works will need a word of explanation. The dynamos made by this company are shunt wound, and instead of using an adjustable rheostat in the field magnet circuit, as is the usual practice with machines of this class, The Clark Electric Company vary the exciting current by means of an adjustable counter electro-motive force. This is accomplished as follows: The small armature shown in the cut is included by means of its brushes and commutator in the field magnet circuit of the dynamo; the armature is simply a small Siemens, but wound with a large number of turns of wire; as the current passing through it is very small (in the arc machines never exceeding 4-10 of an ampere) the wire of this armature is quite small. The armature revolves in the field as shown and when the current passes it becomes a motor, and, of course, sets up a counter electro-motive force, the amount of which will depend upon the velocity of revolution of the armature and the strength of the field in which it revolves. The speed of the armature is limited to a certain number of revolutions per minute, by means of a small belt running from the pulley on the armature shaft to another one on the dynamo, or a line shaft or some other shaft whose speed is constant. As the speed of the

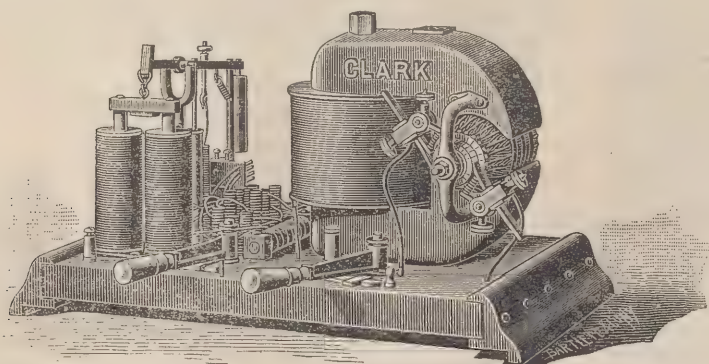


FIG. 5.—THE CLARK ELECTRIC CO. AUTOMATIC REGULATOR.

armature cannot change, its counter E. M. F. can only change by reason of a change in the magnetic strength of its field magnets. The main current on its way to the line passes through the coils of the regulator field magnets, and thus supplies the field in which the regulator armature revolves. If from any cause the main current should increase in strength, it will at once cause an increase in the power of the field of the regulator, and an increase in the counter E. M. F. of its armature, which being opposed to the exciting current of the dynamo field, reduces that current at once, and with it the strength of the magnetic field of the dynamo. This at once reduces the generating power of the dynamo and brings the current back once more to its standard strength. If the strength of the main current should decrease for any reason the opposite action will take place; the regulator field magnet decreasing in strength, the counter E. M. F. of its armature diminishing, and the current through it and the field magnets of the dynamo increasing, thus restoring the strength of the main current. There is another piece of apparatus included in the regulator and shown at the back of the cut. It consists of a solenoid, located in the main current, whose armature is attached to a lever. The other end of this lever carries a sliding contact piece, which slides over a number of sections or contacts of copper. A number of small spirals of German silver wire are connected to these contacts, and arranged so as to form an adjustable shunt for the field

coil of the regulator (whose resistance in the 30-light regulator is only 15/100 of an ohm). By means of this arrangement, when the main current falls a trifle the resistance of the German silver coils is diminished, and a greater portion of the main current is almost shunted through them, instead of passing the field magnet coils. This, of course, causes a further reduction of the magnetism of the regulator field magnets, the reverse action taking place when the current rises. It will be seen by this description that the regulating power depends upon the disturbance which is to be corrected, and the greater the disturbance the greater is the regulating power, and as it is not necessary that anything should move, the regulating influence can be exercised to a great extent instantaneously, while the entire power of the regulator can be exerted in the fraction of a second that is required for the lever of the solenoid armature to move. It is stated that the 30-light regulator exerts a counter E. M. F. under extreme variations of the main current, ranging from 3 or 4 volts to 700 volts, which is enough to control the dynamo under the most violent change of load; and as there is no train of gears nor ratchet movements to be put in motion, the regulation is accomplished in much less time than with any other device in use.

The simple form of Ammeter as shown in Figure 6, is supplied with each plant.

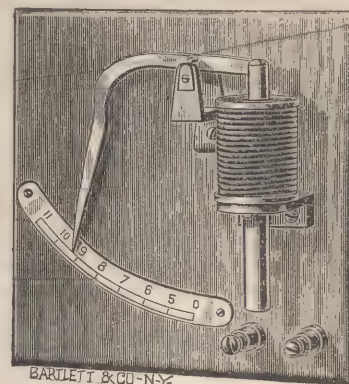


FIG. 6.—THE CLARK ELECTRIC CO. AMMETER.

Among recent patents is an electric drill, which promises to almost revolutionize mining as well as tunnelling. It is run by a motor, which has its power from the electricity from a large dynamo of 400 light power. It is stated that such a dynamo will run twenty drills easily, each one with a capacity of boring on an average two inches a minute in the hardest kind of rock and more in softer kinds.

Telegraph wires are very seldom fused by lightning, although there are numerous instances of their carrying very large currents, and a case is cited on excellent authority where a line man was killed by touching a wire struck by lightning at a point fifty miles distant.

There are 5,747 central stations, with isolated electric light plants, in the United States, showing an increase of 2,067 plants in a year. There are also 2,504,490 incandescent lamps in use, or 754,990 more than twelve months previously.

A well of so-called electrical water has been tapped at Fort Scott, Kansas. To place both hands in the water at the same time is utterly impossible. The shock is so forcible that it throws one aside with vigor.

Professor Rowland shows that in certain cases in which an alternating current is employed the current in the interior of a conductor may be in a direction opposite to that at the surface of the conductor.

## EXCELLENT WORK BY AN EICKEMEYER MOTOR.

A little 2 h. p. Eickemeyer motor is working smoothly and almost silently, says Cecil P. Poole, in the press room of the Lynchburg (Va.) *Daily Advance*, taking the place of a 3 h. p. steam engine, which changed speed perceptibly at each variation of the load, so suddenly were these variations thrust upon it. The speed of the engine dropped from 300 to 240 revolutions at each increase of the load. The press is a large Campbell cylinder, with an automatic folder attached, which enhances the roughness of the work about five per cent. When the press is doing its hardest work the folder is grinding away at its worst, and at the moment when the press lets up the folder becomes idle, making the increase and decrease of the load something terrific; yet the motor sings merrily along through it all, never sparking or heating, and apparently unconscious of the fact that an ammeter placed in the armature circuit dances spasmodically from 3 to 18 amperes and back again 1,500 times per hour, or 25 times per minute. The speed of the motor does not change perceptibly, and the brushes have not been reset or wiped once during the past two weeks. Surely no better practice can be attained without investing a motor with a set of brains, and it is doubtful if this would work improvement upon the performance of this Eickemeyer motor.

## ELECTRICITY ON SHIPBOARD.

There are innumerable devices by which electricity is made useful on board ship. The value of the search light cannot be estimated, as scouting parties, torpedo boats, or swift steam launches can be detected a mile away on the darkest night. As a motive power for small machines it is invaluable, and on the war steamer Chicago will be brought into play for training the huge guns of the main battery. It is used also for discharging the rifled ordnance, and the entire system is under the absolute control of the commander from his position in the fighting tower. He requires no uncertain assistants to place him in communication with the various departments of the complex machine. Electrical devices perform all the duties, transmit the orders and control the movement with far greater accuracy and safety than would be possible by the old methods.

## THE NATIONAL ELECTRIC LIGHT ASSOCIATION

Will hold its Tenth Convention at Niagara Falls, August 6, 7 and 8. Delegates will stop at the International Hotel. The convention will be held at the Casino.

For rooms and exhibition space address Benjamin Rhodes, Chairman Executive Committee, Niagara Falls.

Railroad tickets at reduced rates and seat checks for the special limited Pullman train from New York, August 5, may now be obtained at the Association headquarters, 18 Cortlandt street, New York. Those wishing to join the association and attend the convention should make immediate application at the headquarters.

ALLAN V. GARRATT,  
*Sec'y and Treas.*

## A NOVEL USE FOR THE DYNAMO.

The Reading Railroad Co. is now experimenting with the well-known Eickemeyer dynamos on their engines, for the purpose of preventing the slipping of the driving wheels when starting and drawing heavy trains up grades. This will prove a great saving in time. A current of electricity is passed through the wheels of the locomotive to the track, until the train is well in motion.

## A NEW TELEPHONE COMPANY ORGANIZED.

The Pulsion Telephone Company of New York has filed its articles of incorporation in the Secretary of State's office. The capital stock is fixed at \$1,000,000, divided into 200,000 shares of \$5 each. The principal office is to be in New York, but in their operations the Company will include the whole State.

## AMERICA'S FASTEST RAILWAY TRAIN, AND THE GREAT RECORD IT HAS MADE.

The "two-hour train" which leaves the Reading Railroad station at Ninth and Green for New York at 7.30 A.M., is the fastest scheduled railway train in the United States. In addition to this distinction, it has made a record for precision and regularity of movement which high authorities declare to be without precedent in the history of railroads. From January 1 to June 1, this train made 130 trips—that is, a trip every day except Sunday—and in the five months it reached its destination behind time on only nine occasions, and in these instances the maximum variation from the time-table was but a few minutes. On the remaining 121 trips it arrived on schedule time to the second, averaging 94 per cent. of absolute promptness. This unparalleled showing demonstrates that the Reading Railroad not only possesses a magnificent and completely-equipped line between Philadelphia and New York, but also that it is managed with rare ability and with close regard to the requirements of the traveling public.—*Philadelphia Times*.

## THE TELEPHONE IN HAWAII.

A recent photograph from Hawaii shows a street scene in Hilo, the only important town on the largest island. Amid the wealth of tropical verdure that almost hides the houses lining the roadway one is surprised to see a line of poles with cross arms well loaded with telegraph wires. So many wires would be adequate to the needs of a rushing business in a lively American town; but Hilo has no electrical communication with any other island, and there is hardly another white settlement worth noticing on the island.

The fact is these numerous wires are the telephone system of Hilo. This instrument is proving very acceptable to the rather indolent residents of warm climates, who are glad to be able to talk with their neighbors without going out of doors. Mr. Hugh R. Mill says Honolulu has a more complete telephone system than any town of the same size in Great Britain.

Frank G. Carpenter, in a letter from India, thus speaks of the telegraph equipment in that country: The telegraph poles on many of the lines are hollow tubes of galvanized iron, about as big around as the average man's calf, so made that they fit into one another and form a pole about ten feet high. To these poles the lines were strung, and many of the roads use such poles throughout their entire length. On other lines the telegraph poles are T iron rails, the same as those on which the car travels. Two of these rails are fastened together by bars about a foot wide, and then this iron lattice-work is set deep in the ground and the wire strung upon it. About some of the stations the fences are made of such iron rails, and through hundreds of miles along one of the rajah's railroads in western India I found fences of barbed wire with sandstone posts. These posts were a foot wide and four inches thick, and they stood about three feet above the ground. The wires ran through holes in them, and the railroad men tell me that they are much cheaper than wood.



## GIRLS IN SIGNAL TOWERS.

LONELY NIGHTS IN ORDER THAT TRAVELLERS MAY SPEED IN SAFETY.

The block signal system of the Pennsylvania Railroad is a great success, but one scarcely realizes how much depends on the carefulness and wakefulness of the telegraph operator until he stands a night in one of these telegraph towers.

It was the misfortune of a *Dispatch* reporter, not long since, to have such an experience. Caught at night in the country, with the only hotel in the village two miles away, and the farmers for miles around sound asleep, one of the lonely towers of the Pennsylvania road was not uninviting under such circumstances. The news gatherer had a long telegram to send, and the young lady operator vowed a thousand times, as she admitted afterward, that she would keep the door locked hereafter and admit nobody but railroad men at night. But when the hard job had been performed, and after vigorous rubbing the blood began to return into her numb arm, she was pleased with the prospect of having even a reporter to talk to until morning.

How these poor girls in the towers must suffer from loneliness none but themselves can tell. If a man had a wife that talked too much he could easily effect a cure by having her learn the telegraph business, and then secure for her a position in one of the Pennsylvania towers. It is surprising how many lady operators there are on the railroads, and invariably they work at night. One of them accounted for it by saying that their chiefs are men, and they try to discourage women from entering the business as much as possible.

"I wish I didn't have to work," said the lady operator in the course of the long chat; "certainly we get lonely, and the night is always terribly long. I have two revolvers in this drawer, but I am awfully afraid of firearms. In my experience so far I have had plenty of scares, but I never was really frightened but once. A tramp was determined to come into the tower one night, and placing a skid which the men used in handling freight against the building, he climbed up as far as the windows.

"I pointed the revolver at the fellow's head, and he cried out to me not to shoot. I didn't, and I confess I felt as much relieved as he did, when he found himself on the ground again. He slid down that skid almost like a shot.

"Most of the night operators on the Pennsylvania road are girls. About the hardest work we have to do is to pull the lever back and forward which changes the lights. In the winter, when the long bar becomes covered with ice, it is almost impossible to pull it, and it requires all our exertion.

"My greatest trouble is to keep awake after three o'clock in the morning. We help each other, and if I think an operator is asleep I try to warn her by making all the noise over the wires I can. I remember when the eastern express was put on early in the morning. The operators were so used to dozing about that time of the night that the express had to make a number of stops on its first trip. You see the red light hangs out continually, and this the engineers are guided by. If the operator goes to sleep the trains are blocked, and if she is reported she is fined \$2.

"Well, I have forgotten how often that train was stopped the first morning. At some towers they had to break open the door to see what was the matter. Generally the conductors and engineers are good fellows and do little reporting, but there is a limit to their patience. The train made a number of trips before the operators got used to the new run, and now we all manage to be awake."—*Pittsburg Dispatch*.

## THE CHEAPEST AND BEST ELECTRICAL BOOK.

NOW READY, A NEW WORK OF A. B. C. ELECTRICITY.—BY WM. H. MEADOWCROFT.—ENDORSED BY THOS. A. EDISON.—I VOLUME, LIMP CLOTH, FULLY ILLUSTRATED; PRICE, 50 CENTS.

In simple language the author lays bare the secrets of electrical science and application. The arrangement is systematical, the cuts are good, the typography and binding in cloth are excellent, and altogether the work is one heartily recommended.

The need of such a book has undoubtedly been felt by many, young and old. This work supplies the foundation for a more thorough knowledge of this interesting subject. Its illustrations and comparisons are drawn from objects and simple facts familiar to all, and its language is perfectly plain. Taken altogether, the book is deserving of success, and we predict for it a splendid sale. Copies can be procured from THE ELECTRIC AGE Pub. Co., 5 Dey street, New York, on receipt of price, 50 cents.

Thos. A. Edison says: "I have read your 'A. B. C. of Electricity,' and find that the statements you have made therein are correct. Your treatment of the subject and arrangement of the matter have impressed me favorably."

## THE PRODUCTION OF TELEGRAMS IN COURT.

In regard to the production of telegrams in the celebrated Cronin murder case, in Chicago, it is stated that the attorney for the telegraph company expressed a willingness to let the grand jury examine the telegrams at the company's office; and it is thus made to appear that the question at issue was the power of the grand jury to compel the removal of the telegrams from the telegraph office to the Criminal court building. This is the exact opposite of the truth. The inspection of telegrams by outsiders is as objectionable in one place as another. The position of the company is, that its patrons are entitled to have their messages transmitted and delivered safe from the scrutiny of any outsider. Such also is the duty imposed on the company by the statute of Illinois. However anxious the officers of the company might be to have the telegrams examined by the grand jury in this particular case, the power to demand the production of all the messages sent or received by a particular person for two months, plainly opens the door for great abuse at the hands of an evil-disposed or ill-advised grand jury. It seemed imperative, therefore, that any production of messages in answer to so broad a subpoena should be strictly the act of the court and not of the company. Several representatives of telegraph companies have already testified in this case.

The quarterly report of the Gold and Stock Insurance Company, printed in another column, shows a steady improvement in resources, which is certainly gratifying to the members and officers alike. The membership at present is 593, showing a net gain for the six months past of 88 members, or more than 17% on the membership of last year. There is every reason for congratulation on the healthy state of affairs.

On July 1, 1889, the rates to Cuba were materially reduced and the rules governing messages over the Atlantic cables were extended to the Cuba cables. This introduces the ten letter limit and abolishes many regulations that were confusing.

The farmers and shepherds in the English moors declare that more grouse are killed annually in England by the telegraph wires than by all the sportsmen.

"Telephone pirates" is the name given those who habitually make use of other folks' 'phones.

In France they have applied electricity to the playing of organs.

## THE ELECTRIC STORAGE SYSTEM.

CONSOLIDATION OF A NUMBER OF RIVAL ENGLISH COMPANIES.—  
PROSPECTS OF ELECTRICITY AS A MOTIVE POWER.

Mr. Joseph Smith, director of the Julien Electric Traction Company, Limited, of England, has just effected an amalgamation of all the storage-battery companies and the chief electric railway companies of England, under the name of the Electric Construction Corporation, Limited. In this amalgamation are included the following companies:—

The Julien Electric Company, Limited, of England.

The Electric Power Storage Company, Limited, owning the Faure-Sellon-Volckmar patents, as well as being the parent company and licenser of the Electric Accumulator Company of New York.

The Elwell-Parker Company, Limited, being a large storage-battery company of England, and the rival for years of the Electric Power Storage Company, Limited.

The Railway Electrical Contractors, Limited.

The Sprague patents for electric traction and transmission of power.

The capital stock of this new company consists of

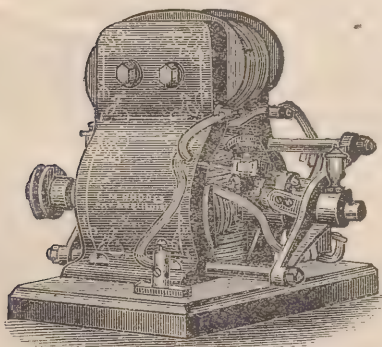
## THE RHODES MOTOR.

The accompanying cuts show the two forms of a motor designed by Charles M. Rhodes of Philadelphia. The smaller size is represented driving a circular exhaust fan. The little machine is quite compact, and so cased in as to be practically dust tight. This pattern is well adapted to driving sewing machines, small fans, and such light machinery.

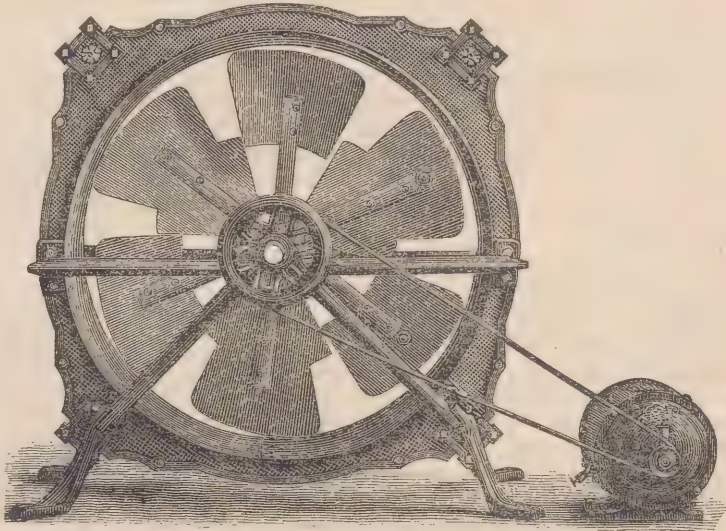
The larger form is built with a view of its being applied to heavier work. As will be seen by the cut, the peculiarity of this larger size lies in the fact that it has but one field magnet. The four-poled armature revolves between vertically-set pole pieces, these pole pieces being united to, and conveying the lines of force from, the two poles of the one horizontal field in such manner as to complete the magnetic circuit through the armature.

By this arrangement both poles of the one field are utilized. While grooved pulleys are shown in the illustrations, the machine is fitted also with flat-faced pulleys.

The English Government threatens to run the telephones since the business has been left to one company.



RHODES MOTOR.



RHODES MOTOR AND FAN.

£500,000. Subscriptions were opened on the 4th of June at par, and were closed the same day for double the amount required. Among the directors are such distinguished names as Mr. Pender, Sir Daniel Cooper, Sir Robert Fowler, Sir Douglas Fox, Sir Henry C. Mance, and the like. Sir William Thomson is consulting engineer of the company.

Mr. William H. Preece, probably the most prominent electrician now in England, and superintendent of the Government Postal Telegraph, in passing upon the merits of the above systems, says among other things: "The Julien and Sprague patents are of proved commercial value. They embrace the whole field of electrical power for general purposes, and there can be little doubt that their use of electricity for the transmission of power will, in the immediate future, still more rapidly extend the demand for electrical machinery. Large provision should be made for this branch of trade in the proposed extension of works."

Volts: "At last they have found an unflinching truth-teller." Jars: "That so? We'd better inform the Ananias Club." Volts: "Yes, it's a fact. The phonograph cannot tell a lie."—*Cincinnati Commercial*.

Galileo was laughed at in the sixteenth century for declaring that "the world moves." There are three men in the nineteenth century who were laughed at for advocating "impossible" schemes: Morse, because he said a message could be sent by wire; Cyrus W. Field, because he said a cable could be laid across the Atlantic, and Edison because he said he could light houses and streets by electricity.

The money has been raised for laying a telegraphic cable from San Francisco to the Sandwich Islands. From that point it is merely a question of a short time when telegraphic communication will be established with Japan, China and Australia. We shall have an electric girdle around the world within the next three years.

The fact that the jostling to which storage battery cells are subjected when in use on railroad trains not only does not injure them, but, on the contrary, prolongs their life, is accounted for on the ground that a continuous movement of the electrolyne is kept up, thus keeping it uniform about the cell and preventing injurious local action.

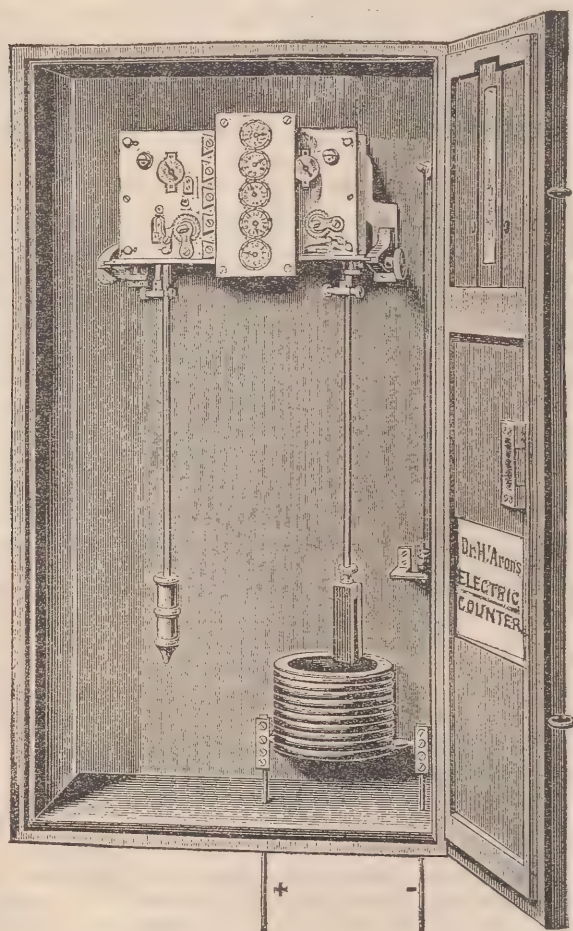
A new trick is called "the electric touch." But don't try it on the overhead wires.

## PROF. H. ARON'S NOVEL ELECTRICITY-COUNTER.

A COULOMB-COUNTER FOR DIRECT CURRENTS.

This apparatus, as the accompanying figure shows, consists in the substance of two pendulums regulated so as to have synchronous oscillations. The left-hand pendulum is of usual construction; the right-hand pendulum carries at its extremity as weight a steel magnet. Each pendulum is kept swinging by a clockwork actuated by spring-power; both pendulums act jointly upon one dial-train, which counts the difference of their oscillations.

As long as no current passes through the counter-coil, fixed below the magnetic pendulum, both pendulums oscillate synchronously, and the dial-train stops. As soon as, however, the current is set-up, the time of oscillation of the magnetic pendulum is affected so that it



PROF. H. ARON'S NOVEL ELECTRICITY-COUNTER.

swings the faster the more current passes, the dial-train registering the acceleration of the magnetic pendulum. The dial is so arranged that the top graduated circle or scale indicates the units; the second scale the tens; the third the hundreds, and so on; in order to learn the quantity of electricity supplied, it needs but to multiply the number of the degrees marked on the dial, with the constant determined for each apparatus individually. The clockwork for the actuation of the pendulums runs for about 40 days, hence requires a winding up but once a month.

The apparatus are furnished in simple, solid casings, and are manufactured in different sizes. Prices differ according to the size of the apparatus.

The loss of electric tension, owing to the inclusion of the electricity-counter into circuit, is, considering the small resistance in the counter-coil, very minute: thus, for

instance, in case of a counter of 100 ampères and of its full charge, hence at 100 ampères, about 0,04 volts.

The counters of every size measure with equal preciseness all currents both small and large; thus, for instance, a counter of 1,200 ampères records correctly the consumption of current of even one single incandescent lamp.

Mr. W. Hackenthal, of 21 Beekman street, New York, is the manufacturer.

## DOMESTIC GAS MACHINE.

Messrs. Phelps & Dingle, of 115 Broadway, New York, are the manufacturers of gas machines especially intended for people who live beyond the reach of gas mains and electric light wires.

The No. 1 Machine has combined all the essential features of a perfect gas machine: simple and inexpensive, safe and requiring little trouble or skill in management, and above all, the production of a superior grade of illuminating gas at a trifling cost.

No part of the machine is located in the building to be lighted, nor is there any need for a gas house, nor even a vault, things which are not only expensive but positively dangerous. The machine is simply planted in the ground at a convenient and safe distance from the house, and without any additional protection will withstand the heat



DOMESTIC GAS MACHINE.

of summer, the cold of winter, rain or snow, a cyclone or a blizzard, without interruption.

The amount of labor connected with the running of the machine is less than the care of one kerosene lamp, and requires no more skill.

The gas made by this machine is composed of about 80 per cent. air and 20 per cent. pure vapor of gasoline, containing no carbonic oxide, sulphur nor any other poisonous vapor so common in coal and water gas. It is absolutely uniform in density and burns in either an open or an argand burner, with a steady white light, fully equal to the very best coal or water gas and far superior to the average gas as furnished in our cities, while it is much safer.

The cost of the gas is very trifling, not being more than 20 per cent. higher than the cost of the same light from kerosene.

The main feature of superiority which is claimed for this machine is that it makes a perfectly uniform quality of gas at all times, which means an elegant light every day in the year, without smoke, smell or annoyance. The regular schedule of piping for common gas is good for domestic gas, and even smaller pipes can be used, as the pressure of gas is under the control of the user.

The arrangement of tanks and connections is such that there can be no waste of oil.

Mr. Dingle of the above firm is a well-known, old-time Western Union telegrapher, and his numerous friends wish him abundant success.

## THE TELEGRAPH CLUB.

Mr. Geo. W. Hann, the chairman of the governing committee of the New York Telegraph Club, in his address at its formal opening gave a brief history of the club which will be of interest to our readers. He said: The scene of its birth was the International Hotel on Park Row, and the date February 15th last. Sixteen of us met there on that day and organized the New York Telegraph Club. We made our first hit in the selection of our President, Mr. Geo. E. Holbrook. You all know him, and anything that I might say in his praise would be superfluous.

Mr. Holbrook's first official act was the selection of eighteen members of the club to act with the seven officers already elected, as a governing committee, and the wisdom he displayed in these selections assured success from the very outset of our career.

A more willing, enthusiastic, hard-working and harmonious body of gentlemen it has never been my good fortune to become associated with. They have given time, money and labor to the furtherance of the enterprise, and the result shows in what you see about you.

Starting out four months ago, with but forty names on our roll, we met with encouragement on all sides. The idea was popular, and popularity was success. To-day we have over two hundred members on our books, and have, we trust, only just begun to grow.

We have a library which will soon contain two hundred volumes, and our by-laws provide that each member must donate at least one volume per year. What will this amount to in a few years, taking into consideration an increased membership? Over a thousand volumes. Will not that be something to be proud of?

We also intend to enlarge our quarters as soon as possible, and offer our members the advantages of a first-class gymnasium.

Perhaps we might have been a little better off, from a financial point of view, had the opening of these rooms been delayed a month or so, but we decided that it would be the better policy to go ahead and show the boys something more tangible and substantial than mere prospectuses and financial secretary's receipts, and here we are—and we are glad of it.

We may pride ourselves especially, I think, upon that clause in our constitution which prohibits the use of intoxicating liquors and forbids gambling in these rooms. We considered this road the only sure one to secure the objects aimed at—the improvement morally, mentally and physically of our members—and we shall follow it to the end.

That we have the approval and endorsement of the officials of the two great telegraph companies is evidenced by the presence here to-night of Messrs. W. J. Dealy and George H. Usher, the managers of the Western Union and Postal Telegraph Companies respectively. These gentlemen are quick to see, as we do, that by elevating our own standard of manhood and self-respect we benefit not alone ourselves but also the telegraph companies, by furnishing them a better class of employees.

That we have friends among the gentler sex is testified not only by the presence of so many of them among us this evening, but also by this beautiful token of their friendship and approbation (a magnificent frosted silver water cooler and gold-lined goblet).

We intend to prove ourselves worthy of these marks of confidence and to make a ticket of membership in the New York Telegraph Club pass as a certificate of good character of the man whose name it bears, for honesty, sobriety and industry both as a telegraph operator and a gentleman, wherever he may go. Our present object is to furnish our members with more elevating and enjoyable surroundings than can be found at other resorts in

this vicinity, and these pleasant rooms will serve as an attraction to draw them away from other influences which, while being much less beneficial, generally prove much more expensive.

And now, Mr. President, it becomes my pleasant duty to present to the New York Telegraph Club, on behalf of the governing committee, through you, its first president, the keys to these beautiful quarters and all they contain, for the use and enjoyment, and, may I add, the elevation and improvement of its members; and in so doing let me venture the prophecy that ere many years shall pass away another chairman of the governing committee will present to another president of the New York Telegraph Club the keys, not to a suite of rooms, but to an entire building, of which the New York Telegraph Club shall be not only tenants but proprietors as well.

Mr. Holbrook, the president, stated that instead of his being entitled to the credit of the club's success, he considered Geo. W. Hann and T. W. Greene the two promoters of the club—the mainstays in the achievement of success.

## PHOTOGRAPHS OF PROF. MORSE'S BIRTHPLACE.

PRICE, 50 CENTS. POSTAGE PREPAID.

We have made arrangements to furnish anyone desiring the same, photographs of the house in which Professor Morse, the inventor of the electric telegraph, was born. The house is situated at 199 Main street, Charlestown, Mass. (Bunker Hill District, Boston), and bears an inscription to the above effect, which can be readily discerned in the photograph. As the house is old and likely to be torn down very soon, the opportunity to procure this valuable souvenir should not be delayed. Address The Electric Age Publishing Company, 5 Dey street, New York.

The fac-simile telegraph, by which manuscript, maps or pictures may be transmitted, is a species of the automatic method in which the receiver is actuated synchronously with its transmitter. By Lenoir's method a picture or map is outlined with insulating ink upon the cylindrical surface of a rotating drum, which revolves under a point having a slow movement along the axis of the cylinder, and thus the conducting point goes over the cylindrical surface in a spiral path. The electrical circuit will be broken by every ink-mark on the cylinder which is in this path, and thereby corresponding marks are made in a spiral line by an ink-marker upon a drum at the receiving end. To produce these outlines it is only necessary that the two drums be rotated in unison. This system is of little utility, there being no apparent demand for fac-simile transmission, particularly at so great an expense of speed, for it will be seen that instead of making a character of the alphabet by a very few separate pulses, as is done by Morse, the number must be greatly increased. Many dots become necessary to show the outlines of the more complex characters.

At a Western Union Telegraph office in New York on Thursday a young German presented some theatre tickets which he wished to have forwarded to an out-of-town address at once by telegraph. It took some time for the girl at the receiving desk to make him understand the impracticability of the scheme, notwithstanding the marvelous advances of electrical science. The applicant's reasoning appeared to be sound, namely, that it should be no more difficult to send the small cards than large quantities of money, the representative of the company having conceded that the possibility of the latter achievement was demonstrated daily.

When you feel like calling a big man a liar, be sure you're right, then use the telephone.

## ELECTRICAL PATENTS GRANTED JUNE 18.

- 405,246. Galvanic battery; William A. Childs, Englewood, N. J.  
 405,436. Electro-medical belt; William J. Shelton, Columbia, Texas.  
 405,519. Electric appliance for railway switches; Morris Wuerpel, St. Louis, Mo.  
 405,539. Autographic Telegraphy; Mark W. Dewey, Syracuse, N. Y., assignor by direct and mesne assignments to the Dewey Corporation, same place.  
 405,546. Insulator; Robert P. Frist, Wilmington, Del.  
 405,556. Electric Railway; Rudolph M. Hunter, Philadelphia, Pa.  
 405,647. Delay action primer; Edmund L. Zalinski, U. S. Army, and Henry J. Smith, Brooklyn, N. Y.  
 405,677. Telephone combination circuit; Frank A. Pickernell, East Orange, N. J., assignor to the American Telephone and Telegraph Company, New York, N. Y.  
 406,057. Electric signaling device; James C. O'Neil, Cleveland, O.  
 406,130. Manufacture of incandescent electric lamps; Thomas A. Edison, Llewellyn Park, N. J.  
 406,168. Electric Battery; Charles A. Hussey, New York, N. Y.  
 406,267. Insulating plate for secondary batteries; Stanley C. C. Currie, Philadelphia, Pa., assignor to the United Electric Improvement Co., Gloucester, N. J.  
 406,284. Insulated electric wire; Henry W. Johns, Jr., New York, N. Y.  
 406,291. Electrical type writing machine; James F. McLaughlin, Philadelphia, Pa.  
 406,293. Combined electric bell and annunciator; Jas. F. McLaughlin, Philadelphia, Pa.  
 406,331. Electric coupling and circuit closer; William H. Baker, Chicago, Ill.  
 406,341. Electrical fire extinguisher; Thomas R. Douse, Chatham, County of Kent, England.

*Copies of the specifications and drawings complete of any of the patents issued since 1866, can be had for 25 cents. Give the date and number of patent desired.*—THE ELECTRIC AGE Publishing Company, 5 Dey Street, N. Y.

The encouragement and appreciation shown by the electrical light people in favor of the National Committee on State and Municipal Legislation are very gratifying indeed. Chairman A. R. Foote, of Cincinnati, O., is in receipt of many encouraging evidence, that the movement is being approved of by a great many. So far, nineteen nominees have accepted appointment as members of this committee for their respective States. The need of such work as this committee is designed to accomplish is just what should be heartily endorsed by every one interested in electrical pursuits and enterprise. As the object to be obtained by this committee is to be the collecting of information, evidence and arguments bearing on the vested interests of all those identified with every kind of electrical enterprise, it is of the utmost importance that this work should be thorough, and it is hoped that all persons interested in the business will lend a helping hand for its advancement and success.

Mr. H. Ward Leonard, vice-president of the Chicago Electric Club, was tendered a banquet by the members of the club on the eve of his departure for New York, where he assumes the important position of general manager of all the United Edison interests.

The Westinghouse people are reconstructing their New York City central at a cost of \$500,000. They use underground wires exclusively.

Chicago is the only large city in the United States doing its own lighting.

## THE WIRES ARE HARMLESS.

"Mr. Smith," said the electric light manager to his foreman, "we want some men to testify to the absolute harmlessness of the electric light current used by us; you might ask Roberts."

"Foreman: He was killed while fixing a wire last night."

"Well; Jackson will do, then."

"He accidentally grounded a wrong wire last week and is scarcely expected to live, sir."

"Such awkwardness. Send Williams."

"Sorry, sir; but he was paralyzed while fixing an electric lamp on Thursday."

"Really it's most annoying. Employ some new men at once; send them to testify to the committee before they have time to get themselves killed.—*New York Herald.*

THE AMERICAN ALPHABET SELECTED.—By a general order issued from Army Headquarters the American Morse alphabet will hereafter be used by the army for all purposes of signaling, whether visual or acoustic, and the use of the English Morse, or Continental alphabet, will be discontinued. This action was taken upon the recommendation of the chief signal officer with a view to the simplification of signal instruction, and to the ready employment and utilization in time of war for skilled civilian telegraphers for military purposes. Fewer errors are supposed to result from the use of the English system, but it is slower than the American system, and its continuance would involve the employment of specially trained experts who could not be procured in sufficient numbers in an emergency.

NEW CABLES.—The Minister of Customs has ordered that facilities be given to land new cables in Dover Bay, N. S., for connection with the New York land lines. The cables include extensions of the two Western Union cables of 1881 between England and Canada, terminating at Canso. The new direct French cable has been landed at Fox Island, five miles from Canso.

Do you use a type-writing machine in your office? Is the noise objectionable? If so, send to us for one of the United Rubber Company's patent rubber mats, and reduce the noise to the lowest minimum point. Its advantages are: It deadens all noise; it produces an easier and more agreeable touch; machine is kept level and will always rest on rubber, it saves wear and tear on the machine. We are using one of these devices in our office and we are surprised at the result. It is just the thing for operators who are bothered with the drowning out of the noise of their instruments by their type-writers. Sent postpaid on receipt of \$2.00. In ordering please state what machine you use. Address the Electric Age Publishing Company, 5 Dey street, New York.

The remarkable progress of reduction in the cost of telegraph instruments is well shown from time to time in the advertising columns of this journal. Messrs. J. H. Bunnell & Co., whose excellent productions in all lines of telegraph apparatus have been prominent in journal advertisements for many years, are once more out with new prices, which are less than one-third of the best figures at which first-class instruments could be bought a very few years since, which means that two dollars will now purchase better telegraph instruments, in view of improvements constantly being made, than would six dollars in former times.

The Manhattan Electric Light Co., incandescent exclusively, is spending \$600,000 on a new station in New York city.

A western judge has decided that it is legal to endorse paper by telegraph.

## A. W. NAYLOR.

A. W. Naylor was born near Cincinnati, Ohio, October 15th, 1854. Being the youngest son of a Presbyterian minister, whose labors as a home missionary occasioned frequent changes of residence for the family, Mr. Naylor does not lay claim to any particular locality as the home of his youth. Until about twelve years of age he resided with his parents in various parts of Ohio, Illinois and Indiana. To the age of fifteen, his time was principally occupied in attending school and doing farm work.

At the age of fifteen years, while attending the Collegiate Institute, at Waveland, Ind., of which institution his eldest brother was principal, he joined a class-mate, W. F. Ringland, an expert telegrapher, in constructing a pony circuit between their study rooms. This was maintained as a pastime and source of amusement, with no thought that the knowledge thus acquired would ever be put into practical use. Many were the telegrams transmitted over



A. W. NAYLOR.

this pony circuit during that year for publication in the college journal.

At the close of the college year Mr. Naylor accepted an appointment as operator at the railroad station just opened in the village, thinking this a more lucrative as well as pleasant manner of spending the summer vacation than had been his custom previously, in the harvest fields. It was his intention to reenter college for the completion of studies in a regular classical course. Circumstances, however, threw the young man upon his own resources, and from that day to the present he has scarcely been beyond the sound of his instrument.

Becoming thoroughly expert as a railroad telegrapher, he readily found employment on the Pittsburgh, Ft. Wayne and Chicago Railway, and during his stay with that company worked in nearly every telegraph office between Pittsburgh and Chicago. In May, 1873, Mr. Naylor was employed by the Allegheny Valley Railway Co., and during his seven years' employment with this

company, occupied positions of responsibility both telegraphic and clerical.

His introduction to commercial telegraphy dates from May, 1880. At that time he was employed by the American Union Telegraph Company in Pittsburgh. He soon gained the confidence of his employers by sobriety and attention to business, and his reputation for rapid, accurate work and good copy was established during the rush incident to the illness and death of President Garfield. Along with an acceptable advance in salary came a permanent assignment to work on the National Associated Press wire, which position he held at the time of the consolidation of the Western Union and the American Union Companies. By direction of the popular manager of the Western Union office, Benj. F. Lloyd, Mr. Naylor was again assigned to the National Associated Press Circuits. After the organization of the Mutual Union Telegraph Company, and the transfer of the United Press—which had succeeded to the business of the National Associated Press—to that Company's lines, Mr. Naylor secured employment with the new telegraph company and was assigned to the new press service.

In August, 1883, Mr. Naylor was selected as the representative of The United Press in Western Pennsylvania, in which position he has continued ever since. He represents one of the most important news centers in the world and has always proven himself worthy of the confidence of his employers. During the recent excitement attendant upon the Johnstown calamity he handled the voluminous report, sent to The United Press, in a most prompt, admirable and artistic manner.

Mr. Naylor is strictly temperate in habits, a member of the Bellefield Presbyterian Church, and knows no greater enjoyment, aside from business requirements, than the pleasures he finds with his family of wife and two bright children, a son and a daughter, in their pleasant home in Oakland, a favorite resident part of Pittsburgh.

## TELEGRAPHERS' AID SOCIETY.—Auditors' report for the quarter ending June 6th, 1889.

Balance from last report,		\$2,015.19
Receipts: Dues,	16.00	
Fees,	701.00	717.00
	Total,	\$2,732.19
Disbursements:		
For Sick Benefits,	\$501.71	
Miscel. Expenses,	62.83	564.54
	Balance on hand,	2,167.65
Gain for quarter,		152.46

Signed by E. F. Stevens, D. C. Donohue and Edward Dean, auditing committee.

## THE GOLD AND STOCK LIFE INSURANCE QUARTERLY REPORT.—The following quarterly report, ending June 30, is submitted:

April 1, 1889, balance on hand,	\$2,853 50	Disbursements:	
Receipts for Fees,	27 00	For Death Claims,	\$ 100 00
“ “ Dues,	761 00	“ Current Expenses,	13 00
		“ Refunded Dues,	4 00
	\$3,641 50	Balance on hand, June 30,	
		1889,	3,524 50
			\$3,641 50

Gain during quarter, \$671 co.

Signed, F. W. Baldwin, J. M. Moffatt and W. H. Jackson, Auditing Committee.

The employees of The E. S. Greeley & Co. administered a healthful baseball walloping to the employees of the Empire City Electric Co. last week. The game took place at Prospect Park, Brooklyn, Saturday afternoon, July 6th, and lasted two hours, leaving a score of 34 to 11 in favor of the Greeley people.

## THE TELEGRAPH.

A new system of universal telegraphic language is proposed.

Mr. J. E. Janney, of Philadelphia, is enjoying a well-earned vacation.

Mr. A. E. Harris, an old Toronto telegrapher, lately of Montreal, has accepted a position with Spencer, Trask & Co., New York.

Mr. R. J. Mullen, of The United Press, Chicago, has returned to work after an absence caused by the illness of his wife and mother.

"Jake" Tallman, one of the veterans of the craft, has found a haven of rest in the office of Gus Tuthill, a prominent oil exchange broker.

The Postal Telegraph-Cable Company have erected poles along the line of the Rome and Decatur Railroad from Rome, Ga., to Attalia.

Mr. A. L. Suesman, general western manager of The United Press, Chicago, has returned to the "sooty city" after a prolonged southern and eastern trip.

Mr. Tom O'Reilly, now of Philadelphia, paid New York a flying visit a few days since. He remained in town just long enough to say: "How are you? Good bye."

Mr. W. H. Hartney, traveling auditor of the Central R'y of New Jersey, an old time telegrapher, has resigned to accept an express agency in one of the uptown New York districts.

Mr. J. H. Gallagher, of the Western Union, St. Louis, has been appointed division chief operator of the way wires. Mr. Gallagher is also agent for THE ELECTRIC AGE, and a good one he is.

A pyramid of mountain laurels, picked among the mountains along the Lehigh Valley Road, and weighing nearly a hundred pounds, has been presented to Superintendent Lattig, of the telegraph department, at Easton, Pa.

The Order of Railway Telegraphers, in annual convention at Cleveland, elected Dr. Ira C. Brown, of Buffalo, grand medical examiner for the U. S. of its insurance department. Mr. Brown is a well-known telegrapher.

W. L. Brown has resigned his position in the Central Cable office and gone to Colorado, where he intends to embark in a new line of business. If Colorado gets many more such settlers as Mr. Brown her future will be brilliant indeed.

In the competitive full figure, still-life class of the Adelphi Art Academy a classical drawing by E. A. Keene, Jr., of the Central Cable office, received the distinction of honorable mention. This honor entitles the drawing to a years' exhibition on the walls of the academy.

Mr. C. S. Loewenthal, W. U. Tel. office, Chicago, Ills., agent for THE ELECTRIC AGE, is prepared to accept subscriptions from all points in the Western States where there is no regular agency. He is also prepared to furnish electrical books of every description at the regular retail price. Catalogues of books free on application.

May's great telegraph song "True Heroes Were They Who Died at the Key," now offered at the retail price of 40 cents, is a work destined to be sung by every telegrapher in the land. The words are beautifully appropriate; the melody, written in waltz-time, is taking and flows like a rivulet; key of A major, highest note F sharp, lowest note E. It is dedicated to the "Telegraph Operators of the U. S." and the title page is adorned with an excellent illustration of the "Catlin Grip," telegraph wire splice, etc. Copies can be procured from THE ELECTRIC AGE, 5 Dey Street, New York.

Allie Rogers' hobby is amateur photography. Many specimens of his skill with the camera adorn the albums of his comrades in the Central Cable office, but his latest effort is the best of all; he has copied the cable staff photo. so successfully and so artistically that his work is being eagerly purchased by the boys for distribution among their friends.

Albert C. Phillips, son of Walter P. Phillips, general manager of The United Press, has established a weekly paper at Saranac Lake, N. Y., the well-known summer resort. It enjoys the title of *The Adirondack Mountaineer*. Its typographical appearance and contents are far above the average rural literature. We heartily wish Mr. Phillips the success the undertaking deserves.

The telegraph operators of Columbus are coming to the front quite rapidly as inventors. Elmer E. Vance, after writing a book and a play, has just devised several mechanical stage effects for the proper production of the latter which are quite clever. G. F. Ramsey has just patented a game played somewhat similar to checkers or backgammon, called "Base Ball Without a Bat." T. J. Green, night operator of the Pan Handle, at the depot, has patented a registering savings bank, and has resigned his position to go to New York for the purpose of pushing the sale of the novelty. They are made to receive either cent pieces, nickels or dimes, which cannot be extracted until a stated sum has been deposited.—*Columbus, O., Dispatch*.

## THE ORDER OF RAILWAY TELEGRAPHERS.

The following officers were elected at the annual convention of the O. R. T., held in Cleveland, O., June 23, for the ensuing year:

Grand Chief Telegrapher—A. D. Thurston, of Vinton, Iowa.

Assistant Grand Chief Telegrapher—H. S. Lambdin, Columbus, O.

Grand Secretary and Treasurer—S. O. Fox, of Vinton, Iowa.

Senior Telegrapher—A. J. Hall, of Cleveland, O.

Junior Telegrapher—Jas. B. Finnan, of Baltimore, Md.

Inside Sentinel—J. N. Bissell, of Galveston, Texas.

Outside Sentinel—W. O. Ford, of Tennessee.

Members of Grand Executive Committee—J. T. Connors, of Albany, N. Y.; T. E. Smith, Woodstock, N. B.; F. H. Collins, of Boston, Mass.

Member of Grand Insurance Committee—W. F. Doran, Cedar Rapids Iowa.

New York was selected as the place for holding the next convention.

The biggest liars in the world are fishermen. The New York *Evening World* is famous for arranging periodical contests in "Love-letter Writing," "Stories," "Jokes," etc., and at the present time it has the fishermen spinning their yarns, of which the following is one:

"Last week while dreamily gazing at a goldfish in a glass aquarium I bethought myself of the electricity and its accessories. Struck by an idea, I placed the aquarium upon the table near my telegraph key, to which I attached two wires—one to the negative and positive poles respectively, and the other ends were gently dropped into the globe containing the fish. As an experiment I tried the "Morse Alphabet" and was greatly surprised at noticing that for every dash or dot I would make with the key the upper right eyelid of the gold fish would close and open correspondingly. After several days of practice the telegraphic instrument was dispensed with, and now we hold daily communication by "winklocution."

Is there any Morse on this? W. T. B. FISH.

## PATENT BUREAU.

ROOM 47.—181 BROADWAY.

For the purpose of soliciting and prosecuting applications for patents in the United States and foreign countries. Re-issues, Caveats, Trade-Marks, Copyrights, Designs and Labels promptly and carefully attended to.

Expert opinions, diagrams and general information in electrical matters furnished at reasonable rates. Correspondence solicited.

We will furnish copies of United States patents on receipt of 25 cents each.

Suits in patent cases prosecuted and defended in United States Courts.

L. A. McCARTHY,  
*Manager.*

J. B. SABINE,  
*Attorney at Law.*

## OPERATORS WANTED.

Six good, sound railroad telegraph operators wanted immediately. Must be strictly temperate. Apply to S. B. Rumsey, Supt. Low Grade Division A. V. R. R., Reynoldsville, Penna.

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Will ship you any article in the way of Diamonds, Watches, Jewelry, Emblems, etc., etc., C. O. D. approval and guarantees all goods as first-class, and prices spot cash, wholesale rates. We sell immense quantities of goods and can afford to give our customers the benefit of very great inducements. Write for Catalogue and our Co-operative Watch Club system. Manufacturing and Repairing. Designs furnished free of charge.

References: Editor of this journal and First National Bank, Chicago, Ills.

## J. S. TOWNSEND,

1554 WABASH AVENUE,

CHICAGO, ILLS.

## NEW YORK WESTERN UNION NOTES.

From present appearances the excursion of the Magnetic Club to Glen Island, where a huge clam bake is to be enjoyed by those who can find the time to participate, on July 19th, will be a grand success. Ed. Kirby has been transferred to West End, Long Branch. Miss Minnie Stapleton has gone to Point Pleasant, N. J., for the summer. Recent additions to the waiting list are Messrs Filkins, Ferris, Friend, Dillon, Mead, Giffin, Lester, Roberts and Howell. Miss Florence Miller has gone to Pine Hill, N. Y., for the season. Mr. and Mrs. Becker have been transferred to Saratoga, N. Y.; Miss Nellie Reeves to Spring Lake, and Miss Edith King to Adirondack Mountains; Mrs. C. Burr's hours have been changed from 7 a. m. to 4.30 p. m. to 10 a. m. to 4 p. m. Miss Mamie Cassidy has been assigned to Fulton Market wire; Miss Kittie McGrath to Washington Market wire, and Miss L. L. Solz to 9 New street. Misses Stella Hearne, Nora Ohlandt, Fannie Simmons and Eva Hall have been promoted from check girls to operators. Mrs. Blackburn has gone on a vacation of three weeks to Chautauqua, N. Y., and Miss Julia Coleman on a vacation of three months. Miss Seaver is back again after an absence of several days on account of sickness. The following named ladies have the split trick for the month of July: Misses Kittie Boyle, Jennie Fitch, Kittie Power, Fannie Morris, Nellie McPherson, Mamie Ryan, Hattie Fox, Lillie Shannon and May Finley. Miss Millie Patterson has been absent several days on account of illness. Miss Eva Pope is relieving at a broker office and Miss Alice Wheelan at the Cotton Exchange for two months each. On the first of the present month Mr. Thos. J. Kennedy, senior chief of the Eastern Division, completed thirty-nine years' service in the telegraph business. We, as all others should, extend congratulations of sincerity to the senior chief of New York for having attained such honorable distinction in his chosen profession. Chief Operator Gregory has been rusticated for a few days past at his former place of residence, Callicoon, Sullivan county, where he has been putting in his time on Hollister Creek trout fishing. He met with fair success. Much sympathy is expressed for Miss Kittie Powers, whose father died quite suddenly a few days ago. Mr. F. W. Flood is spending a needed and well earned vacation of six weeks in the Adirondacks.

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MELBOURNE, AUSTRALIA



## NOTES.

BOSTON NOTES.—Arrivals: Messrs. J. J. Riley, Postal City; Messrs. Ludington, New York; Powers, Worcester, Mass.; J. J. Hegerty, Lowell, Mass.; J. S. Hughes, and others whose names could not be ascertained. Mr. E. B. Elliot received the appointment to the managership of the Cottage City office for the summer months and left for that delightful resort July 1. Mr. H. L. Kellen has replaced him on the first New York. Another fortunate operator, Mr. H. A. McDonald, left for Bar Harbor, Maine, June 27, and will remain there in charge of the Western Union interests till October. He will be reinforced when the rush of business sets in by some of his Boston associates. Mr. C. A. Shea, of the 7-4.30 trick, resigned, July 4, to go with the Long Distance Telephone Co. He will look after their telegraphic department in this city. Mr. P. J. Delahanty, of the extra list, has returned to Worcester. Messrs. J. A. Kenna, D. McCarty, H. C. Wolover, W. C. Cox, and S. F. Shirley were sent by the management to New London, Conn., to help out during the boat races. Messrs. Kenna and Wolover also went to Putnam, Conn., July 4, while the president was in that vicinity and handled a very large amount of press matter. Our base ball nine started for the Franklin Park grounds July 6th to meet the Long Distance Telephone nine, but as the latter club did not materialize, they played a picked nine who were on the grounds "looking for trouble," as a W. U. man puts it, and defeated them by a score of 10 to 4.

CLEVELAND NOTES.—Departures: McCollum, to Youngstown; Wilcox, to the country to rusticate; Murphy, to Chicago. Arrivals: Beach, from Delaware; Rollins, from Toledo; Fuller, from Albany; Swigert, from Zanesville; Kennedy, from Pittsburg; Rudinour, from N. Y., P. & O. Ry., city. Mr. Hiner has been promoted to Saturday night man, vice Ross, who resigned to go to New York, but who is back with us again. Miss Vaughn absent past week on account of sickness. Here are a few samples of "he sent it that way": "Col. W. W. Duddi" for "Col. W. W. Dudley," "Patterson, Stallion Co., Ohio" for "Patterson st, Alliance, Ohio," "Ches & Brough" for "Cheesebrough," "Barr & Canaba" for "Barr Escanaba," and "piece nic cheese" for "picnic cheese."

NEW ORLEANS NOTES.—I believe Oscar Wilde, while lecturing through this country, frequently alluded to our "innocence of appreciation for *renaissance*." This was really *apropos*, and to any one of a phraseological turn of mind, this clause should be a gem. He also said: "that dwellers in cities of America seemed dead to the fact that their streets and highways are awfully muddy, and when not awfully muddy, awfully dusty." But *renaissance* was the word, and our office has been subject to some of that during the past two months. Although we have been sprinkled bounteously by brick-dust and paint and dirt, all has been *born* patiently, heroically, and successfully in anticipation of a more spacious, brighter, better ventilated, better lighted room, in which to expend our nervous and vital forces. The old, hideous, microbe-fostering staircase was thrown out of the window, three large windows added on the side, walls and ceiling painted angelically white, window frames *à la carnation de Boulanger*, lockers for our wardrobe, systematical and symmetrical arrangement of operating tables; and with all modern improvements who shall say, with stinging veracity, that New Orleans is behind the decade? The personnel of this office is probably very well known at least to the "pilgrim" of the profession. Who does not know and appreciate our genial, if dignified, Chief Operator W. D. West? Who is it that says he is not thoroughly impartial and just? If the level truth is told it is that the company, as well as the profession, locally, has a treasure in him.

Being a man of acute and sound judgment and one of the best of electricians, he thoroughly fills his position, and there are lots of every-day humanity of whom this much cannot be said. His assistant, J. J. Thomson, is a thorough gentleman, who believes that by courteous address and reasonable concessions, more work can be done, because better feeling has been generated, hearts lighter—work with gayer and better spirits. John's *forte* is not theorizing, but to practice what he believes is right and good. James Mobley, traffic chief, is a general favorite. Now that I call the turn among the ranks, who says Charles Berry is not a winner? "What's the case?" Just this, that the other day when Charley had a row with the redoubtable Marsh Redon, of pool room fame, who dispensed with Charley's services, the betting men on "the street" thought so well of his popularity that another "den of in(e)quity" was put in operation and of course Charley was duly installed as operator, and is a "bloated monopolist" once more, and the house is getting more customers than the rest, too. Chronicle a parallel if you can? Messrs. Scheible, Jim Berden, Alexander and Berry make up the pool room quartette. Ed. Flynn works Cincinnati; Shirley English, New York; C. N. D. Sands and McHugh, St. Louis; Weidman, Atlanta; Peter Vidal, Galveston; Kleppinger, Houston; Westerfield, Nashville; Berton Hall, Memphis; Emilio West and Alexander, Mobile; Lipscomb, Kansas City; Whann, Chicago; Swindel, Shreveport. Charles Fisher is our genial wire chief. My letter would be too long should I mention the all-around men, or way men. In my next you will hear from the night force. Not one woman is working in this office. Not that "N. O." depreciates her professional merit, or is blind to her sweet charms. Nay! not so; but we fear our chivalric spirits would be subject to hypochondria were roseate cheeks and dainty hands to be goaded by the wear and tear of the telegraph table.

NEW BRUNSWICK, N. J., NOTES.—W. E. Wineland, manager of main office, is assisted by Richard Cadmus, operator, and Francis Reilly, delivery clerk. Harry F. Ettinger has charge of depot office, the principal test office between New York and Philadelphia. Thomas H. Mulligan, lineman for the Philadelphia district, and Pat. Brennan, New York district, both stationed here, and are considered the "boss" trouble hunters. The Canal office, C. W. Sedam in charge, and assisted by E. Runyon, operator and chief clerk, is doing a rushing business during the boating season. Joe Cahill, formerly of Cahill Bros., commission brokers, is now with the W. U., at 195 Broadway. Joe says: "There is lots of work down there, and plenty of opportunities to wear the rust off." Joe is a great fisherman. James A. Cahill, a brother of Joe's, from Plainfield, N. J., gave us a call this week. He has closed out his "broker business" on account of dullness in trade. Manager W. E. Wineland was presented recently with a daughter, and is very proud.

CHICAGO WESTERN UNION NOTES.—There is little or nothing of importance to write for this issue, there being a dearth of news all around. Bert Culver and J. P. Kelly have gone to Deming, where they will work for the W. U., with John and Jim Kaine, recently of Chicago. Godfrey Lawrence is also there, and we have no doubt but what they will make a very happy family. Mr. C. J. Perrin has gone to Denver, and C. E. Ward to Ireland. Among the recent additions to the force we notice Messrs. Mayfield, St. Louis; Yarnell, Muscatine; Dunwald, Vanderhoof and Mrs. Jackson, St. Paul; Brown, Dakota; Poin Dexter, Tucson; Pilling, Minneapolis; Hamilton, Cleveland; Howard and Hudson, Postal; J. M. Ryan, Louisville; Myers and Tripp, St. Louis. The operators' base ball club, Wm. Carr, captain, organized only a short time ago, has played six games, losing only one. They are open to challenges from all commercial clubs, and

promise to round up the season with as many games to their credit as any city nine of a like calibre. A decision rendered by three Judges in the Circuit Court last week decided that the market quotations of the Chicago Board of Trade were of such importance to the public that they could be considered public property. The Judges refused to dissolve the injunctions preventing the Western Union from removing the tickers from sundry bucket-shops and other concerns that had secured injunctions. No action has up to this writing been taken by the board, but it is expected they will soon remove the embargo and permit everybody to have the quotations. If those who have been "guying" your correspondent about the last letter to the AGE, saying that it didn't read, etc., will take out that superfluous comma after the word "stop" it may read a little better and convey the idea intended. There is nothing quite so aggravating as a typographical error.

CANADIAN PACIFIC RY., WESTERN DIVISION NOTES.—The Heisler incandescent electric light system now shines forth in Port Arthur, and is giving much satisfaction. Mr. J. F. Richardson, electrician, of Montreal, has been visiting Port Arthur for the purpose of putting in a new spring-jack switch-board. This office is now one of the finest on the line of the C. P. R., containing as it does three quartette tables with two sets of Polar-Duplex, Milliken-Hicks, and Bunnell repeaters, which are manipulated to their fullest capacity. A new set of "quad" repeaters is shortly to be added to this most important office. Much regret is expressed at the departure of Mrs. Allan, who has so capably performed her duties at Port Arthur town office for the past year. It is understood that ill health is the cause of her resigning. Mrs. Allen goes to Winnipeg. Miss Boyd, from Portage la Prairie, has been appointed in her stead. Neil MacDougall, witness in a law suit at Cobourg, has returned. Neil was in the "box" a whole day, where things were kept pretty hot for him. On vacations: M. Davidson, Eagle River; M. Southworth, Parrywood; J. H. Campbell, Murillo. Mr. Campbell, more familiarly known as "Old Reliable" and "Despatchers' Pet," is an old timer from away back, and has been with the C. P. R. since its infancy. He is taking a much needed rest of two months, and before returning intends making an extensive tour of the eastern provinces. We must take this opportunity to congratulate Mr. J. L. Turner, agent, Beausejeur, who has just lately been married to a very estimable young lady of that place. The happy couple have just returned from a tour of the Eastern States and Canada. We must also congratulate Mr. A. B. McCoy, agent, Tache, who was a few days ago married to Miss Julia White, of Ignace. Transfers: W. Wormworth, Buda to English River; J. A. Campbell, English River to Murillo; W. McDonald, Buda to Seekirk; D. Gignac, Tache to Kalmar; E. Urquhart, Tache to Eagle River; A. H. Rombough has returned from sick leave much improved in health and has been placed at Parrywood. Arrivals: W. Wormworth, Kingston to Buda; R. J. Davidson, Belwood, Ont., to Buda. EASTERN DIVISION NOTES.—On the return to Schreiber of Chief Despatcher Trenouth and bride, on the 1st inst., a large number of friends took advantage of the opportunity to show their esteem by presenting him with an address and a costly and beautiful present. Mr. Trenouth responded in a few appropriate words, thanking them for so handsome a gift, remarking he would always hold the same as a souvenir of the good-will existing between them and himself. A. J. Ward, formerly agent at Mazokama, who has been on leave of absence since February last, returned last week and has resumed his duties at Heron Bay. Mr. W. Loutitt has transferred, Heron Bay to Black River.

MACON, GA., NOTES.—The force of the Western Union here consists of the following: Manager, J. Norton; days, F. W. Clarke, H. A. Morris, J. McLeod; split trick, Chas. Meyer; nights, E. H. Strickland, A. B. Kennedy.

Arrivals: A. B. Kennedy, from Selma; J. McLeod, Jacksonville; Chas. Meyer, Columbus, Ga.; departures: W. J. Phelan, to New York; T. C. Grove, Savannah; W. B. Ludwig, Birmingham. Mr. H. A. Morris has just returned from a month's vacation in Maryland and New York. The different railroads in this city are provided as follows: Central of Georgia, Depot, W. P. Gould, Mr. Beaver, F. W. Ruple, dispatchers; W. D. Buchanan, operator. Ocmulgee River Bridge, Messrs Andrews and Henderson; G. S. & F. R. R. General office, W. M. Craven, dispatcher; S. A. Campbell relief operator; depot, J. C. Tucker, operator; C. & M. R. R. General office, Mrs. A. J. McEvoy, dispatcher; depot, Mr. Lineberger, operator; E. T. V. & G. R. R. Depot, J. J. Kress, A. J. Love, G. H. Groce, dispatchers; A. S. Wilson, A. S. Groce, operators; Cotton yards; A. P. Surrency, W. F. Keegan, operators.

JERSEY CITY NOTES.—Quite an addition to the day force at "J" office is the person of E. B. Stout. Mr. George True has been transferred to the depot office for the Western Union. Mr. Thomas Leavy, who has served over fifteen years in the signal service, has been promoted to a regular night trick in "J." Miss Annie Hasson still attends to the Camden quad in addition to a New York local, which she does in a creditable manner. Mr. Arthur Plant seems to like the night managership pretty well. Mr. L. J. Howell has resigned the regular extra list to accept a position at 195 Broadway, New York. We are glad to see him doing better, but miss him very much as he was one of the best operators we ever had and a favorite all around. Mr. E. E. Creeley, who resigned a few months ago, is at Claremont tower with C. R. R. Jos. P. Murray, an old time W. U. man, is with National Storage Co.

PHILADELPHIA POSTAL NOTES.—The ball team of the Postal Company is having a run of luck. Having met very few clubs lately that were able to defeat them, the members are correspondingly happy. They are developing into a strong team, and, if their fine playing continues, will rank with our leading amateur clubs. Comparatively few changes have occurred in the staff of this office since last chronicled. Mr. J. M. Crawford, of the Sugar District, has resigned; Mr. Geo. F. McIntyre, of this office, has been appointed to fill the vacancy. Mr. H. I. Talley has been appointed manager at 133 South Second street. Among our latest arrivals are: Mr. J. J. Maguire, Jr., from W. U., and Mr. E. K. Davis from a broker. Mr. A. J. Walker, late of Portland, Oregon, returns after an absence of about two years, and relieves Miss Lou. Koch, on vacation.

BALTIMORE POSTAL NOTES.—In the main and branch offices we find the following: Wm. S. Sullivan looks after the board; on New York we find Fred Hilmer and Wm. V. Ardisson; J. J. Lawler and J. Twyford, on Chicago; Geo. Morris, on Pittsburg; Dave Hill and Wm. Bodell look after the city wires; Geo. Wells, on Richmond duplex; floor boy, Hennie Pittinger; Jos. Grophy, night chief, who is ably assisted by Messrs. Siegman and Becker. Under the care of our gentlemanly managers, Messrs. Connor and Sprigg, I must confess it would be hard to find two better gentlemen to work under than those in Baltimore. In the branches we find a group of hard working local managers and can safely say that every branch does the majority of the business to competing points. Dry Goods district, J. Vogt; Eutaw House, E. Stumpp; manager with F. M. W. Savage, nights; Oyster district is well taken care of by R. Bauer; Canned Goods district, G. Rhein; Fish, Produce and Commission district, H. C. Wooden, manager, assisted by J. B. Ward and George R. Wells, Jr., with R. Pittinger, clerk; S. Engels at the Madison avenue office with Mr. Joynes, night; Coffee district, Mr. Flowers manager, assisted by H. Becker and Ed. Hoffman; Stock Exchange, Wm. Whitworth; H. C. Gogel, an old-timer, in the confectionery business for a number of years, has now a branch office in his place.

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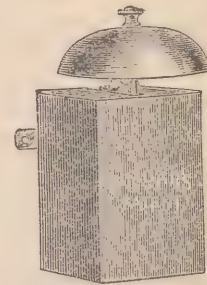
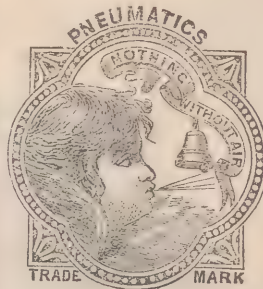
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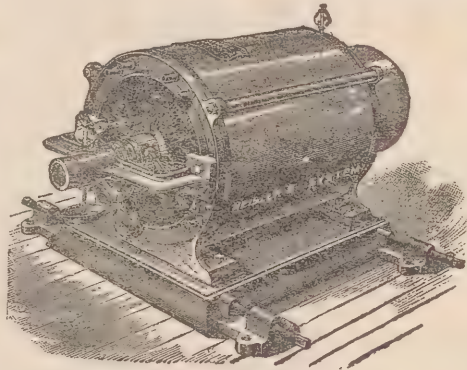
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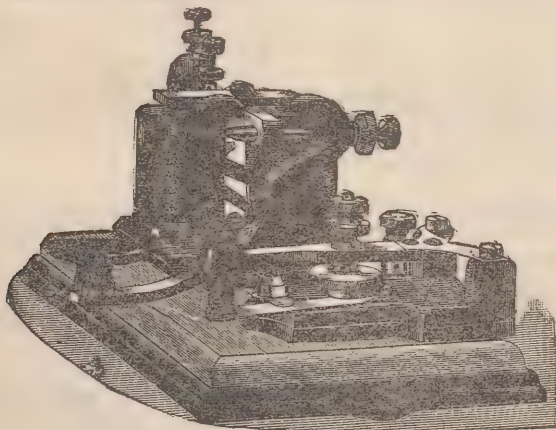


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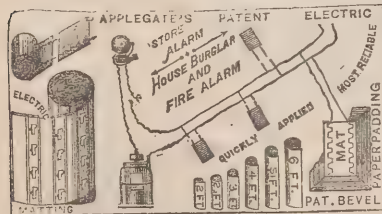
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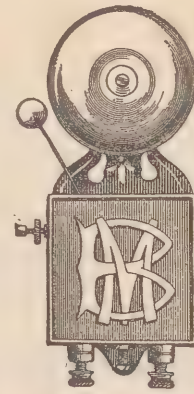
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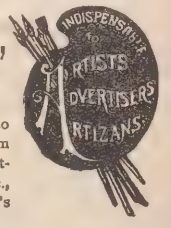
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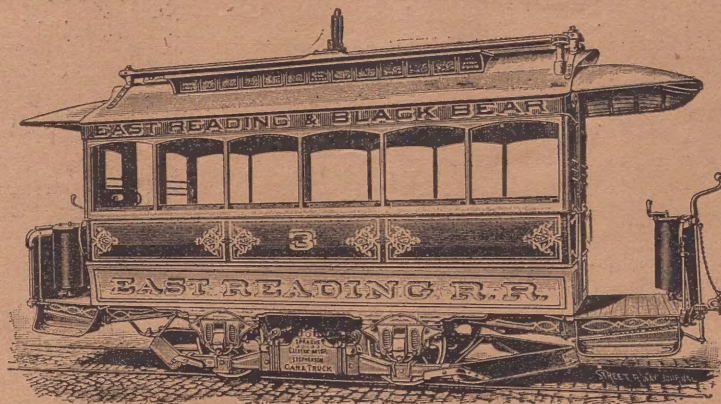
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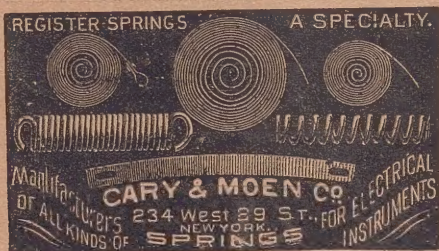
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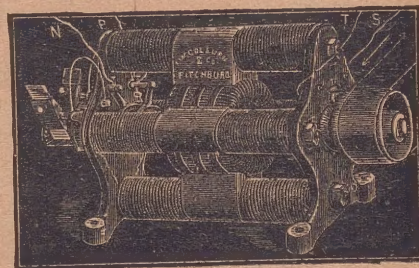
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