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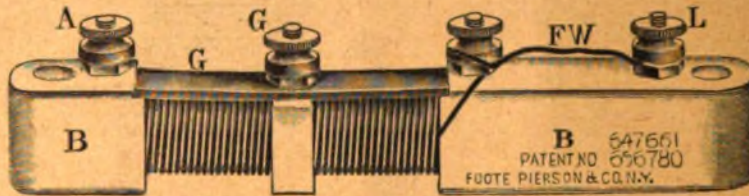
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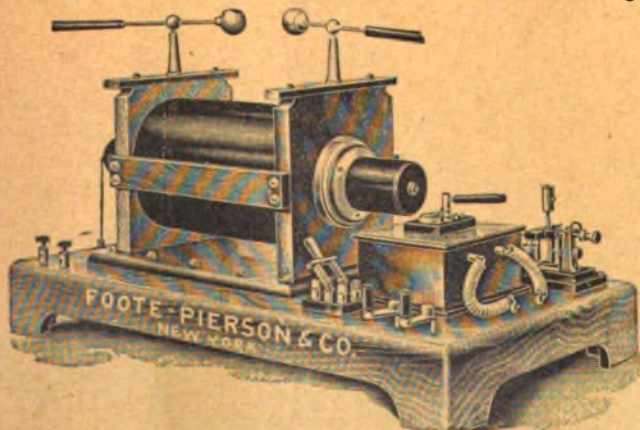
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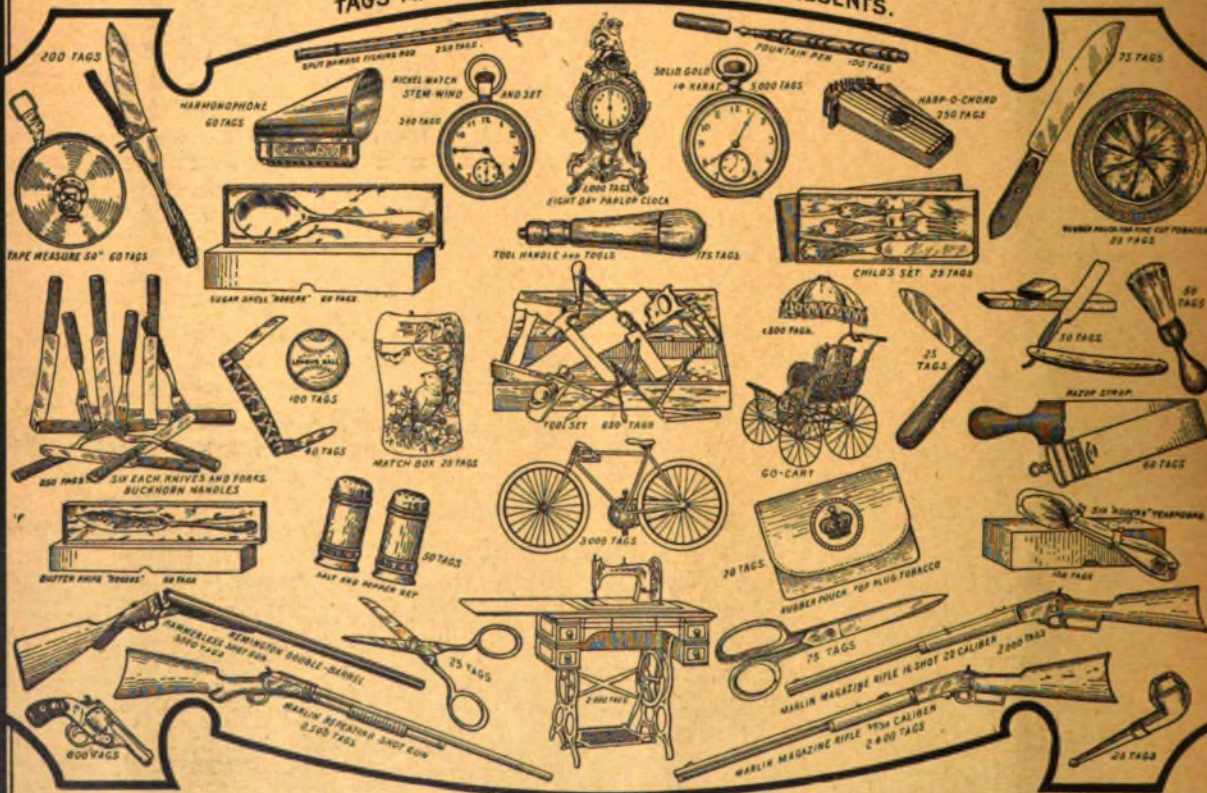
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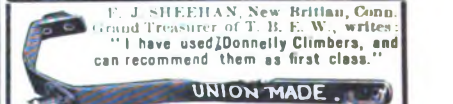
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THE TELEGRAPH AGE

No. 7.

NEW YORK, APRIL 1, 1903.

Vol. XX.

CONTENTS.

Some Points on Electricity.....	157
Recent Telegraph Patents.....	158
A New Insulating Material.—Personal Mention.—Recent New York Visitors.—The Railroad.—General Mention.....	159
Resignations and Appointments.—Organization.—The Cable.....	160
Death of Geo. R. Mockridge.—Obituary Notes.....	161
Telegraphic Bookkeeping.—Directory of Annual Meetings.....	162
The Phillips Code.....	163
The American Telephone and Telegraph Co.....	164
Editorial.—To Our Foreign Readers.—Education the Factor.....	165
Not Busy Enough for "Pidgin"—Preserve Your Papers.....	166
The English Post Office Savings Bank.....	167
J. J. Ghegan of J. H. Bunnell & Co.—The Proposed Western Telegraph System.....	168
The Hurry Page-Printing Telegraph.....	169
The Telegraph in Colorado.....	172
Brief History of the Western Union Russian Extension Telegraph.....	173
He Was Immune.....	175
A Few Facts Concerning the Telegraph in South Africa.—The Telephone as a Receiver in Multiplex Telegraphy.....	176
G. W. Lloyd as Assistant Superintendent at Minneapolis.—James F. Nathan, Western Union Manager at Boston.....	177
An Odd Courtship.....	178
Philadelphia the Tournament City.—The Magnetic Club.—Our Book Table.—Mexican Telegraph Company.....	179
Albert Eckert Chandler.—Postal Extension.—H. H. Demarest at St. Joseph, Mo.....	180
Montreal (Great North Western; Oelwein Notes; Cleveland, Postal; Peoria, Postal; Chicago, Western Union; Toledo, Western Union.....	181
Philadelphia, Western Union; Philadelphia, Postal; New York, Western Union.....	182
New York, Postal.....	183
Salt Lake City, Western Union.—The Associated Press.—Wireless Telegraphy.....	184
Canadian Telegraph Linemen.....	185
A "Scrap" Over the Wire.....	187

SOME POINTS ON ELECTRICITY.

BY WILLIS H. JONES.

The Standardizing of Methods—The Passing of the Jigger—Further Improvements in Method of Current Distribution for Roberson Quadruplex Apparatus.

One of the factors that no doubt has contributed greatly towards hindering the acquirement of a more general knowledge of telegraph apparatus and methods is the lack of uniformity adopted by electrical engineers in different offices throughout the country. Heretofore it has been left to a great extent to the engineers of their respective territories to arrange apparatus and devise methods pretty much after their individual ideas and manner. The result is that, although each may have been successful in his respective district, the operator and the layman who frequently migrate from one place to another, are perplexed anew on every shift. Of course, the general principles adopted are the same, but the unfamiliar arrangement of instruments and mode of wiring naturally perplex the operator, who may have begun his studies in another office.

Mr. J. C. Barclay, the electrical engineer of the Western Union Telegraph Company, New York, seems to have appreciated this fact, and is speed-

ily rearranging old, and equipping new offices upon a standard basis. His idea is that, so far as possible, one office should be a duplicate of another, and that a lineman, or a chief operator in one office should be able to enter another and fill a similar position, either permanently or temporarily, with an almost complete knowledge of his surroundings. Heretofore, again, it has frequently been necessary, in cases of emergencies, to call upon the local lineman, or the manager, who alone are familiar with the manner in which the wiring of the office was done, to straighten out a tangle. With Mr. Barclay's standard method expert wiremen from the nearest point may quickly be sent to the scene of disturbance and repairs made without the aid of local authority.

One of the noticeable alterations contemplated is shown in the new arrangement of tables and multiplex apparatus. The old desks consisted of a quartet table with glass partitions, while the fuses, lamp resistances, and local battery switches were concealed at different points under the desks. The standard tables have all such accessories in plain view above the lid, where they may be examined daily and their location become familiar. The lamp sockets and fuse holders are all made of white porcelain, while the latter are provided with a porcelain cover which fits snugly into sockets for the protection of the fuse. The main and the local battery switches are of hard slate. No wooden switches are to be installed hereafter. The rheostats for multiplex apparatus are to be of the radial pattern, thus doing away with metallic plugs altogether, while the particular pattern to be installed is one devised by Mr. Barclay himself.

The standard single line relay possesses no sockets for the shaft of the armature to rest in, but a V shaped bevel which prevents the contact points of the relay ever becoming twisted out of position. The retractile spring holder also possesses a "stop," which prevents it from accidentally touching the armature in case it should become loose.

The little giant box relay devised by Mr. Barclay has given such satisfaction wherever used, that no other kind will hereafter be employed by the Western Union Telegraph Company.

THE PASSING OF THE JIGGER.

For many years the "jigger" switch, as it was humorously called, conveyed all complaints due to wire and other troubles from the broker offices to the wire chiefs in the main office, while those in charge of the device kept tab on the former and made records of all disturbances.

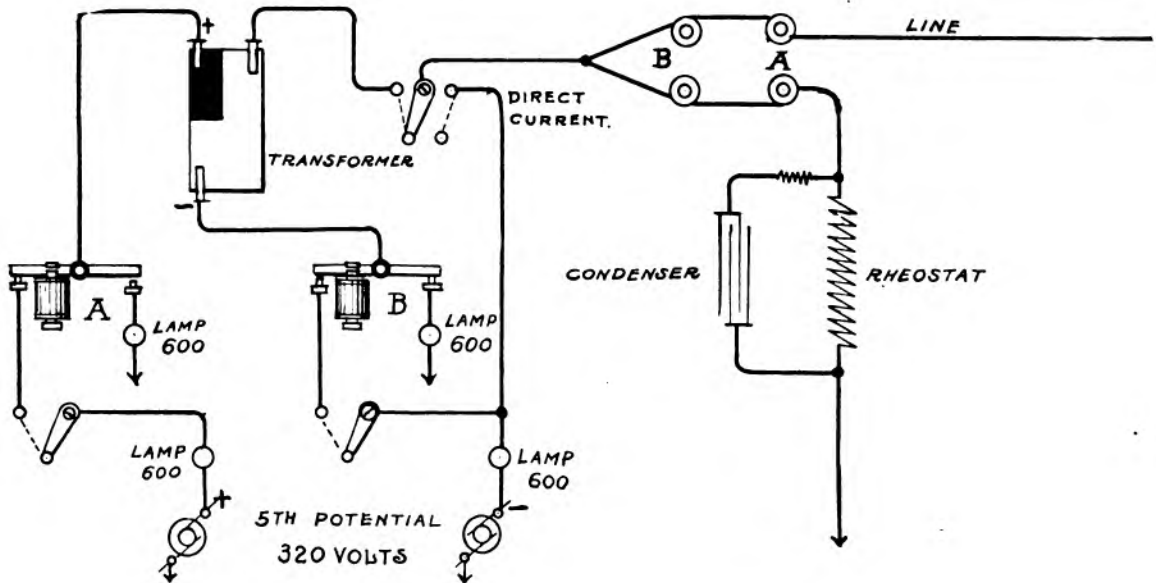
This was a somewhat expensive and unnecessary method, as Mr. Barclay has discovered, and he has substituted for it a modification of an American District call box system which is attended to by one person who alone easily conveys to the wire chiefs all the information formerly requiring five high salaried assistants. The various broker offices are cut in on one or more circuits and a call box in their office registers their assigned number on a double pen register in the main office. The attendant fills out a blank with the firm's name, addresses it to the proper wire chief and has it placed in his hand. The delay is then up to the wire chief.

IMPROVED CURRENT DISTRIBUTER FOR THE ROBERSON QUADRUPLIX.

A few weeks ago a new method of furnishing current for the Roberson quadruplex apparatus without the use of specially constructed dynamos,

of the polechanger in the usual manner, while the open position, or back post, go direct to a ground through a 600 ohm lamp. When the A pole changer is closed the current is conveyed to one of the brushes on the commutating ring as shown in the cut and the B current (when the polechanger is closed) to another brush. The third brush is the line wire. As the + and the - brushes are alternately in metallic connection with the line through the solid portion of the ring during each half revolution of the disk, it follows that alternating impulses go out at a rate regulated by the speed of the commutator.

As the ring revolves at the rate of 40 cycles the same result is therefore obtained that an alternating dynamo would give. In other words, the direct current is run through the commutator, broken up into alternating impulses and thus delivered to the line. When the small three-point



was described in this journal. In the arrangement referred to two commutating rings and eight brushes were required for each quadruplex circuit. Since then it has been discovered that by cutting and insulating one commutating ring, as shown in the accompanying cut, one ring will do the work of two and at the same time double the capacity of the device, while the discarding of five brushes minimizes the attention required in keeping the latter nicely adjusted.

The figure to which the brushes are seen to rest on represents the full circumference of a ring rolled out flat for the purpose of simplicity in showing the brush connections. The dark portion extends over half the circumference and is insulated from the brass portion, which is solid all the way around.

The regular direct current used on an ordinary quadruplex circuit is connected to the front posts

switch lever is turned to the right the commutator is cut off and a direct current is thus secured for the purpose of balancing. By this method no carbon rods or condensers around the polechanger are required. Experiments have shown that the quadruplex works equally well without them.

Recent Telegraph Patents.

A patent, No. 722,852, has been awarded to I. Kitsee, of Philadelphia, for a telegraphic sending device.

A patent, No. 723,189, for a fire alarm telegraph system by which fire and other alarms can be sent to headquarters over telephone circuit, has been awarded to A. Goldstein, of New York.

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

A New Insulating Material.

The Electrose Manufacturing Company, of 127 North 10th street, Brooklyn, New York, is placing on the market a new insulating material, known as "Electrose," the invention of Louis Steinberger, the president of the company. The compound presents a very hard, tough, dense and strong material of a brownish hue. It has been subjected to exhausting tests conducted notably by the Niagara Falls Power Company and by Prof. Sheldon, of the Polytechnic Institute, Brooklyn, with results that are highly commendatory to the insulating qualities of the substance. The compound is cast in the various forms which are required, so that the drilling and working necessary for some of the materials formerly used for electrical work are no longer imperative. The resistance of the substance to atmospheric influences and general wear renders it of peculiar service for outside work, and for telegraphic insulating purposes it is said to possess many advantages.

Personal Mention.

Mr. W. J. Lee, of Washington, D. C., has been appointed telegraph manager for the New Department of Commerce and Labor.

Mr. Thomas A. Edison, says a Washington special to the New York Times, has taken out almost 800 patents up to date. Up to 1895 he had taken out 711 patents. Since then he has taken them out at the rate of from three to twenty-three each year. Last year he took out nineteen. This year, so far, he has received six. In ordinary fees for patents, Mr. Edison has spent over \$51,000.

Mr. Clarence H. Mackay, the president of the Postal Telegraph and Commercial Cable companies, lost his mother-in-law, Mrs. W. A. Duer, on Sunday evening, March 22, at the Waldorf-Astoria, the cause of death being paralysis. Mrs. Duer was a granddaughter of the late Hon. Reverdy Johnson, of Baltimore. The same Sunday evening a second daughter was born to Mr. and Mrs. Mackay at their Roslyn, L. I., country seat.

Dr. R. Mullineux Wamsley, F. R. S. E., principal of the Northampton Institute, London, England, is visiting this country for the broad purpose of inspecting the electrical field, including the telegraph, the telephone, etc., and measurably our industrial and educational interests. He was an interested visitor a few days ago at the main office of the Western Union Telegraph Company, New York, and bore a letter of introduction to President Clowry from Sir Wm. H. Preece.

Mr. P. W. Williams, of the Western Union Telegraph Company, Detroit, Mich., has been selected to accompany President Roosevelt and his party on their Western trip which begins on April 1, and which will cover a period of sixty-six days. It will be remembered that Mr. Williams accompanied Mr. Roosevelt on his tour

undertaken during the fall of 1900 when he was the vice-presidential candidate. Mr. Williams goes at the present time at the personal request of the President.

Mr. J. C. Barclay, the electrical engineer of the Western Union Telegraph Company, New York, has been appointed assistant general manager of the company. While by this act the position of electrical engineer, as such, is abolished, Mr. Barclay, who holds high rank in his profession both as a technical and executive officer, will nevertheless continue to exercise supervision over his old department and the electrical connections and machinery of the company's cables. The promotion will greatly widen Mr. Barclay's responsibilities and at the same time will serve to relieve President Clowry from a large amount of detail, which now crowds upon that busy official's time.

In this rearrangement Vice-President Thomas F. Clark will, in addition to his other duties, the performance of which has always reflected credit upon the Western Union management, have charge of the company's cables and their connections. All the business, however, relating to the physical condition, the finances and staff appointments of the company's cables will be carried on direct with the president as heretofore.

Recent New York Visitors.

Mr. H. B. Perham, of St. Louis, Mo., president of the Order of Railroad Telegraphers.

Mr. C. M. Sheaffer, superintendent of telegraph of the Pennsylvania Railroad Company, Philadelphia, Pa.

Mr. Thos. F. Clohesey, of Indianapolis, Ind., at one time prominent in Denver, Kansas City, and St. Louis telegraph circles.

The Railroad.

The Delaware, Lackawanna and Western Railroad Company is installing the telegraph system on its lines between Elmira and Buffalo, New York. Mr. L. B. Foley, the superintendent of telegraph of this road, is sanguine as to the utility of the telegraph as an auxiliary to the telegraph service.

The Signal Club, of which Mr. H. C. Hope, of St. Paul, Minn., is president, will meet again in New York city on May 10, to continue its important deliberations on automatic block signaling. This subject occupied almost exclusively the attention of the members of the club at the meeting which took place in New York on March 10, 11, 12.

General Mention.

Mr. A. Brooks, assistant chief operator of the Western Union, at Houston, Texas, was married March 15, to Miss Lutye Calvert, of Franklin, Texas. They were the recipients of a handsome silver service from the Houston staff.

Resignations and Appointments.

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

Mr. E. Chambers has been appointed superintendent of the Western Union Cable station at Penzance, England, vice G. R. Mockridge, deceased.

Mr. Wilbur G. Overmeyer has been appointed manager of the Western Union Telegraph Company at Lima, O., transferred from the Delaware, O., office.

Mr. F. E. De Parcq of Salem, Ore., has been appointed manager of the Western Union Telegraph Company at Tacoma, Wash, vice Robert Reid, resigned.

Mr. H. Montgomery of Oshkosh, Wis., has been appointed manager of the Western Union Telegraph Company at Duluth, Minn., vice L. P. Taber, resigned.

Mr. A. R. Stone has been appointed manager at Wheeling, W. Va., of the Western Union Telegraph Co. He was formerly manager at Warren, Pa., where he is succeeded by W. L. Nelson.

Mr. A. A. Brown, manager of the Western Union Telegraph Company, Pittsburg, Pa., has resigned to accept a position as representative in western Pennsylvania of the Interstate Life Assurance Company of Indianapolis, Ind. He has been succeeded by Mr. N. E. Church.

Mr. Thomas Dellert, manager of the Western Union Telegraph Company at Ironton, O., has been transferred to the Portsmouth, O., office, where he succeeds Mr. C. E. Jones, who takes charge of the Zanesville, O., office. Mr. J. F. Hull, of the Zanesville office has been appointed manager at Ironton.

Organization.

Mr. I. J. McDonald, of Chicago, Ill., associate president of the Commercial Telegraphers' Union of America, was a recent visitor at New York.

The International Union of Commercial Telegraphers and the Order of Commercial Telegraphers amalgamated at Washington, D. C., on March 15, under the title of the Commercial Telegraphers' Union of America. A conference was called on March 14 to bring about this object. The arbiters were I. J. McDonald, of Chicago, president of the International Union of Commercial Telegraphers; Percy Thomas, of New York, president of the Order of Commercial Telegraphers; B. A. Riley, of Philadelphia, a member of the executive board of the latter organization, and M. J. Reidy, of Boston, vice-president of the International Union of Commercial Telegraphers. The consolidated body will be affiliated with the American Federation of Labor, and will get a charter under its new title. An executive council was named, which will be the governing body of the organization until the convention

which will be held in New York on July 19. The officers and members of the executive council are: Associate presidents, Percy Thomas and I. J. McDonald; grand secretary and treasurer, Wilbur Eastlake, of New York; editors of the official organ, A. G. Douglas, of Milwaukee; W. F. Craig, of Pittsburg, and M. J. Reidy.

The consolidation of the two organizations makes a total of sixty locals and a membership of more than eight thousand.

The Cable.

Mr. D. A. Boyd, for many years employed at the Canso, N. S., Western Union cable station, has accepted a position on the new British Pacific cable staff, and will hereafter be located at Fanning Island.

It is expected that the second cable of the German-American Cable Company, the laying of which began March 23, will reach the Azores in the course of the summer and New York before the end of 1904.

A submarine cable will shortly be laid for the Dutch Government between Borneo and the Celebes. This cable, about 650 nautical miles in length, has been manufactured in England, and will be transported and laid by the Eastern Extension Telegraph Company's new repairing steamers "Restorer" and "Patrol."

The Commercial Cable Company has filed the following certificate of its condition December 31, 1902:

Assets.—Cables, land lines, plant and buildings \$37,277,442; spare cable, stores and supplies \$418,207; investments in bonds and stocks \$4,784,848; cash and debts receivable \$1,191,158; total \$43,671,655.

Liabilities.—Capital stock \$13,333,300; debts, bonds, etc., \$20,774,772; reserves \$5,794,720; balance profit and loss \$147,529; revenue applied in extension of cables and plant \$3,621,334; total \$43,671,655.

The first steps in the work preliminary to the laying of the cable between Honolulu and the Midway Islands have been taken. The Pacific Commercial Cable Company has chartered the steamer Grace Dollar, and on April 10 she will leave San Francisco with supplies and the materials for the construction of the Midway Islands station. She will also have on board a number of carpenters and engineers, and the work of putting up the buildings will begin immediately upon her arrival. The line from Honolulu to Midway will be the second link of the cable which is to connect this country with the Philippines. The British steamers Anglia and Colonia are at present loading the cable at London.

Application has been made by a Dutch cable company to this government for permission to land a cable at Guam to connect with the trans-Pacific cable now in course of construction. The other end of this cable will be at Marshall Island,

in the South Seas, where it will connect with the Dutch and German systems of cables already laid.

The Department of Justice has decided to grant this landing right, but at the Navy Department there is a feeling that it is not altogether wise from a naval viewpoint to permit the Dutch company to establish a station at Guam. For this reason certain charts and soundings which the Dutch company desires to use in laying the cable have not yet been turned over to that concern. The Navy Department before doing so, will consider the effect of the Dutch cable from a strategic point of view.

The so-called Midway group, consisting of two low atolls known as Sand Island and Eastern Island, is close to the 180th meridian, the international date line where the day changes with a jump. It is almost equidistant from San Francisco and Yokohama, from Behring Straits and from Australia. It is at the navel of the Pacific, and as a central station of the future American telegraph system connecting this continent with Asia and the islands of the ocean it will always be a famous and interesting spot.

Midway is American territory already, and was chosen by the original navy survey as a more advantageous landing place for the cable than Wake Island, although the route from Honolulu to Guam is two or three hundred miles shorter by way of Wake. The reasons for preferring Midway to Wake were stated by Admiral Bradford in his statement of January 17, 1902, to the House Committee on Interstate and Foreign Commerce:

"The Midway Islands have always been in the possession of the United States. * * * We avoid Wake Island by going to Midway, for the reason that Wake Island seems at times to be swept by the sea. It is only a few feet above the level of the ocean, and if a cable station were established there very expensive works would be required; besides, it has no harbor, while the Midway Islands are perfectly habitable and have a fair harbor for vessels of eighteen feet draught."

The executive order committing the Midway Islands to the charge of the Navy Department, for the protection of the property of the Pacific Cable Company against landing parties of Japanese sailors, is a purely domestic arrangement. No international question of jurisdiction is even remotely involved. Japan has not, and never has had, any claim to Midway.

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

Subscribe for TELEGRAPH AGE, \$1.50 a year.

Death of George R. Mockridge.

George R. Mockridge, superintendent of the Western Union cable station at Penzance, England, died on March 25, of influenza. Mr. Mockridge was born in 1854, at Bristol, England, and made his first entry into the telegraph business in 1869. For a number of years he was in the employ of the Direct United States Cable Company, serving these interests in Nova Scotia and afterwards at Rye Beach, N. H., and at Boston, Mass.



THE LATE GEORGE R. MOCKRIDGE.

He resigned from this service in 1881 to accept the superintendency of the station at Penzance of the American Telegraph and Cable Company, now the Western Union Telegraph Company, where he had since remained. Mr. Mockridge, who was well known on both sides of the Atlantic, had the reputation of being one of the best operators in the cable service, and was held in high personal esteem as a careful and well informed business man, and for his excellent qualities of heart.

Obituary Notes.

John C. Raidy, aged 31 years, manager of the American District Telegraph Company, Louisville, Ky., died March 8.

William J. Guilfords, aged 52 years, for many years a prominent telegrapher at Syracuse, N. Y., died at his home, Geneva, N. Y., on March 14.

Mrs. Agnes McGovern Long, wife of Will C. Long, of the Western Union Telegraph Company, Austin, Tex., died at that place on March 9, aged forty-nine years.

If you wish to know all about the instruments you work, invest \$1.50 in a copy of Jones' Diagrams.

Telegraphic Bookkeeping.

Fifth Article.

BY W. H. DOHERTY.

In the series of articles preceding this I have treated the handling of the different kinds of messages as they appear in the ordinary course of telegraphic bookkeeping. While a full knowledge of these are necessary to the successful manager, there is another, and, I think, more important side of the subject to be considered, and it will be my purpose in the articles following this to treat the question of debits and credits, as they apply to the telegraph business.

No business concern will attempt to do business without keeping a daily record of all transactions made. The fundamental rules of general bookkeeping will apply to any business, and as the business becomes large, requiring a complex set of records, it will be found that special sets of books are kept, which, after all, are only an elaborated system of debits and credits. Telegraphic bookkeeping is not unlike others in this respect, and no manager should attempt to manage an office without running a complete set of books. Too many ex-managers know to their sorrow what the result is if this is not done.

The first book to be considered is what is known as a "day book," in which all transactions must be entered as they occur, on both debit (left) and credit (right) sides.

Debits consist of such items as the following:

Regular daily receipts, in total, city line message receipts in total and cable receipts in total. If transfers are handled, the total of principal premiums and tolls of each are entered, guaranteed message receipts, marine in total, and all collections on outstanding accounts. Care should be taken to see that the previous month's collections are not entered in the same total with current month collections. These are the common receipts of an office, and when totaled show the amount of debit against the office for one day.

Credits are quite as numerous as debits, consisting of paid "other line" vouchers, refunds made during the day, uncollectible messages, salaries paid, office rent, light and fuel. Sometimes other expenses are added, such as cleaning the office, rubber stamps, telephone rentals, etc., all of which are classed as "miscellaneous expenses." Another credit, the largest and most important one is that of charged accounts, the total of this item being entered like the rest. Transfer payments, if any, about concludes the list of credits, not forgetting the all important "cash on hand." The total of this side, of course, should be the same as that of the debit side. If it should be found that the totals do not agree, it is evident that a mistake has been made, and by carefully going over each item, it can usually be found. Do not carry your daily balance in your pocket, for you will certainly go wrong if you do.

The smallest railroad telegraph office should keep a book of this kind, entering debits and credits from day to day, and carry forward the total of each day, in the same manner that the station cash book totals are carried.

To be explicit, we will start with the first day of the month, and carry the total of that day to the top of the page of the second business day of the month, entering it in the last column to the right; the debits and credits for this second day should be entered one column to the left of this, and when the day is completed, the footing should be placed under, or in the same column with the totals that were brought forward from the first day. Now, total these two days and bring the sum forward to the third day. By repeating this process on each business day of the month, your sum total at the end of the month will show your total debits and credits for the month, and when your monthly report is made up, the several items taken together will balance with the total figures shown on your day book.

The foregoing will cover the work in a railroad office, although many of the items mentioned will never be met with in the experience of a life time. For independent or city offices, a little more bookkeeping will be found beneficial.

Directory of Annual Meetings.

Association of Railway Telegraph Superintendents will meet on May 13, 14 and 15, at New Orleans, La.

Commercial Cable Company meets the first Monday in March, at New York.

Gold and Stock Life Insurance Association meets the third Monday in January at New York.

Great Northwestern Telegraph Company meets the fourth Thursday in September at Toronto, Ont.

International Association of Municipal Electricians meets at Atlantic City, N. J.; time not yet selected.

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

Old Time Telegraphers' and Historical Association meets at Milwaukee, Wis.; time not yet agreed upon.

Postal Telegraph-Cable Company meets the fourth Tuesday in February at New York.

Telegraphers' Mutual Benefit Association meets the third Wednesday in November at New York.

Train Despatchers' Association meets June 16, 17, 18, at Nashville, Tenn.

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

Everybody in the telegraph service is reading "Pocket Edition of Diagrams," etc. It is endorsed by experts, and no telegrapher who would gain a thorough knowledge of his business, told and illustrated in a manner clear to every reader, should fail to procure a copy. See advertisement.

The Phillips Code.

BY WALTER P. PHILLIPS.

(Concluded from page 145, March 16, issue).

The late William T. Loper, during his term of service as Associated Press reporter of the United States Senate, furnished, in pencilled code, at the rate of a thousand words per hour, a sketch of the Senate proceedings for afternoon papers. In addition to this he managed the basis for a separate story largely in Phillips Code, but using shorthand when he found occasion to take anything verbatim. The pencilled code was transmitted to Baltimore, Philadelphia and New York by the regular operators and when the afternoon papers went to press, thus enabling him to drop the sketch report, Mr. Loper developed from his Phillips Code and shorthand notes what is termed the full report for morning papers. Of this he supplied seven plainly written manifold copies at the rate of two thousand words per hour and I never knew of a case in which he did not finish the end of the full report by 7 P. M., unless the Senate sat beyond its usual hour—between 4 and 5 P. M. He often filed the last of the full report within fifteen minutes of the time when the Senate adjourned. Mr. Loper had able predecessors—none better—and his successors were men of recognized ability, but they never equalled him for the reason that they confined themselves to shorthand and longhand notes. But for the Phillips Code Mr. Loper's achievements would have been impossible for he would have had no time in which to write out his shorthand notes until the necessity for the sketch report had passed, and the operators could have done nothing with them in their original form. They read his pencilled code report as easily as they could have read matter that was written out in full and furnished in typewritten copy. Mr. Loper did the work of two men and did it better than they could. By handling the whole thing, his sketch report and his full report agreed in every particular. When one man made the sketch report and another the full report there were vexatious discrepancies to be reconciled which often delayed the delivery of the report to Associated Press clients until a late hour.

In 1883, when Mr. Loper and I transferred our services to the then newly organized United Press and went from Washington to New York, he began, and continued for several years previous to Mr. Beecher's death, to report the sermons of that eloquent and able man. He used the Phillips Code for his introductions—always exquisite pieces of writing in precise harmony with the style, tone, temper and atmosphere of the particular sermons they preceded. This part of his report was handed to any operator who happened into The United Press office on Sunday, who transmitted from it, without its being written out, while Mr. Loper took a hasty luncheon. He was a star operator as well as one of the best Pitman stenographers I ever knew. He had mastered shorthand in Wisconsin at the early

age of ten years. When the assisting operator had disposed of the introduction written in the pencilled code, Mr. Loper took the wire and proceeded to send in Phillips Code, in its absolute purity, at a gait that made the "Beecher Circuit" shunned by all but those typewriting operators who were serenely confident that they could take anything that could be transmitted by human hand. The report was sent simultaneously to the Chicago Tribune, Cincinnati Enquirer, St. Louis Globe-Democrat and Boston Globe, all of which were connected together every Sunday for the purpose of receiving Mr. Loper's report. Neither the introduction, in pencilled code, nor the sermon itself, which was in shorthand, was ever written out. It was desirable to have this sermon in hand for composition in the newspaper offices as early as possible and under Mr. Loper's plan of reporting, the last line of it was in Chicago, Cincinnati, St. Louis and Boston before Mr. Beecher had finished his dinner and got well among the dreams incident to an afternoon nap.

Mr. Loper used the Phillips Code with equal success in reporting the National Conventions for afternoon papers, in 1888 and 1892. The operators sent from his pencilled code and part longhand manuscript and in spite of the whirr of the blower operated beside us in connection with the pneumatic tube connecting the extemporized telegraph offices with the platform and the reporter's tables, the noise and confusion incident to boys running hither and thither, there was never a word of question about the running report for afternoon papers furnished by Mr. Loper, ably aided and abetted by Mr. P. V. DeGraw, whose work on the 1884 Conventions eclipsed all that had gone before. It was not uncommon for Mr. Loper to file the announcement that the Convention had taken a recess or adjourned, and for the operator to send it within one minute of the time when the gavel fell. We have often had to stop and explain to inquiries in the convention hall, as we passed through to our hotel, that the Convention had taken a recess or had adjourned until evening, the next morning, etc. The fact was known from Boston to San Francisco before the people in the hall realized what had happened. As an employer of stenographers since 1878, and among them were many who had national reputations, I have seen them at their best and they were certainly splendid on many great occasions such as the reporting of the Potter Investigating Committee proceedings in 1878 and in covering the National Conventions for morning papers, all of which were reported for The United Press under my direction from 1884 to 1896, inclusive. But, for a certain class of work such as has been referred to, ends were secured by the use of the Phillips Code that could be achieved by no other instrumentality. The files of the afternoon newspapers of the Convention years mentioned, wherever published, give ample evidence in their editorial columns that these reports were admirably written, correct, and quite photographic in

character. They were made by Mr. Loper in 1888 and 1892, and were largely written and wholly transmitted in the Phillips Code. Mr. DeGraw was his coadjutor and after Mr. Loper's death applied to the Conventions of 1896 the methods that had been so successful in 1884, 1888 and 1892.

The illustrations I have given dispose of the notion that abbreviations cannot be easily read by those who write them. The fact is that they can and have been read for more than twenty years, not only by those who wrote them but by many others, as I have shown. And these are by no means isolated cases. The newspaper profession is more largely recruited from the telegraphic ranks than from any other one source. There are more than one hundred telegraph operators on the New York and Brooklyn newspapers alone—reporters, copy readers and editorial writers. The newspapers of the country are largely manned by them in many of their departments. They are not shorthand men—not one in a hundred—but they are all Phillips Code men and when the occasions arise when something swifter than longhand is required they use the Phillips Code with which they familiarized themselves in the telegraph business. Some of the telegraphers do not stop at being reporters, copy readers and editorial writers. They become proprietors. Mr. Frank Munsey is one of us, Mr. Edward Rosewater of the Omaha Bee is another, and Mr. S. H. Kauffmann, one of the principal owners of the Washington Star, is a third. The latter has the honor of having taught General Eckert, ex-president of the Western Union Telegraph Company, how to telegraph, and when the latter had qualified he succeeded Mr. Kauffman as manager of the telegraph office at Wooster, Ohio. Even in those remote days there was a slim system of abbreviations used on the wires and the Phillips Code is simply an expansion of those early contractions such as "fm" for from, "t" for the, etc., etc. This system has been extended until you express "The Senate adjourned until to-morrow morning" thus: "T sa adjd un twm." The Supreme Court of the United States is designated by the word "Scotus" and so on ad infinitum. The Phillips Code is sent over the wire through an instantaneous mental transformation from the written words lying beneath the operator's eye. It is sent at double the rate of speed of ordinary transmissions, in full, and is mentally digested by the receiving operators and written out on the instant in full on typewriters as it comes over the wire at a careful but somewhat chirpy gait. Handled in this way; employed as it was by Messrs. Kennan, Loper, DeGraw and Hood, to say nothing of its general use by telegraph operators in every conceivable way after they have left the telegraph business, it seems to me that if Mr. Kimball had been an Arkansas journalist and had "traveled far and wandered wide" he would have a more comprehensive knowledge than he has now of a thing that has been running under a full head of steam

since 1879, and the fundamental principles of which were laid fully fifty years ago. The appended is a specimen of the Phillips Code, a fairly good knowledge of which can be obtained in a month. "Ix" is the equivalent of "it is," and aside from that and a few arbitrary signs, such as *by* for *believe*, a good deal of the specimen given below can be read by almost anybody whether he knows the code or not. The context, which is much more obvious to the reader than are the obscurer signs, even to experts, used by stenographers, carries the transcriber along as the strains of martial music lighten the heavy feet of a tired soldier and speed him on his march.

T amn sprit as ix cld, h a cntemt fo ti's halowg inflns. Inded, it sems to bv tt ti cann halow, bt can ony dstroy. N mny ys ago Lafayette Plc ws i f most imposg patricn qrs o N Y. T clmrs o Bway ca to it ony in a dremy murmr. Its length ws n gt, bt it hd a lordly bredth. Win easiest akc f most busy purlus, its quietud ws provrbl. So infq wr vchcls alg its pavmt tt in sumr t gras wd ofn crop ot tr lk fringy scrolwrk nr t wl swept sidwlks & clnly gutrs. At i end4 ts staly ave is crosd bi a naroe r st ro an imens chh, in rigid clascl stile, w t pintd roof o an ancnt tmpl & imens gra flutd pilars frmng its portico.

The American Telephone and Telegraph Co.

The American Telephone and Telegraph Company will increase its capital stock from \$150,000,000 to \$250,000,000. The proceeds from the additional stock will be used in betterments, extensions, acquisitions of other properties, etc.

The authorized capital stock of the company is \$150,000,000, having been increased by \$50,000,000 less than two years ago. Of the new stock \$20,709,000 was subscribed for by stockholders at par in 1901, and \$21,937,000 in 1902. The funded debt of the company amounts to \$38,000,000. The capital stock was originally \$12,000,000. The amount was increased to \$20,000,000 in June, 1896; to \$25,000,000 in 1898; to \$75,000,000 in 1899, and to \$100,000,000 in 1900, with a further increase to \$150,000,000 in 1901.

Previous to 1900 the American Telephone and Telegraph Company owned only the long-distance lines of the American Bell Telephone Company, but in March, 1900, a proposition was voted on and carried, to transfer the real estate and other property of the Bell Company to the combine. The company now operates over 2,000,000 miles of wire, while the stocks and bonds of other companies owned by it aggregate \$100,000,000.

Telephone girls in Chicago have put into practice the art of polite conversation as laid down in a book of rules introduced by S. A. Crawford, the new manager of the American Telegraph and Telephone Company. The book is full of formalities and elegancies such as Boston telephone girls have been taught to use after a course of compulsory education.

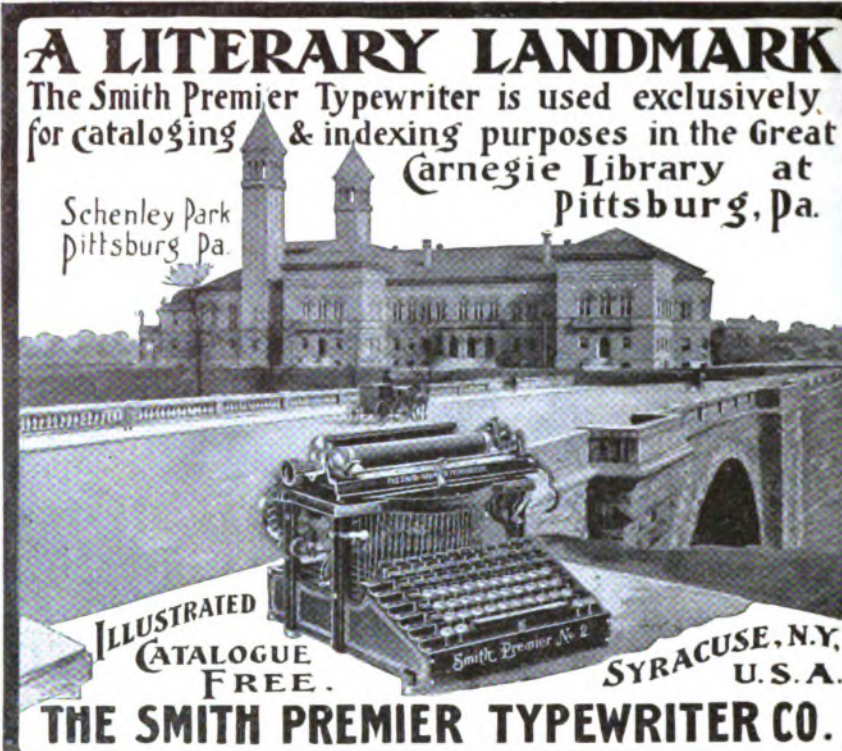
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NEW YORK, April 1, 1903.

The amount of information contained in each issue of TELEGRAPH AGE of the utmost practical value to the progressive operator who is ambitious to succeed, to acquire a more thorough knowledge of his profession, and not only to better qualify himself for the position he now occupies, and consequently for advancement, should prompt many to send in their subscriptions to this journal without delay. The first article in each issue, contributed by Willis H. Jones, under the standing heading of "Some Points on Electricity," contains more positive instruction concerning the telegraph, than can be found anywhere else, and worth more to the operator than many times the cost of the paper itself. Subscriptions should be sent direct to this office, or to any of our agents who may be found with both the Western Union and Postal companies in nearly every large centre in the United States.

We are prepared to furnish a limited number of bound volumes of TELEGRAPH AGE, which embraces 536 reading pages, besides the index, for the year 1902, at the uniform rate of \$3 a volume. The binding is substantial and the lettering is done in gilt. The volume furnishes a complete record for the year named of the telegraph, the cable, wireless telegraphy and other allied interests, the whole constituting an interesting work of reference of the highest worth to all telegraphers, libraries, etc., to which the carefully prepared cross-index lends additional value. Single copies of the index for volume XIX, covering the year 1902, may be had at ten cents apiece. Our friends who require copies of the bound volume, or of the index alone, should send in their orders promptly so that they may be filled while the supply lasts.

To Our Foreign Readers.

To the readers and friends abroad, wherever they may be and of whatever nationality, as well as those nearer by at home, to whom this issue shall go, carrying its varied fund of information especially interesting and of value to the telegrapher, TELEGRAPH AGE extends a hearty and cordial greeting. In directing attention to its pages, care should be exercised not to omit a careful perusal of the advertising announcements in which so much of practical utility for use in telegraph construction and equipment is offered. It is said, and we refer to it with becoming modesty, yet with none the less pride, that the United States leads the world in the manufacture of improved forms of all telegraphic apparatus, and that the trend, therefore, of foreign buying in this regard is more and more away from the old sources of supply and toward this country. If this be so, and it apparently is an accepted fact, telegraph officials abroad are especially requested to note what American manufacturers are offering to meet their needs.

Education the Factor.

It is not without its significance that telegraphers resident in the smaller towns are being summoned in increasing numbers to fill positions of greater responsibility in offices situated in the larger and busier centres of population, frequently to the exclusion of the local men themselves. This has become noticeable to such an extent as to excite wonder and wide remark. While there are exceptions, and honorably so, their comparative infrequency but proves the truth of the general statement. Comment and speculation as to the causes of this state of things may be variously indulged in, yet it is not difficult to determine the true reason therefor. It may be traced readily to the single fundamental and governing factor—Education.

With all of the advantages of circumstance and environment calculated to arouse and stimulate ambition on the part of the individual, it is nevertheless a singular, as well as a lamentable fact, that but a small proportion of operators in the larger cities make their calling the subject of study and research. It is difficult to understand why this should be so, especially as the demand for efficient men is constantly increasing. To none should this be more manifest than to the employes in the big offices, yet with a strange fatality they apparently are indifferent to their present as well as to their future condition.

On the other hand, it is observed that many operators located at points remote from the more important centres, narrowed in their opportunities, without access to the multiplex advantages so freely bestowed upon their more fortunately situated brethren of the key elsewhere, are nevertheless acquiring an extensive and intimate knowledge of telegraphy and developing executive ability through close application to duty, by studious habits and by intelligent thought. The natural

and inevitable result is that this class of men are forging ahead, while others, less diligent, are lagging behind in the great race of life.

The telegraph never offered such opportunities to intelligent and practical men as it does to-day. The services of better trained men are constantly in demand for the field of their labors is ever widening. The difficulty is to find men qualified to respond to the call to step up higher. Yet how often in excuse for this shortcoming is heard the remark: "We will study (fit ourselves) when we receive promotion." To all such it is needless to say that promotion will never be theirs. An employer will never recognize such nascent qualities in an employee, be he telegraph operator or bank clerk, as this inane exclamation exhibits. And men know it. Why is it then that such utter indifference and purposeless motives in life exist? It is beyond comprehension. The blame for non-promotion rests largely with individuals themselves.

A conspicuous illustration of failure in this respect is shown in a recent civil service examination of telegraphers for positions in the fire alarm telegraph department of the City of New York. Out of one hundred and thirty-five applicants, most of whom were from the two main offices in this city, not one passed, two of the three successful appointees being employed outside of commercial offices, the third serving in the Postal underground cable department. Comment in this case is unnecessary. The result is distressing and raises the apprehensive and yet natural question whether it can be that the personnel of the telegraph is deteriorating.

Operators owe it to their own manhood to carefully consider their position in life. If they are to remain at the key and to pursue telegraphy as a life work, then they should, not only in fairness to themselves, but to the business as well which employs them, give the best of which they are capable. The parable of the talents will apply in this case. Just as surely as a man, if he has health, puts earnestness and integrity and patience into his work, just as surely, sooner or later, will he gain recognition. In every field of human endeavor the world has urgent need of skillful and progressive men, and no exception to the rule will be found in the telegraph service.

Not Busy Enough for "Pidgin."

Americans are a busy people. But they are not, we trust, so busy as to be driven to the general use of "Pidgin" English. This expression of a pious hope is provoked by some current discussion about the name for wireless telegraphy, and particularly by the suggestion of a correspondent in our columns the other day that "wireless" should be adopted, as both noun and verb. Thus, our correspondent thinks we should speak of sending or receiving a "wireless," instead of a "wireless dispatch" or simply a dispatch, and should also speak of "wirelessing" and being

"wirelessed." He would have us conjugate the new verb "to wireless" thus: I wireless, thou wirelessest, he wirelesses. Also: I was wirelessed, thou wast wirelessed, he was wirelessed. We should like to suggest, as an alternative form, this: I wireless, thou throwest a fit, he drops dead.

Self-respecting people will never, we believe, countenance, such grotesque degradation of their language, even though it be for the sake of saving a little breath or a few drops of ink. It may be, as our correspondent says, that some people use "wire" instead of "telegraph" and "telegram," and "typing" instead of "typewriting." They probably also write "nuz" for "news," and "thru" for "through" and "nox" for "knocks." There always have been and always will be freaks and cranks. But that such orthographical and etymological "Pidgin" will ever receive the sanction of rational and educated people is simply unthinkable. The excuse that we are a busy people and therefore drift rapidly to the shortest words that clearly express our meaning would not serve to justify such atrocities even if it were true. But it is not true.

For these specimens of what Frenchmen sometimes call 'style negre' are not the shortest words that clearly express the meaning. "Typing" is shorter than "typewriting," but it does not make clear whether the operation referred to is typewriting or typesetting or printing. So a "typist" might be a typesetter as well as a typewriter. The wretched abortion of a word, "electrocute," which some use, is actually a syllable longer than the "execute" which they ought to stick to instead. Such examples might be multiplied. The jargon of the careless and illiterate is not always clear in meaning nor brief in compass. The most effective speech is that which conforms with the established rules and principles of the language. It is well to be busy. But it is not well to be too busy to write and speak correctly.—New York Tribune.

Preserve Your Papers.

By taking a little trouble, when TELEGRAPH AGE first comes to hand, it may be preserved to form a permanent and valuable addition to the reading matter with which all individuals should be supplied. We furnish a neat and attractive cloth board binder, which will be sent by mail, prepaid, for \$1.00. It has good, strong covers, on which the name TELEGRAPH AGE is stamped in gold, and means by which each issue may be securely held as in a bound book. One binder may thus be made serviceable for several years, and when the successive volumes, as they are completed, are bound in permanent form, the subscriber ultimately finds himself, for a moderate cost, in possession of a most valuable addition to any library, embracing a wide variety of telegraph, electrical and general information, and timely and original illustrations. Save your papers.

The English Post Office Savings Bank.

The actual banking in connection with the English Post Office Savings Bank is all done in one building in London, and the postmasters throughout the country simply receive, transmit, and pay out money. No accounts are kept at any post office; that is, in fact, forbidden, and consequently no one save the ledger clerks in the central office can tell the financial standing of a depositor. There is perfect secrecy as well as absolute safety. Moreover, post office branches are so numerous that a person living in a village and desiring his intrusions to be unknown, can always keep them even from the knowledge of the local postmaster by dealing with the office in the next village or town. An account may be opened at one office, but it can be drawn upon at thirty-six hours' notice at almost any other office in the United Kingdom. By the telegraphic withdrawal a depositor who carries his book with him may receive money anywhere in England, Scotland, or Ireland in a couple of hours, though he may not be known to a single person in the place.

The work of the bank is carried on by a staff of some 3,000 clerks, a large proportion of whom are young women. It was at one time believed that the feminine mind could not grapple with the problems of banking and the mazes of figures that accumulate day by day, but these fears have been dispelled. To the young women is given one of the most delicate tasks in the whole of the operations—namely, the identification of signatures, and the determining whether the writing on the demand note is that of the real depositor. It should be stated that when a person opens an account with the post office he must sign a declaration, which is forwarded to London and carefully pigeon-holed, under the name of the post office where he paid in his money. For ever afterwards, however much he may move about, his account will belong to that particular post office. An account is opened in the ledgers of the bank for each depositor, however small the amount in his name may be. These ledgers number over 20,000, and are classified in 262 alphabetical divisions, in accordance with the names of the post offices.

At the close of each days business every local Postmaster must make out a list of the transactions he has carried through, and that is forwarded to the central office. On a blue paper he enters all the moneys received for accounts originating at his own office; while on a white sheet he makes a note of the deposits in books that were issued from other post offices. The next day or the day after these notes reach head-quarters, and all the little sums and big sums are entered carefully in the ledgers, and a receipts made out and posted to each depositor. The book-keeping alone is a huge task, but it is simplified by a system of cross-entries which make those home and "foreign" transactions of the post offices equally easy to deal with, and a correct balance is struck every afternoon.

A few days may pass before a depositor receives the receipt for his money from London

showing that all is correct; but when he wishes to withdraw a part of his savings the bank is much more energetic. His request reaches London in the morning, it is attended to at once, and a warrant in proper form is posted in time to reach him the next morning. These withdrawals have to be gone about with some circumspection. In every pass-book is the signature of the depositor, and money can be drawn at any post office. So, if a thief gets hold of a book, he may secure all the funds available if he can forge the signature. Eighteen thousand withdrawal notes reach the central office daily, and each one is examined with the utmost care by the young women who have been trained for the duty. To make the work easy, girl sorters arrive early in the morning and arrange all the notes according to the post offices, and each clerk has charge of so many offices.

As a rule, a glance suffices, but in many instances the greatest skill and care are required to arrive at the truth. Signatures change, particularly in the case of young persons, and some people even change the spelling of the their Christian names for no reason whatever. As this is practically the only check on fraud, a heavy responsibility rests on the examining clerks. Sometimes they are cheated, but these occasions are rare. Indeed, the swindles that have been perpetrated on the bank since it began do not exceed a farthing in every hundred pounds that has passed through its hands. Having examined the signatures and looked at the ledger to make sure that there are funds in the account to meet the demand, the clerk passes on the demand note to a department where boys make out the warrants on the local post offices. These are written in duplicate—one for the depositor and one for the Postmaster. They are both given back to the young woman who authorized them, in order to be examined, and then sent out to be folded by machinery, and posted to their destination. The work is passed through in the most expeditious fashion, each clerk being expected to do a certain amount every hour, and the whole of the withdrawals are ready for the afternoon mails. The responsibility, too, is very real, and can readily be brought home to the person concerned in case of error.

"Wireless Telegraphy," by Richard Kerr, F. G. S., with a preface by Sir W. H. Preece, is a book just off the press, which is meeting a very wide sale, the subject treated being uppermost in the minds of the public at the present moment. This work, which comprises 116 pages, contains a good account of the discoveries in telegraphy without wires. The subject matter is arranged in readable form, the illustrations are excellent, and the descriptions of the experiments are accurate. Copies may be had at 75 cents each by addressing J. B. Taltavall, Telegraph Age, 253 Broadway, New York.

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

Mr. J. J. Ghegan of J. H. Bunnell and Company.

Mr. John J. Ghegan, vice-president and general manager of J. H. Bunnell & Co., incorporated, 20 Park place, New York, like many another successful business man, is a graduate from the key of which he proved himself to be a most efficient operator. Born near Dublin, Ireland, in 1855, he came to this country when but a small lad. He first learned telegraphing in 1869 with the late John E. Zeublin, at the old Western Union Telegraph office at 3rd and Chestnut streets, Philadelphia. His first position as an operator was on the Camden and Amboy Railroad, under Robert Stewart, then superintendent of telegraph. This employment, however, he soon left to go with the Automatic Telegraph Company, at Chester, Pa. Here his habits of thrift were shown, when at the time of the great Boston fire in 1872 he took advantage of the occurrence and worked extra in



J. J. GHEGAN.

Vice-President and General Manager of J. H. Bunnell and Co., Inc.

the Western Union service in the neighboring city of Philadelphia. In November of that year, when but seventeen years of age, young Ghegan was made night manager of the Western Union office at Newark, N. J. At this point he successfully organized ticker circuits and a telephone exchange for the Gold and Stock and Western Union companies. Subsequently, on the consolidation of the Bell and Gold and Stock telegraph interests, he became manager of the Western Union offices in Newark, a position he continued to hold until the consolidation of the American Union Telegraph Company with the Western Union, when he accepted service with the Mutual Union Telegraph Company in superintending the construction of its wires throughout northern New Jersey. Completing this work he went to Monterey, Mexico, there to become the general manager of the Mexican Northern Telephone and Tele-

graph Company. This position he filled with signal ability for two years, when he returned to New York on invitation to accept a responsible place with the well-known house of J. H. Bunnell & Co., with whose interests he has now been continually identified for about fourteen years.

The varied experience Mr. Ghegan has gained as a telegrapher has stood him in excellent stead during these recent years of his business life. For, identified with a house making the manufacture of fine telegraphic material a specialty, his practical knowledge of all such requirements, coupled with keen business acumen, and a genial manner, has naturally won for him the confidence of the telegraph people as well as those with whom he is associated. In the recent reorganization of J. H. Bunnell & Co., his services received willing and just recognition in his advancement to the high position he now holds.

As an inventor Mr. Ghegan has also won much credit, recent examples of his aptitude in this respect being shown in his automatic telegraph repeater, which is coming into extensive use, and by his system of duplex telegraphy, simple and ingenious of arrangement.

The Proposed Western Telegraph System.

At a meeting of those most interested in the proposed new telegraph system between Kansas City, St. Louis, Chicago, Milwaukee, St. Paul and Minneapolis, held in Chicago on March 7th, plans were consummated to such an extent as apparently to assure the establishment of the new system. It is understood that there will be a consolidation of several companies to form the new and larger one, the name of which has not yet been decided upon. In speaking of the meeting C. F. Crawford, of the Chicago and Milwaukee Telegraph Company, said: "Our plans of consolidation and reorganization have not yet sufficiently developed to give out the details of the new company. That the new line will be built is an established fact. Contracts for material for some of the construction have already been let."

It was learned from W. R. Stewart that entrance into Chicago from the south would probably be made by attaching the cables to the South Side Elevated structure from Sixty-third street. Cable connections in the various other cities, it is said, will in most instances be gained over the lines of the companies interested in the venture. The general offices will, it is thought, be located in St. Louis, the Orthweins of that city being the principal figures in the deal.

T. M. B. Association. Assessment No. 405 has been levied to meet the claims arising from the deaths of Fred E. Hamlin, at Indianapolis, Ind.; Sylvester O'Connor, at Chicago, Ill.; James W. Plaisted, at Portland, Me, and Allen M. Pennock, at New York, N. Y.

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

The Burry Page-Printing Telegraph.

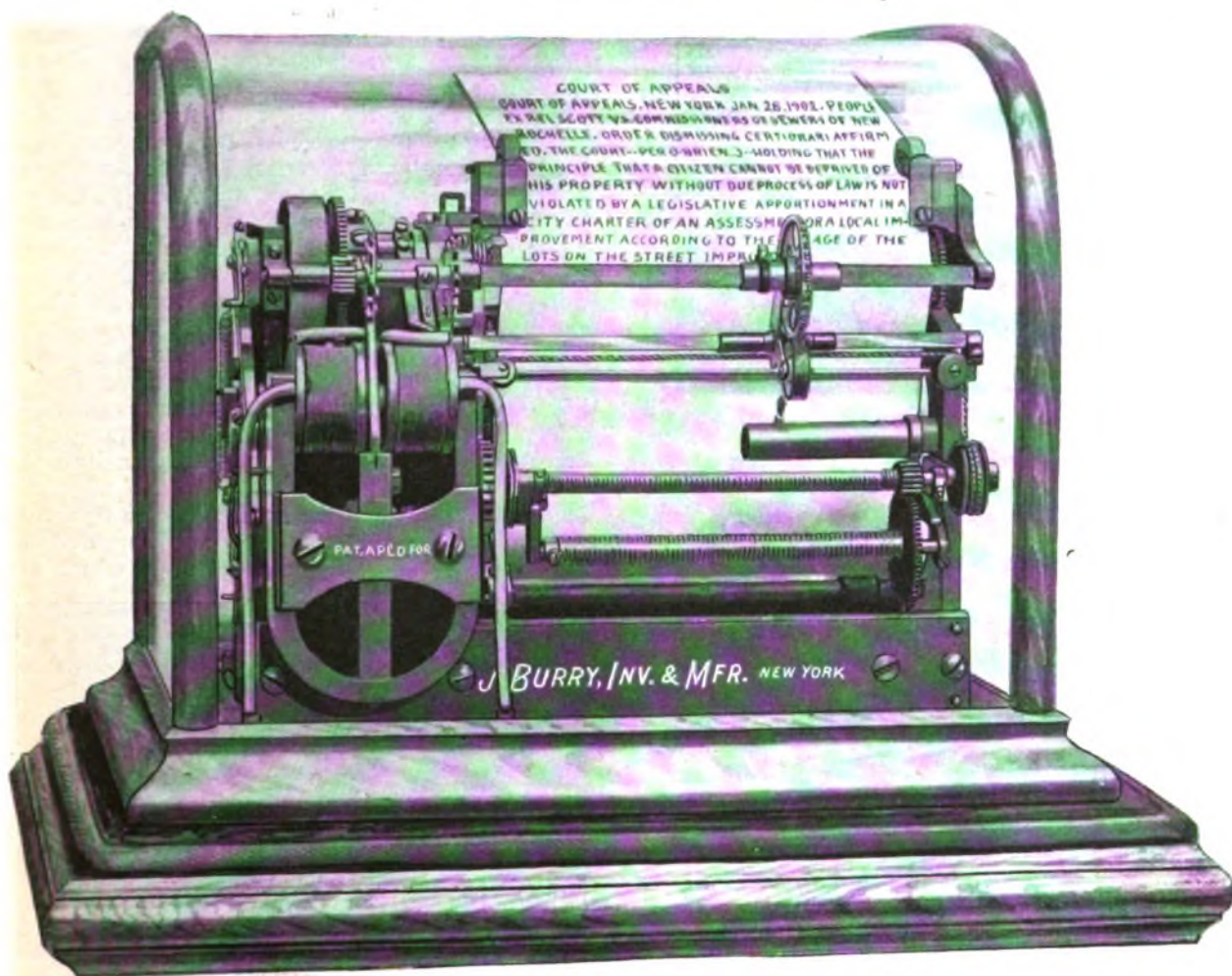
The development of the art of telegraphy has been marked by the production of some of the most ingenious machines to be found in the whole field of practical mechanics; and in no part of it has more well-applied inventive energy been displayed than in the direction of what might be broadly classified as telegraphic printing, or the automatic recording of messages by printing the same in the characters of the Roman alphabet.

Although the art of telegraphic printing had its beginning as long ago as the middle of the

The objects aimed at in this invention may be broadly summed up under the following three heads:

First: To produce a machine that would receive a telegraphic message and print it in the Roman alphabet, not, as in the old "ticker," in a continuous line upon an endless strip of tape, but in presentable page form, suitable for commercial or domestic use.

Second: To provide a machine which would be absolutely automatic, and, therefore, independent of both the sender and the receiver, thereby obviating all risk of clerical errors.



THE BURRY PAGE-PRINTING TELEGRAPH.

century, it is only during the past few years that successful attempts have been made to produce a true page-printing telegraph. The ingenious machine which forms the subject of the accompanying illustrations is a very successful attempt on the part of John Burry, of the New York News Bureau, 54 Broad street, New York, the inventor and manufacturer both of this machine and of the well-known ticker which bears his name, to substitute a true page-printing telegraph in place of the old ticker with its messages written upon a continuous tape.

Third: To provide a system whereby a large number (several hundreds, if so desired) of these machines could be operated at one and the same time by a single sender at the central station.

Broadly stated, the system consists of a transmitting machine at the central station, from which, by the operating of a keyboard, certain electrical impulses are sent out, in the proper sequence and of the proper polarity, over two line wires, to any number of printing telegraphic machines. As each key of the transmitter is depressed at the transmitting station, electrical im-

pulses are sent out through the circuits and act upon a series of magnets in each of the receiving instruments, the magnets serving to furnish the energy for the automatic movements of the machine.

The operation of the printing-telegraph, so far as its internal mechanical movements are con-

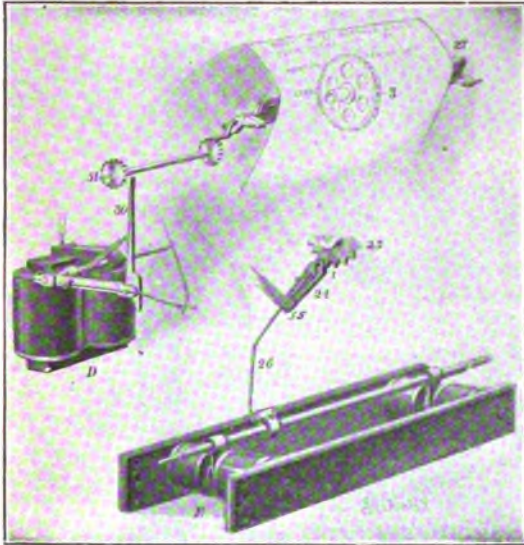


FIG. 1—PRINTING MECHANISM AND OSCILLATING MOVEMENT.

cerned, is absolutely automatic, and hence, to all intents and purposes, the operator at the transmitting station, who may be some hundreds of miles distant from the printing telegraph, is able to print, without any possibility of error, a hundred different messages, in as many different and widely separated localities. We present a photographic view of the printing telegraph, as it appears when installed in a business office or any other place of use. It is mounted on an iron stand and inclosed in a glass case, as shown. As the roll of paper is printed it is delivered automatically at the back of the machine, and the printed matter may be cut off in pages of any desired length.

The relative position of the magnets in the electric circuit is shown clearly in the diagram (Fig. 2), and before entering into a detailed, consecutive description of the movements of the machine, it will be well to state briefly the particular operations which each magnet is designed to fulfill.

The escapement magnet, A, controls the position of the escapement wheel, 2, and the type-wheel, 3.

The power magnet, B, has six functions:

- (1) It turns the type-wheel forward or backward 1-72 part of a revolution at each pulsation;
- (2) Winds the main spring, 4 (Fig. 5);
- (3) Winds the traversing spring, 5 (Fig. 5);
- (4) Controls the unison device, 6;
- (5) It gives oscillating movement to wire, 7 (Figs. 3 and 5), which throws pawl on arm 14 into engagement with arm 15 (Fig. 3);

(6) By means of a catgut, 11, it actuates one of the two contact points, 12; and acting in conjunction with the vertical rod, 13, operated by magnet, C (Fig. 3), it serves to cut in the current for magnet, D, whose duty it is to bring up the impression roller, 27 (Fig. 1), at the proper instant for printing a character.

The magnet, C, has four functions:

(1) By means of a pawl, 8, and ratchet wheel, K, it assists in winding up the main spring, 4 (Fig. 5).

(2) By means of arm, 9, it spins the shaft and fly-wheel, 10, and, through a worm on said shaft engaging a worm-wheel, 40, it winds up two helical feed-springs, which, acting on two toothed wheels, 31, one at each edge of the paper, serve to keep them under a constant tension.

(3) It operates the rod, 13, before referred to as assisting to cut in the current for magnet, D.

(4) It operates a lever, 14, whose lower end carries a pawl, which serves to engage the upper end of the arm, 15, for purposes later explained.

The purpose of the magnet, D, is to bring the impression roller, 27, forward at the proper instant for taking an impression from the type-wheel.

The quick-acting magnet, E, actuates a forked rod, 26, which forms part of a switching device, that throws the tooth, 24 (Fig. 1), to the right or left, and determines which of two adjacent letters on the type-wheel is to be thrown into the printing position.

The machine consists essentially of a base and two end frames, in which latter are journaled the various shafts and spindles, and upon which are

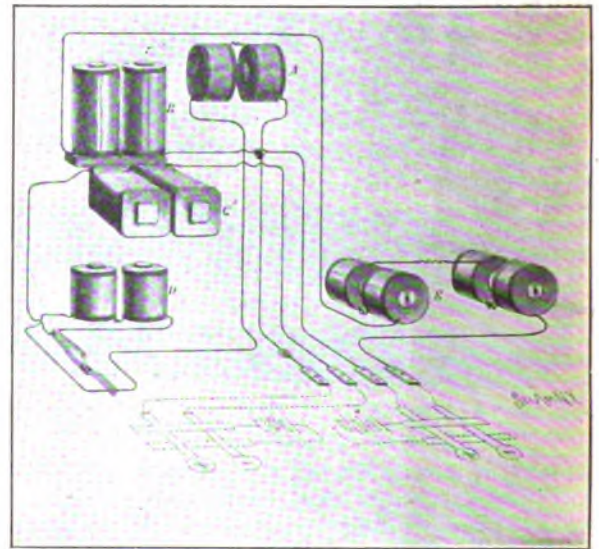


FIG. 2—DIAGRAM OF ELECTRIC CURRENT.

carried the five magnets and the numerous pawls and levers, by which the various movements in the machine are performed. A roll of blank paper, 5½ inches in width, is carried upon a roller, with a steel center, journaled at about the mid-height of the frame. It is maintained under a constant and even tension by means of two tooth-

ed wheels, 31 (Fig. 3), one at each edge of the paper, the paper being pressed down upon the serrated periphery of the wheels by two small pressure rollers, 16. The toothed wheels, 31, are maintained under constant tension by means of a winding gear, which is operated by the magnet, C, acting through arm, 9. As this arm oscillates

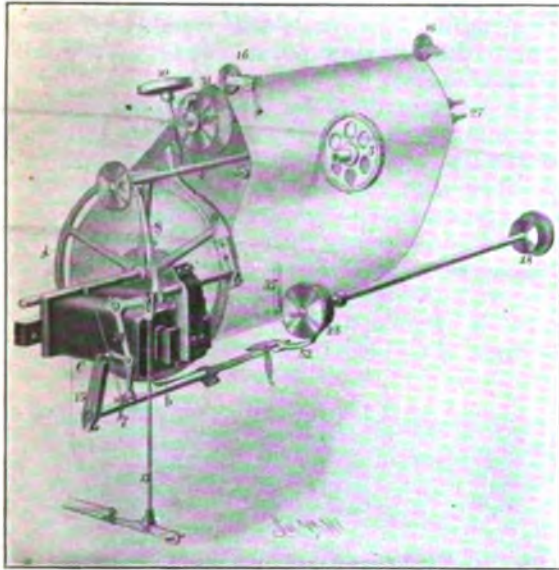


FIG. 3—DETAILS OF PAPER FEED AND RELEASING GEAR.

a knife edge on its upper end strikes a small pinion at the foot of the shaft, 10, on which is a flywheel, and causes it to spin, a worm above the pinion on said shaft engaging the worm wheel 40, and winding up the shaft on which this worm-wheel is journaled. Upon the shaft, between the toothed wheels, 31, are two helical springs, which are wound upon the shaft with sufficient friction to cause the rotation of said shaft to exert a rotational effect upon said toothed wheels, 31, thus preserving a constant tension upon the paper. This tension is resisted by two pawls, a and b (Fig. 4), which engage a toothed wheel, d, keyed firmly upon the steel shaft that carries the roll of paper. The pawls, a and b, are operated by the pulsations of the magnet, C, and are brought into play whenever a new line is to be commenced, the releasing of the wheels allowing the paper to be unwound a quarter of an inch, which is the space between two successive lines. This escapement is provided with ingenious mechanism to compensate for the decreasing diameter of the roll of paper; for it is obviously necessary that the escapement wheel, d, should rotate through a larger arc, when the roll is nearly exhausted, than it does when the roll is full; otherwise an even feed of a quarter of an inch could not be maintained at all times. The compensating gear consists of a curved wire, d, one end of which rests upon the roll of paper, while the other is attached to a vertical sliding bar, at the center of which is carried a horizontal stop-piece, c. When the paper is to be drawn forward, the stop, b, is re-

leased and the stop, a, engaged, the amount of rotation of the escapement wheel, d, being determined by the distance between the inclined face, f, of the arm, e, which carries the escapement pin, a, and the opposing face of the stop-piece, c. By this arrangement it will be seen that as the roll decreases, there is an equivalent increase in the amount of rotation of the escapement wheel, d, at each release.

Type-Wheel: The type-wheel is a small disk of brass with the alphabet cast in soft rubber around its periphery. This wheel is capable of rotation, oscillation and lateral or transverse motion, these movements being secured in the following manner: In the first place, there is a helical mainspring, 4, extending entirely across the machine, which is kept under tension by two pawls, T and 8, operated respectively by magnets B and C, as already described. This mainspring is in frictional contact with the shaft on which the ratchet wheel, K, is keyed, and one end of it is attached to and actuates a gear wheel, 17 (Fig. 5), which in turn rotates the pinion, 18 and shaft, 19. The shaft, 19, is clutch-connected by coiled springs, 50, with a triangular shaft, 20, on which the type-wheels, 3, and carriage, 21, slide, and by which the type-wheel, 3, is rotated. The smaller triangular shaft, 22, just below serves as a guide, and is engaged by the lower elbow of the carriage. The ink roller, 23, is carried on an arm of the carriage, and is inked every time it passes the ink-brush of the ink tank, 24 (Fig. 5). Under the constant tension of the mainspring, 4, operating



FIG. 4—PAPER FEED.

as described, the type-wheel tends to rotate in a constant direction, but is controlled by the escapement wheel, 2, which is operated by the magnet, A. The escapement is so arranged that a single pulsation of the magnet causes the type-wheel to rotate through the space of two letters. Thus, if the type-wheel is to be rotated through the space of six letters there will be three pulsa-

tions of the magnet, A, three teeth of the escape-ment being allowed to pass. When this has occurred, the wheel is brought up in its approximate position, or midway between any two letters, and it is now necessary to move the type-wheel to the right or left just half a space, or $1/72$ of a revolution, in order to bring the desired letter to the exact position for printing. This small movement is accomplished by means of the V-shaped reciprocating, tooth, 24 (Fig. 1), which is controlled by a magnet, E. This tooth is pivoted at 55 (Fig. 5) on a rocking arm, whose movement is derived from the magnet, B, as shown in Fig. 5. The V-shaped tooth engages a star wheel, 25, which is carried on the same triangular shaft, 20, as the type-wheel. After the escapement has brought the type-wheel to the mid-position between two letters, the magnet, E, by means of the forked arm, 26, throws a small tongue, 1, to the right or left of a guide pin, placing it in such

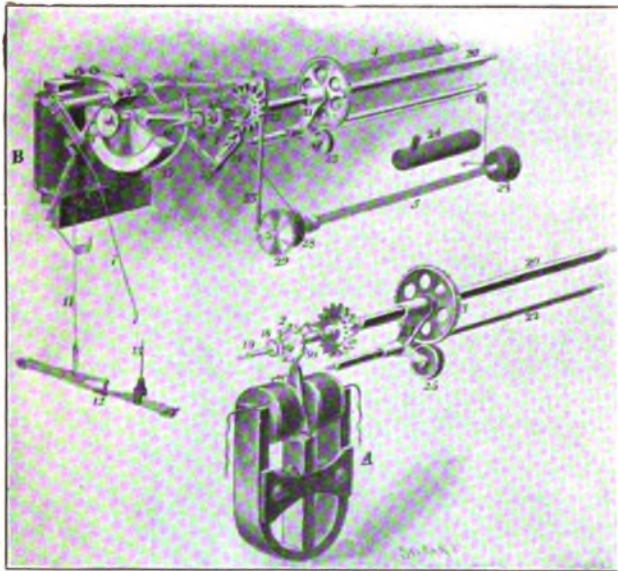


FIG. 5—TYPE WHEEL POSITIONING MECHANISM AND ESCAPEMENT.

a position that, as the tooth, 24 comes up, its right or left-hand face will engage the star wheel, turning it $1/72$ of a revolution to the right or left, according as the right or left-hand letter is to be brought into the printing position. The movements involved in these operations, acting by means of catgut, 11, and vertical rod, 13, on the contact points, 12 (Fig. 5), cut in the current for magnet, D (Fig. 1), which, by means of a pawl, 30, and ratchet wheel, 51, brings the impression roller, 27, forward and prints the letter on the paper.

The transverse motion of the type-wheel across the machine is accomplished by means of a cord (Fig. 5) which is attached at its center to the type-wheel carriage, 21, and extends parallel with the guide bar, 22, passes over two small pulleys at the end of this bar, and is wound at each end on two drums, 28. The drums are rotated by means of the ratchet wheel, 29, and the pawl, 35,

at every pulsation of the magnet, B, each movement of the ratchet causing the type-wheel to travel transversely the space of one letter. The ratchet also winds up the helical spring, 5, on the shaft that carries the ratchet wheel and drums, and when it is desired to return the type-wheel for the commencement of a new line the pawl is automatically released, and the tension of the helical spring, 5, draws the type-wheel sharply back to the starting point, ready to commence the next line.

The printing done by this most ingenious little machine is remarkably even, and in its spacing and general typographical excellence it compares favorably with the best work that is turned out on the typewriter. We are informed that during the past three years over five hundred of these printing telegraphs have been put in operation in New York and Chicago, the number being limited by the capacity of the shop in which the machines are constructed.—Scientific American.

The Telegraph in Colorado.

Mr. John Jenkins the chief operator of the Western Union Telegraph Company, Denver, Col., in a recent address on the history of the telegraph in that city delivered before the Colorado chapter of Electrical Engineers, had the following to say regarding the first entry of the telegraph into Denver:

"The first telegraph line in Colorado was built from Julesburg to Denver in October, 1863, and extended on to Central City the following month. This line connected with the transcontinental line from New York to San Francisco, which was completed in 1861. A line was completed from Denver to Santa Fe, N. M., in 1868, and is still in use between these points. A line to Cheyenne, Wyo., was completed on January 1, 1869. Two wires were brought in over the Kansas Pacific about 1870. A wire was built over the Rio Grande to Pueblo and Canon City in 1873, and a wire to Alma and Fairplay in 1874. A third wire came in from Kansas City over the Kansas Pacific in 1875.

"The Leadville excitement coming on in the fall of 1878, the Alma-Fairplay line was extended on to Leadville. At this time the first attempt was made to work a duplex in this part of the country but the wire being of such a poor quality, it was found impossible to make it work to Leadville. The wire was afterwards rebuilt with a better conductor and the duplex successfully operated to Leadville. The Western Union then had three operators at Denver; now it employs seventy-five operators here, and all other companies about 125. Wires are extended to all parts of the State and United States. There are 400 telegraph offices in Colorado. The Western Union has in Denver at present fifteen quadruplex and nine duplex and fifty single Morse circuits."

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Brief History of the Western Union Russian Extension Telegraph.

BY R. R. HAINES OF LOS ANGELES, CAL.

With pleasure I yield to the request for some reminiscences of the work I did under the charge of Mr. James Gamble in carrying the pioneer line through the north Pacific forests. Possibly I cannot make it sensational enough to be up to the requirements of the day, but it should be of interest to the telegraph fraternity, for no history of our lines is complete without it. And no line was ever constructed under greater difficulties than that through Oregon and Washington territories. It must be borne in mind that the work was done thirty-eight years ago, when, in Washington Territory, particularly, there were but few settlers to bridge its twenty rivers or make roads through the woods. Line builders of to-day, who have good roads for their wagons, or the railroad to haul material and camp, should



R. R. HAINES.

be thankful that their lines are cast in more "pleasant places," that with them it is not all the way bridgeless and ferryless rivers, or solid forest.

The remarkable forest, commencing at the southern line of Oregon and continuing northward, on the westerly slope of the Cascade range of mountains, has few, if any, superiors, in point of grandeur. Where the vandal lumberman has not despoiled the solid wall of wood, or fires devastated it, the trees stand as thick as they can live. Imagine a cornfield with stalks one hundred and fifty to two hundred feet high, and a conception is had of that "continuous woods," as Bryant happily expresses it in his beautiful poem, "Thanatopsis."

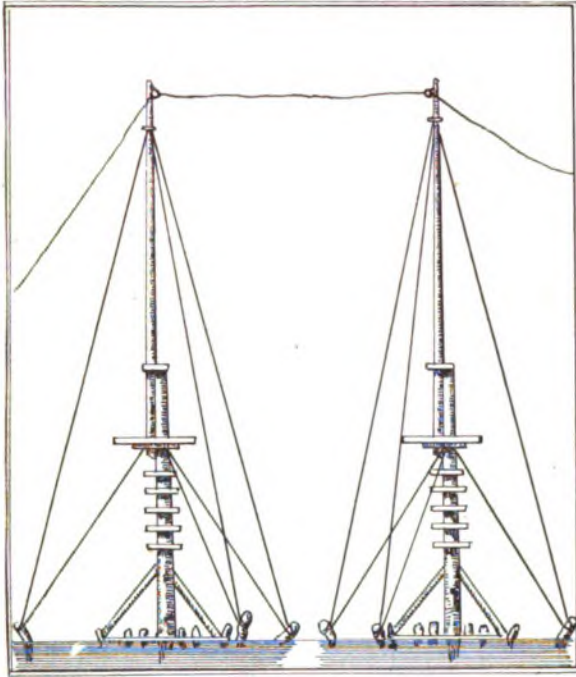
The line builders found remnants of Indian tribes at several points, but they were few, to Bryant's millions. The few Indians were friend-

ly, and were not very deficient in Indian intelligence. In many respects they surpass millions of white people, for they know how to supply their own wants. In their season, they laid up stores of clams, smoked salmon and dried berries, and were highly skilled in canoe building, and in catching fish and wild game, in which the country abounded. But they could not understand the utility of the telegraph line. They saw a large party of men with an extensive outfit, and were aware it must cost much "chickamen" (money) to build it, and were also aware that with every storm the line would be prostrated by falling timber. In fine, a chief of a small tribe gave expression to his opinion that the white men were "piltons" (fools) for running the "chicamen" (metal) "lope" (rope) through the "stick" (woods). And sometimes the builders, in their weariness and struggles through swamps and briers and climbing over the fallen timber and ferrying bridgeless rivers, thought the Indian philosopher was not far from the truth. And here seems the proper place to tell the story of the why and wherefore of that terrible struggle to run the wire through the magnificent forest of the then Territory of Washington to the town of New Westminster, B. C., some thirty miles above our northern boundary line.

A want of faith in an Atlantic cable of 1858 was father to the project of building a telegraph line to England, via the Pacific Coast, Alaska, Behring Strait, Siberia, etc. And this want of faith was almost entirely among practical telegraph men. A company, known under the title of Western Union Russian Extension Company, in 1864, commenced preparations for construction. Vessels were chartered or purchased, and the material was shipped "round the horn;" the cable for the crossing of Behring Strait was sent out from England in a special ship, and the work was entered upon in 1865. Some eight hundred miles of line was built, when upon the successful laying of the Atlantic Cable in 1866, the work was abandoned. The loss was reported to have been three millions of dollars. It was to cover a portion of the ground to be built upon by the Eastern Company, that the California State Telegraph Company "took to the woods" of Washington Territory. It reaped its advantage in the subsequent sale of its stock.

Let us briefly follow the building party from its initial point, Portland, Oregon, commencing July 6, 1864. Between Portland and New Westminster, B. C., about three hundred miles, there are more than twenty rivers, mostly bridgeless and ferryless at the time of which I am writing. Most of them are navigable for light draft steamers and small schooners, and three of them navigable for sea-going craft. The first, the Willamette, was crossed by a wire suspended from masts 180 feet in height. The second, the majestic Columbia, was cabled, the northerly end landed at Fort Vancouver. Thence the route was along the north side of the Columbia, with little help from a rough wagon road, a portion of the way,

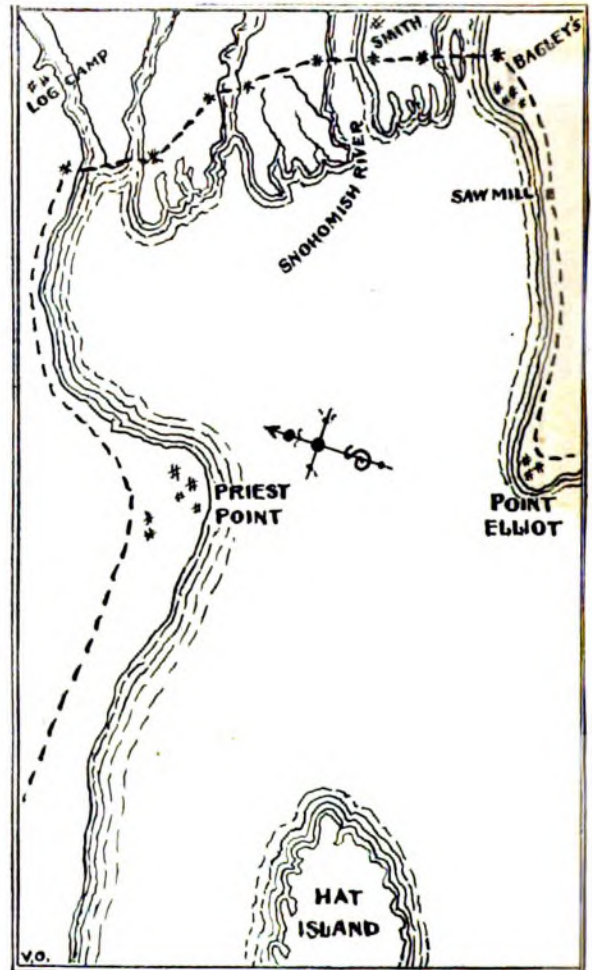
to the Cowlitz River, crossing it and the Lewis and Kalama Rivers. Monticello, near the mouth of the Cowlitz, was the terminus of a steamboat route from Portland, and thence to Olympia, the capital of the Territory, was a rough wagon road, mostly through forests. A few miles of open prairie gladdened the builders.



TELEGRAPH MASTS, SNOHOMISH RIVER.

The next objective point was Seattle. After a few miles of open country, "continuous woods" commenced. In 1857 a trail had been cut to a point near Seattle, but it had not been used, and was obstructed by windfalls to such an extent as to be little better than no trail at all. Upon reaching Seattle the order was still "forward," and the builders found themselves literally "up against it," for there was neither roads nor pathways ahead; nothing but the solemn woods, from the summit of the Cascade Mountains to the shore of Puget Sound. There were ten rivers to cross, without ferries or bridges, and swamps and other obstacles without number. To run an air line would have necessitated cutting a trail sufficiently good for pack animals, in order to get in material and camp, and making of suitable arrangements for crossing swamps and rivers. The outlook was very discouraging, and the conclusion was reached to follow the shore line of the Sound, taking advantage of the clearings the few settlers had made, and cutting across the bases of points jutting into the Sound. A light draft steamer was employed, which carried the building material and provision, and was the ferry boat and camp for the expedition. The work was generally kept within an average of one-half mile from the shore. The steamer was kept apprised of the locality of the working party, and upon the close of day called them on

board with her whistle, and then run to some inlet or cove for the night. The programme for the morning was to get up steam early, and while breakfast was being eaten the steamer was run to the point of the quitting of the previous evening, and the men put on shore, each with his lunch pail, and laden with wire and tools. The working programme was in the main monotonous, the variations being from frequent storms and twice frozen fast in rivers by cold snaps which occurred. The rivers were all troublesome, requiring the suspension of the wire above the reach of sailboats and little steamers. The



THE DOTTED LINE ON THE MAP SHOWS THE ROUTE OF THE TELEGRAPH ALONG THE SHORE.

Snohomish River gave more trouble than all the others. There were four navigable channels, and their banks were low and marshy, and subject to be overflowed by spring tides. It required seven masts to suspend the wire, three of single sticks, and four made ship-shape, with lower masts and top-masts, and substantially guyed with cables made of two strands of line wire, twisted by hand. There was no help to be derived from the blacksmith, and where iron bands were needed wire was substituted. This crossing cost many days of hard labor, yet was the most satisfac-

tory part of the line, for there were no trees to disturb it, and an inspection of the work four years after construction, found everything as good as new.

The builders left Seattle on the first of November, 1864, and arrived at New Westminster April 1, 1865, without serious damage to man or steamer. General Superintendent James Gamble had preceded the party's arrival, bringing with him the cable for the Frazer River crossing.

The arrival of the wire at New Westminster was a notable event to the isolated little town and the late Governor Seymour, who had his residence there, did much to make the few days the party was with him pass pleasantly. He donated the use of his little steamer in laying the cable across the Frazer River and to insure good work, steered it himself, and did it most satisfactorily.

New Westminster was the initial point of work on the Western Union Russian Extension line. The route lay up the Frazer River, until the broken coast line was passed, then bore away for Behring Straits, and would have passed through the Alaska mining region.

Telegraphic communication was established with Victoria in the fall of 1865. The route was from a convenient point on Swinomish Slough, which was crossed by an air line, and thence across Fidalgo Island, thence cable to Lopes Island, to San Juan Island, to Vancouver Island, three sections of cable, with a total length of seventeen miles. Victoria was a place of considerable importance, besides being the seat of the Colonial Government and the rendezvous of the British North Pacific Fleet. Great interest was felt in the coming of the telegraph, and the Admiral of the station readily acceded to the request for a vessel to lay the cable, and placed at the service of the line builders the gunboat *Forward*. She proved to be very suitable for the work, and her officers and crew worked with a cheerfulness and intelligence that crowned the critical work with complete success. The jubilation among officials and people was great, and the superintendent in charge was also enthused, and sent his company at San Francisco the following message:

"I have wired the left wing of the American Eagle to the tail of the British Lion. They work peaceably in harness."

The work briefly narrated above, passed to the credit of James Gamble, the General Superintendent. The wiring across every river on the Pacific Coast between New Westminster, B. C., and Deming, New Mexico, in all of which, excepting the Sacramento and its northern tributaries, the writer had the honor of being a helper.

James Gamble, under whose superintendency this telegraph expedition was conducted, and who now lives at Santa Barbara, Cal., in a private letter writes interestingly as follows respecting the enterprise:

"For one hundred and fifty miles north of Seat-

tle to New Westminster it was the most difficult and roughest extension of the telegraph ever made upon the Pacific Coast, or anywhere else, and perhaps the only line ever built with a steamer for camping and all work of distributing material, etc. The line was built in mid-winter, which it would not have been only that I desired to have the connection at New Westminster ready for the start of the Russian overland, which was to begin at that point early in the spring. I went up with the chief of the Russian extension, Col. Chas. S. Bulkley, and Staff, to introduce him to Gov. Frederick Seymour of British Columbia, and remained as a guest of the Governor while Col. Bulkley explored the coast as far as Sitka. In the meantime I laid the cable across the Frazer river and looked after the completion of the line from the south."

Mr. R. R. Haines, the writer of the above sketch, is an oldtime telegrapher, having commenced telegraph work as far back as 1848. He is now the manager of the Postal Telegraph-Cable Company at Los Angeles, Cal. He was born in Hallowell, Me., in 1826, and comes of good old revolutionary stock, his immediate ancestry also serving in the War of 1812. From the quiet life on the farm the lad of twelve years learned printing and later had experience in going to sea. In 1848 the advent of the telegraph into Maine fired the ambition of young Haines to acquire the art of telegraphy. This he speedily did and he was given charge of the telegraph office at Bath. Politics won his attention for a while and he was rewarded by a postmastership, a position he retained for two years. Then came the California fever, whose influence was strong enough to land him in San Francisco in 1857. A brother who had preceded him to this El Dorado awaited his coming in Amador County; but the gold which he expected to obtain easily refused to yield itself up, and weary with the fruitless attempt at mining Mr. Haines found employment with the Alta California Telegraph Company at Placerville, where he remained until January, 1864, when he was promoted to be assistant superintendent under James Gamble. Then it was that he engaged in the Russo-American overland telegraph scheme which he has described so graphically. Mr. Haines is still hale and hearty at seventy-six years of age, and attributes his good health largely to the out-door life which he has followed so conspicuously.

He Was Immune.

In a recent application by an operator for a job, the following clause was evidently intended to act as a clincher, for apparently the writer considered himself immune to all ills of the flesh and therefore able to put in steady and continuous work:

"I am a married man of 23 years. Have had a genuine case of small-pox and most all of the contagious diseases. I will make you a good man and stick to you."

A Few Facts Concerning the Telegraph in South Africa.

EDITOR TELEGRAPH AGE:

Many of the readers of TELEGRAPH AGE will no doubt be in entire sympathy with the prevailing rule here at Johannesburg, South Africa, which calls for but a seven hour working day for the telegraph operating forces. As the office is undermanned, there is plenty of extra pay to be made by working overtime. The visit of Mr. Chamberlain, the English Colonial Secretary, from London, has made the press-work very heavy and increased the overtime. One operator's share of overtime for two months amounted to £28, or \$140. The wheatstone system is largely used now on all of the main lines in South Africa. The working between Cape Town and Johannesburg is done entirely by wheatstone, and a great deal of the work with Kimberly and Natal is got rid of in the same way. Six or eight hours of slip-writing at night makes one's eyes very tired. Barely half the staff of the Johannesburg office are wheatstone men, but I suppose we will all have to learn the system as a notice has been issued that proficiency in wheatstone working will be considered when increments fall due. Salaries range from £200 to £300 per annum, in second class; £320 to £440 in first class, and are paid according to age and experience. For instance: I am between 29 and 30 years of age, and have had over fourteen years experience, so I get the maximum salary in second class.

Most of the men in the first class held office under the Boer Government, some of whom have been ten years in the Transvaal telegraphs and originally came from the English service. When the British Government took over this country the men were kept on and have been very well treated. A large percentage of the newer hands are Australians, and these are not greatly loved by the John Bulls, who seem to regard them somewhat as usurpers.

The engineering branch has had a busy time since peace was declared, rebuilding and repairing lines, etc. Things are getting into better order now, and we hope soon to be able to dispose of our work more quickly.

What South Africa needs, however, is a few of your energetic up-to-date American electricians and managers to introduce some modern instruments and methods of working the telegraphs. Everything here is old-fashioned and copied from the English telegraph service of years ago, and the powers that be, never having seen anything better, think their instruments and methods of working cannot be improved upon. I have never heard of any South African telegraph department sending an official touring in other countries in quest of information and improvements.

In the January number of the "Telegraph Chronicle," London, I notice the Cape service is still advertising for operators, offering from £120 to £160 per year for competent men. This is

not a bad service, but the men are frequently much worried by those in authority with matters of the most trivial nature.

The cost of living in Cape Colony and Natal averages about £6 per month. In the Transvaal it is much higher, being about £9 per month in Johannesburg and Pretoria, slightly less in country towns. A single man can save money here, but a married man has a poor show unless he is drawing at least £40 per month. House rent is the principal drawback. It is impossible to get a decent, small unfurnished house under £15 per month. My friends have had to pay £20 and £25 per month for houses of five and six small unfurnished rooms, and it is difficult to get a vacant house at all.

Johannesburg is growing rapidly and is already about the largest town in South Africa. The climate is very good and the summer weather much cooler than that of the towns on the coast. The rainy season lasts from November to March, and we experience some very severe thunderstorms, deaths by lightning stroke being quite common. The dust is very bad, especially at the beginning of the summer. During the winter there is little or no rain and the weather, though cold, is sunny. A. Z.

The Telephone as a Receiver in Multiplex Telegraphy.

A French inventor describes an arrangement for duplexing a telegraph wire, in which the telephone plays the part of a receiver. The system has received the test of experience having been in successful service between Tours and Chinon and Loches for the past six months.

There are four stations which are united by a single wire and use a grounded return. At the stations a regular Morse key and sounder are used, and messages are transmitted in the ordinary manner. At each of the stations a telephone transmitter and receiver are located, which are not placed in the line, but are electrically connected thereto by means of induction coils. Between each of the telegraph and telephone stations a retardation coil is placed. In each local circuit of the telephones a buzzer is located in circuit with the battery and the key. When the key is depressed the buzzer operates and a series of short impulses are sent through the induction coil. The retardation coils prevent the induced impulses of the buzzer from reaching the Morse instruments, and the circuit is completed to ground by means of condensers. Therefore stations can send buzzer impulses over the line wire to each other. By means of the keys the buzzers at either station can be made to send Morse signals, which can be heard in the telephone as a receiver at the other station. By this contrivance stations can communicate with each other in the regular telegraph fashion, at the same time that they are talking with each other by means of the buzzers with Morse code.

Mr. G. W. Lloyd as Assistant Superintendent at Minneapolis.

Mr. George Whitney Lloyd, who has recently been promoted to be assistant superintendent of the Western Union Telegraph Company at Minneapolis, Minn., is a Canadian by birth, his native



GEORGE W. LLOYD.

The New Assistant Superintendent of the Western Union Telegraph Company, Minneapolis, Minn.

place being Port Stanley, Ont., where he was born in 1858. His first experience gained in the telegraph service was at London, Ont., in 1876. From thence he went to Ingersol, Ont., as manager of the Dominion Telegraph Company, a position he held during 1877 and 1878, when he was transferred in like capacity and in the same interests to Detroit, Mich. During the life of the American Union Telegraph Company, Mr. Lloyd served as its manager at Detroit. After this dates his connection with the Western Union Telegraph Company in whose employ he served as an operator in Chicago from 1881 until 1887. From Chicago he went to Omaha, Neb., where as an operator, traffic chief and night chief in 1888-90 he made an excellent record for himself. In the early part of 1891 Mr. Lloyd went as an operator to Ogden, Utah, but in the latter part of the same year returned East to Minneapolis where he was made manager of the Chamber of Commerce office. His appointment to the position of assistant superintendent is a promotion well deserved, for Mr. Lloyd has proved his capacity as an all-around telegrapher and a man of executive force. In his new post he will have a larger opportunity for the exercise of the real abilities possessed by him.

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

James F. Nathan, Western Union Manager at Boston.

James F. Nathan, lately appointed manager of the Western Union Telegraph Company at Boston, Mass., where he succeeds C. F. Ames, who himself was only appointed to the position in May, 1902, now promoted to be superintendent, comes from Chicago, where he was born on November 11, 1870. Although not yet thirty-three years of age Mr. Nathan has shown himself to be an apt pupil in telegraphy and a man of capacity, as may be inferred from the fact that he is appointed to so responsible a post. Mr. Nathan first entered the telegraph in Baltimore, Md., in 1884, as a messenger for the American Rapid Telegraph Company, later being employed by the Bankers' and Merchants' Telegraph Company. Yet, after serving in the capacity of messenger and clerk, at the same time learning telegraphy he quit the telegraph for blacksmithing, spending a year in the shop, afterwards serving for three years as an apprentice in a machine shop. It was not as a machinist that young Nathan was intended, for although his sinews grew strong, his inclination led him back to telegraphy which he reentered as an operator under Richard J. Bloxham, then manager of the Western Union office at Baltimore. This was in the spring of 1889. From Baltimore he went to Chicago in the fall of 1892, where he secured a position under Mr. A. C. Murphy, superintendent of the city lines. After two years of



JAMES F. NATHAN.

The Lately Appointed Manager of the Western Union Telegraph Company, Boston, Mass.

this service, he entered the Western Union employ, holding various clerical positions under Mr. E. M. Mulford, then manager of the Chicago office, and now superintendent at New York. His last position prior to going to Boston, was that of solicitor and assistant to the manager.

An Odd Courtship.

I stood at the telegraph window with my message. At a table inside a girl with chestnut hair and brown eyes sat working a key. Seeing me, she came to the window, punched each word of my message with a pencil and said in a business-like tone:

"Twenty-nine cents."

"I figured it twenty-eight cents."

"One cent for a stamp."

Now, I knew perfectly well that at that time, a year after the close of the Spanish war, all telegrams must bear a Government stamp, but I wanted an excuse to hear the musical voice and look at the pretty face and brown eyes of the telegraph girl, so I continued:

"What's the stamp for?"

"Government."

"Don't you think that's an imposition on the part of the Government?"

She had been waiting with the end of her pencil between her teeth, but now she left the window and, going to the table, resumed her clickety, click, click, click, as imperturbably as if she had not been interrupted.

"Here's the money," I said, handing out a \$5 bill, though I had the exact amount. I hoped she would not be able to change the bill and I would have an opportunity to talk about it, but she pulled out a drawer, counted \$4.71 and returned to her table without looking at me.

The next day I found it necessary to send another telegram—that is, I made it necessary—and, handing it in at the window, I again saw the words punched and heard the melodious voice say:

"Fifty-one cents, please."

"I make it fifty cents. What's the extra cent for?"

"Stamp."

"What stamp?"

"Government."

"Are we living under an autocracy or are we a free people?"

She started for her table, but I threw down fifty-one cents and she returned and took the message with her invariable imperturbability. I had a look of admiration ready for her in case her eyes met mine, but she gathered up the money, went to her table, and again came the clickety click.

I arranged with my sister to send her peculiar messages, to which she was to pay no attention. Then I went to the telegraph office and handed in the following. It would be useless for any one to tell me that I should have been given a good thrashing for my impudent, because I knew it at the time.

"Chestnut hair and brown eyes. Will explain when I see you."

I watched the little telegraph girl carefully as she counted the words, but there was not the slightest twitching of a single muscle. When she had finished she looked at a quarter I had laid down with the message and said:

"Twenty-six cents please."

"The extra cent?"

"Stamp."

"Ah! Thank you. Here it is."

For the next twenty-four hours I expected that the girl's big brother, if she had one, might at any time appear and give me the thrashing I merited, but I was prepared for that, being ready to compromise by marrying his sister instantly. However, he did not appear, and I wrote another message to my dummy:

"I am sad and lonely. Can't you fix it so that I can call on you this evening?"

"Forty-seven cents."

"Forty-six for the message and one for the Government, I suppose?"

No answer. I put down a bill and received my change. Then, handing her a dozen large American Beauty roses, I asked if I could leave them with her for a few hours.

"Certainly, at your own risk," she said. "There's nothing to put them in."

"Never mind that. They'll spoil in time anyway. Everything must wither." And I took my departure as if in a great hurry.

Three days later I returned and called for my flowers. I saw them on the telegraph table in a very dainty vase, but of course faded. I took courage.

"My flowers, please. I am sorry to have troubled you with them so long."

She handed them out with the same undemonstrative face and the words:

"Ten cents, please."

"Ten cents? What for?"

"Storage."

I threw down ten cents and handed in another dozen roses, which she took in her usual businesslike manner. Her composure was upsetting me. Seizing a pen I wrote a telegram to my sister:

"I am wildly in love with a girl with chestnut hair and brown eyes who treats me with supreme indifference."

I looked for at least a slight blush in the cheek or a halting as the pencil jabbed the words. There was not a sign of either.

"Fifty-one cents."

I pulled a half dollar and a cent from my pocket and threw them down impatiently. The girl took up the silver coin, looked at it critically, scratched it, threw it down to hear it ring, then said:

"Counterfeit."

"Counterfeit?" That coin counterfeit? You're mistaken. It's genuine."

"Not the coin—the telegram."

Her face broke into as merry and happy a smile as I ever saw on the face of a woman. I thrust my hand under the bars where I had pushed so many telegrams and managed to get it on hers. She did not withdraw it, and, although the position was cramped, I felt a thrill running up my arm, through my elbow, my shoulder and into my heart.—Rockville Journal.

Philadelphia the Tournament City.

It has finally been decided that the Telegraphers' Tournament, which it was thought would be held at some point in the West, shall take place at Philadelphia, Pa., some time in May, prior to the 15th of that month, the exact date yet to be fixed. The tournament committee, believing that all interests would be better conserved to have the meeting occur this year either at Cincinnati, Chicago, St. Louis, Louisville or Nashville, worked energetically with that end in view, but it appears that a strange lack of enthusiasm at these points has defeated this praiseworthy object. Failing in these efforts, the Executive Committee has recognized the claims which have been advanced with considerable ardor by the Philadelphia telegraphers, and has accordingly decided to name that city as the place of meeting. Now that this long deferred point has been definitely fixed upon, it is in order for the various telegraph interests in the Quaker City to act promptly in the matter and take such measures, including the selection of a local committee, officers, etc., as shall be necessary to further the ends in view, exerting themselves to the utmost to make this tournament a success. It will be remembered that the Carnegie medal, won last year by F. M. McClintic, at Atlanta, Ga., will again be contested for this spring.

On March 19, J. P. Altberger and L. Lemon, were elected president and vice-president, respectively, of the tournament association for the ensuing year. This action places at the head two well known telegraphers, who will confer prestige on the association, and who will work zealously in its behalf. Last year the Atlanta committee, largely by reason of its high personnel, was enabled to offer all legitimate entries in the contest free railroad transportation. It is hoped that the same arrangements may be secured this season.

The Magnetic Club.

The regular Spring meeting of the Magnetic Club will be held at the Hotel Vendome, Broadway and Forty-first street, New York, on Saturday evening, April 18. Dinner will be served promptly at half past six o'clock.

The Governing Committee desires this dinner to be a compliment and welcome to Colonel Robert C. Clowry, the president of the Western Union Telegraph Company, who will be the guest of honor, and it is earnestly hoped by the Committee that every member of the club will be present and assist in extending to the guest a cordial reception.

An interesting programme is being arranged, and a most successful and enjoyable time is confidently predicted.

Friends of members may be invited as their guests, and it is requested that the Secretary be informed whether members will be present or not, and also how many guests it is necessary to provide for.

Our Book Table.

Frederick L. Meyer is the author, and Rand, McNally & Co., Chicago and New York, the publishers of the "Twentieth Century Manual of Railway and Commercial Telegraphy." The volume, bound in cloth, illustrated and carefully indexed, contains 239 pages, and offers to the young telegraphic student or beginner a kind of text book of forms employed in both fields of service. The price is \$1.00 and will be supplied, postpaid, by J. B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York.

Mr. Charles E. Yetman, 220 Broadway, New York, the inventor of the transmitter bearing his name, and himself a former telegrapher, has issued a very comprehensive booklet entitled "Typewriter Wisdom for Telegraph Operators," which he briefly describes as "an analysis of the work of a telegraph operator and an adaptation to that work of the eight finger method of typewriting." In view of the almost universal use of the typewriter by telegraphers, and as a rule their unscientific, and consequently the hardest, method of manipulating the machine, the work is timely, full of practical information and should be in the hands of every operator. As the booklet may be had simply for the asking, there should be no limit to its circulation among the craft.

"How to Become a Competent Motorman," is the title of a neat little volume of 232 pages, illustrated, published by the D. Van Nostrand Company, New York. It is a practical treatise on the proper method of operating a street railway motor car, and gives the details of how to overcome certain defects therein. The book has been prepared under the joint authorship of Virgil B. Livermore, chief instructor with the Brooklyn Rapid Transit Company, and James Williams, shop foreman with the same concern, and, as may be expected, emanating from such a source, the amount of information bearing on the subject is authentic and comprehensive. The price is \$1, express charges prepaid. Address J. B. Taltavall, Telegraph Age, 253 Broadway, New York.

Mexican Telegraph Company.

The Mexican Telegraph Company reports for the quarter ending March 31 a surplus after dividends and charges of \$60,385, against \$52,256 last year; total surplus after payment of April dividend, \$1,241,919, against \$1,078,956 last year. The quarterly dividend of 2½ per cent. from the net earnings of the company to March 31, 1903, is declared, payable April 15. Books closed March 31 and reopen April 16.

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

Albert Eckert Chandler.

Albert Eckert Chandler, who was manager of the messenger department of the Postal Telegraph-Cable Company, New York, and recently appointed to the newly-created position of superintendent of the messenger and district service,



ALBERT ECKERT CHANDLER.

Superintendent of the Postal Telegraph-Cable Company's Messenger and District Service.

is a son of Col. A. B. Chandler, formerly president and now chairman of the board of directors of the Postal company. He is thirty years of age, and with the exception of one year, when he was identified with automobile interests as secretary of a company, has been in some branch of the Postal company's service, including the executive offices, since he was sixteen years of age, commencing his career at a downtown branch office as a messenger boy. Mr. Chandler was made assistant superintendent of the supply department when but twenty-three years of age. For four years he served as stenographer and private secretary to his father, and like his father resides in Brooklyn, the city of his birth. He was married at Rutland, Vermont, September 1, 1898.

Postal Extension.

The Postal Telegraph-Cable Company will at once start to construct another line of wire, the third, adjacent to the right of way of the Union Pacific Railroad Company, from Omaha, Neb., to Denver, Col. The right of way of the railroad company will be followed from Denver to Ogden, and Salt Lake City, Utah. The line will carry six wires, and the total cost of construction will be \$1,500,000. The object of the new line is to connect the Postal Company's system more directly with the Pacific cable now being constructed by the Mackay interests.

H. H. Demarest at St. Joseph, Mo.

Mr. H. H. Demarest, of the Western Union Telegraph Company, at St. Joseph, Mo., who has been promoted to be manager, where he succeeds Rodney Smith, resigned, has had long experience both in the fields of commercial and railroad telegraphy. Born at Parma, N. Y., on June 29, 1861, he became an operator for the New York Central Railroad when but fourteen years of age. Going West in 1880 he found employment with the old central branch of the Union Pacific Railway, now a part of the Missouri Pacific system. In 1882 he became an operator of the Burlington and Missouri Railroad, at Plattsmouth, Neb., gaining promotion two years later to the position of chief clerk to C. E. Yates, then superintendent of telegraph of the road, with headquarters at Lincoln, Neb. Here he remained for nine years, until 1893. For a year thereafter he occupied the place of fuel distributor for the same company, when he accepted the proffer made by the Western Union Telegraph Company of the managership of the office at Glenwood Springs, Col. Since that time, with the exception of one year in which he again engaged in railroad work, he has filled the respective positions of operator at Denver, Col., manag-



H. H. DEMAREST.

Western Union Manager at St. Joseph, Mo.

er at Colorado Springs and at Salt Lake City. Mr. Demarest has a courteous manner, is keenly alive to the business requirements of his office and has taken hold of his new duties in a way indicative of a clear conception of his responsibilities.

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

LETTERS FROM OUR AGENTS.

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

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

MONTREAL, QUE., GREAT NORTHWESTERN.

A handsome new ticker outfit has been installed by wire chief Walter Graham.

A punch clock is the latest addition.

Robert Kane has resigned.

OELWEIN, IA., NOTES.

The force here of the Chicago Great Western Railroad at present consists of C. T. Williams, manager and wire chief; A. V. Hartly, C. D. Evans and F. M. Pickering, day operators at relay office; Wm. Brennan operator at the ticket office; C. L. Grover, night chief; John Skoda, night operator; Roy Butler, messenger.

The new postal wire to Mason City from this point has been in operation for some weeks. The Mason City office is ably handled by Frank Haase, operator and acting manager. Mr. Haase says that TELEGRAPH AGE is very fine, and wishes he had seen it before.

Born.—Friday, March 6, to Mr. and Mrs. A. V. Hartley, a son, another prospective reader of TELEGRAPH AGE.

Mr. A. M. Dafoe has been appointed chief dispatcher at Des Moines, Ia., to succeed L. M. Shipley, who is now train master on the Des Moines division.

Our linemen all jumped at a copy of "Jones' Diagrams" like a hungry man at a stack of hot pancakes.

R. D. Handibo, who has been our train wire operator for several years, left March 1st to accept a position as night operator and extra dispatcher in the general office at St. Paul.

Mr. Young, organizer for the "O. R. T." who has been making his headquarters with us for some weeks, left a short time ago for the Chicago and Alton system at Chicago.

C. E. Dafoe, division superintendent; A. T. Hollenbeck, chief clerk, telegraph department; H. M. Eshelman, train master, and two or three

others were here recently experimenting with a telephone set which can be cut in at any point on a telegraph line, and be used at the same time wire is used for telegraph purposes. They were successful in talking with St. Paul over one of our quadruplex wires, while the latter was working full blast.

CLEVELAND, O., POSTAL.

Mr. E. W. Collins, who was operated on at the Lakeside Hospital a few weeks ago, has fully recovered and is back to duty again.

The Lorain, O., Republicans were unanimous in their selection of George L. Buell as their candidate for mayor at the coming municipal election. Mr. Buell has for the past twelve years been manager of the Postal Telegraph-Cable Company at that point.

PEORIA, ILL., POSTAL.

The Postal office at this point is ably managed by Mr. F. C. Lacey, assisted by F. H. Jacobs, chief operator. The operators are S. S. Lacey, M. E. Bourke, J. F. McGrath and A. T. Griffith.

L. O'Loughlin is cashier and Louis Quinn, recently from the Western Union, this city, and G. W. Reiners are, respectively, counter and delivery clerks.

Charles M. Mackley and J. M. Fulton are the linemen.

Al Babb, the old-time gilt-edged Chicago operator, is doing a successful brokerage business here and looks younger than he did twenty-five years ago. Mr. Babb is assisted by M. J. Purfield.

Branch offices are manned by Matthew O'Keefe, Mr. Rogers, J. J. Arnold and Augusta Dersch.

CHICAGO, ILL., WESTERN UNION.

A daughter has been born to Wire Chief Jerry Mereness.

Harney Clark, after an absence of several weeks occasioned by sickness, is back again.

Harry Beer, who has been here a good many years, has gone to Utah to take up farming.

Mr. Bogardus is with us and is keeping his hand to the plow right steadily. Guess he is fastened here now. We all hope so. Every one in this country ought to know that this gentleman as a traveler has no equal.

Arrangements having been made to keep the Central Y. M. C. A. open all night for the especial benefit of night workers, the Western Union night men have not been slow in taking advantage of the accommodation.

A basket ball team has been organized with J. J. Fournery as captain. In an exhibition game played between the operators and the "All Star" check boy team, the former won by a score of seven to four.

TOLEDO, O., WESTERN UNION.

The personnel of this office is made up as follows: G. L. Wagner, manager; F. J. Krumling, chief operator; C. D. Sweeney, wire chief; J. P. Gerathy, assistant wire chief; W. G. Davis, traffic

chief; G. M. Brigham, night chief; J. S. Riekert, night traffic chief; G. E. Crapsey, night wire chief.

Operators: F. J. Krumling, C. D. Sweeney, W. G. Davis, J. P. Gerathy, H. C. Stough, T. J. Everett, A. E. Krumling, Charles Olsen, F. G. Currier, C. F. Nighswander, R. V. Barlow, B. C. Hoffner, A. E. Meyer, H. M. Addleman, J. D. Sullivan, D. P. Saulter, Frank Goodwin, C. L. Terpany, C. W. Quetchke, G. E. Marks, Mrs. J. L. Anderson, Miss C. E. Russell, Miss D. M. Bratton.

Night force: G. M. Brigham, G. E. Crapsey, J. S. Riekert, W. R. Scoggan, P. E. Murray, Frank McNeff.

Check clerks: Joseph Widman, Harry Beach and Carl Mehrman.

The Exchange office is in charge of J. G. Steuer. ST. LOUIS, MO., WESTERN UNION.

Miss Mary Burke has been appointed manager of the office at Jackson, Mo.

Miss Landauer is now working in the main office, transferred from the West End Hotel.

"The Roaming Stags," an organization of operators, have constituted a baseball team.

S. A. Mulray has left this office and will go to New York City.

Joseph H. Giles has gone to his home in Kansas City.

Mr. W. C. Stein has returned.

Mr. J. J. McCrudden recently took a trip to his home in Belleville.

The Misses Coyle, Hickey and Barnett have joined the "Tireless Club."

PHILADELPHIA, PA.

My motto—Honorable Dealing—D. A. Mahoney, special representative, Western Union Telegraph Co., Philadelphia. Send for booklets and easy monthly terms for "club plan" now forming for purchase of latest models, Fay-Sholes, Fox, and Jewett typewriters. Old machines taken in exchange and liberal allowances made. All makes rented three dollars monthly. Remodeled Smith's and Remington's \$40 to \$50, small monthly payments. OPERATORS REMEMBER, "NO MILL NO WORK" IN EITHER THE WESTERN UNION OR POSTAL THIS CITY.

WESTERN UNION.

Philadelphia has been selected by the Executive Committee, which recently met at Atlanta, Ga., as the next place for the Telegraph Tournament to be held some time between the 1st and 15th of May. It is up to us now whether we make it a grand success or a dismal failure. If we have any pride at all for our profession and the reputation of our city, we should all come to the front with one object in view and that object success in its highest and broadest sense. The spirit will be catching; all we have to do is to spread it broadcast. Philadelphia slow? Well, we guess not.

W. H. Unglaub, whose hustling abilities as an operator at Altoona, Pa., which were quickly recognized, has been promoted to be manager at that place, vice G. Catherman, appointed to the

managership at Harrisburg, Pa., vice E. A. Tuepser, resigned. Mr. Tuepser was a capable official for many years at Harrisburg and retires now on account of ill health.

Mr. J. Benjamin has been transferred from Broad and Columbia avenue office to Broad and Chestnut streets.

Harry Emanuel has adopted the Yetman transmitter and is doing excellent work with it. POSTAL.

New arrivals and changes have been quite numerous recently. Among the former are W. B. Ray, R. Ebaugh, H. A. Whitehead, F. E. Brown, J. M. Carroll, from a local broker; H. Hallman, from the American District Telegraph; F. M. Ragen, Miss L. L. Embrey and Wilbur L. Stanger.

By the resignation of Chas. T. McIntire, which occurred after many years' service with this company, a new assignment has had to be made to the first Chicago. Mr. Horace K. Holtzinger was the selection.

Mr. Auerbach has also resigned and will go to Chicago.

Mr. Philip Sherwood has been added to the 6 A. M. force. He will begin his early duties at Mr. Stump's office in the fish district.

A change has been granted to Howard Baker by his being sent to Altoona, Pa., where he is temporarily in charge.

William Burt, Jr., has been having quite a siege with la grip and other attendant ills.

An elegant crayon portrait of our late president, John W. Mackay, has been hung in the front office near the public counter.

The branch office at 5th and Market streets has undergone some very extensive improvements. A handsome new oak counter and operating table, supplemented by an entire new call service plant and attractive signs, are the chief features of the work of the renovators. Mr. L. Burk, formerly with the Western Union, has been made manager.

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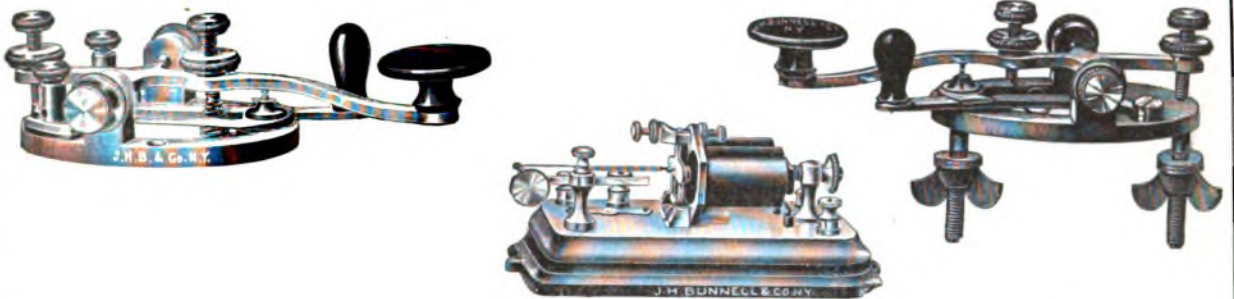
WESTERN UNION.

The annual meeting of the New York Telegraphers' Aid Society occurred on March 25. The meeting was called to order by President Frederick F. Norton. Mr. Norton did not make any report, nor were there any reports from the recording or financial secretaries, or from the auditors or trustees. Considerable discussion upon the methods of nominating candidates for office was had, and Messrs. M. J. O'Leary and "Senator" Ives took an active part. A motion was made by "Senator" Ives, and seconded by John Rathbone, that a set of resolutions expressive of the high personal regard entertained for W. J. Quinn, the retiring secretary, and for his efficient

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

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services rendered during the past thirteen years, should be suitably engrossed and framed.

Many kind remarks were made in support of the motion, which was carried unanimously. Mr. Quinn retires on account of his time being wholly occupied with his official duties.

The supervisors of elections, who had charge of the polls the previous day, at which 354 votes were cast, then read the result which was as follows: President, E. E. Brannin; vice-president, J. C. Watts; treasurer, Thomas M. Brennan; recording secretary, C. J. Power; financial secretary, Charles A. Kilfoyle; for members of the executive committee, Miss S. Dougherty, Miss M. E. Jermain, Miss K. Meyer, Joseph F. Ahern, W. W. Price, C. S. Pike, M. F. O'Neill, J. F. King, W. P. Brady, A. J. Gillman, F. J. Sheridan. President-elect Brannin, and Recording Secretary-elect Power then assumed their respective offices. Resolutions of thanks to the retiring officers for their zeal displayed during the past year, and to the Western Union Telegraph Company for the use of the room were passed and the meeting adjourned.

Those present were T. M. Brennan, E. Burrill, M. J. O'Leary, John Rathbone, Frank D. Murphy, C. S. Pike, A. M. Guest, C. A. Kilfoyle, Wm. L. Ives, Robert Morton, M. F. O'Neill, P. Gries, C. M. Holmes, Joseph Dion, J. McParlan, C. J. Power, E. E. Brannin, F. F. Norton, Vincent Burnes, F. J. Sheridan, J. C. Robinson, A. J. Gillman, J. C. Watts, A. Dougherty, Ramage Ferguson, John Brant and others.

The moving of the City Line Department from the eighth to the seventh floor was accomplished Sunday, March 22, without a hitch. By this movement the force on the different floors are about equalized.

W. N. Butt has been appointed to fill the vacancy caused by the death of A. M. Pennock.

Edwin F. Howell, secretary of the Serial Building Loan and Savings Institution, has been spending a week in Montreal.

Mr. Charles D. Kemp, who was a well known New York telegrapher up to 1889, when he was appointed on the New York police force, was a few days ago promoted to a captaincy. Mr. Kemp has filled positions in all of the police departments and he has thoroughly earned his promotion.

Arthur P. Stirling, having resigned as a member of the board of management of the Serial Building Loan and Savings Institution, James R. Beard, secretary of the Central and South American Telegraph Company, was elected by the board to fill the vacancy.

William Calvert, for some time an operator in this office, and brother of John K. Calvert, died of consumption in Brooklyn, March 17.

John H. McGinity, who has been confined to his house with rheumatism for a year past, has with the aid of a crutch and cane, resumed duty in the Commercial News Department.

The Social and Dramatic Club held its first social function March 27.

Mr. Henry Riddick of New York and Robert

F. Petree of Reading, Pa., exchanged 353 messages on March 21, making average of 45 per hour for the day—heaviest ever exchanged between the two cities.

A new camp of "Woodmen of the World" has been formed in South Brooklyn, with J. H. Kimball as the consul commander and W. S. Hutchinson as the adviser lieutenant. These gentlemen are well known in telegraph circles, and in the broker district, and it is safe to predict that the new camp will soon be in a flourishing condition.

Oscar McCullen, up to two years ago with the Western Union at Richmond, Va., and since that time a traveling salesman for a manufacturing house, has located in New York, where he will act as representative of a Baltimore concern.

J. J. Duggan, of the Central Cable office staff has been transferred to the Havana, Cuba, office.

Mrs. E. H. Rogers, an operator at the 46 Broad street office, was struck by a Fulton street, Brooklyn, trolley car on March 16, while crossing that thoroughfare, and was seriously injured about the face and arms. She was unconscious for nearly an hour and was taken to the hospital. She was removed thence next day to her home. She is slowly recovering.

A few friends of Mrs. M. E. Randolph, who has been absent on sick leave since last September, sent her a beautiful blooming Azalca recently, as a token of remembrance on her birthday, for which they received the following letter of thanks:

"Greeting and tender appreciation of the buds and flowers you caused to blossom on my birthday, into my life, with a beauty and fragrance that will never fade from memory, even when morning comes, and I awake in a home whose environment shall be the acme of beauty and joy. Perhaps your own hearts will best interpret to each of you, all this will mean to me every recurrent natal day, and the surprise of joy and blessedness with which it has crowned today. I pray that you may each have many years of health, prosperity and usefulness."

POSTAL.

A son was born to Mr. and Mrs. Albert Eckert Chandler on March 9.

Mr. G. W. Garland, lately of this office, but now with the Yetman Transmitter people, at Pittsburg, Pa., was married to Miss Katharine White of Brooklyn on March 10. The wedding was a home affair, only a few friends and relatives being present.

The sympathies of the force are with Mr. Joseph F. Carr, on account of the death of his young son.

E. W. Messler has been assigned to the Cotton Exchange Postal force, taking the place of W. E. Martin, who returns to the main office.

J. J. Hope, E. H. Hughes and V. C. Poe are back again after an absence of several months, the latter going West for his health last fall.

F. M. Huntington, for many years manager in Jersey City, and up to about a year ago employed in this office, died about a month ago.

There are still quite a number away on account of illness.

Mr. E. J. Fullam, who was absent about ten days on account of a severe attack of grip, is on duty again.

P. W. DeBaun has resigned.

Arrivals: F. R. Johnson, P. H. Free, H. Woodside, W. H. Stratton, J. P. Conklin, Robert Empie, J. W. Murray, C. B. Martin, C. J. McGinn and Mrs. L. R. Gardner.

A smoker was given on March 21 by the New York local, Union Commercial Telegraphers of North America. Occurring immediately upon the amalgamation of the International Union of Commercial Telegraphers and Order of Commercial Telegraphers at Washington, the affair savored greatly of a peace council and it may be truly said there was many a "pipe of peace" smoked. An excellent vaudeville programme was arranged under the able stage management of Herbert A. Yoell. Many volunteers from the telegraph fraternity made individual hits, as did also the professional talent, introduced by Mr. Yoell. A number of labor speakers also appeared.

Mr. J. B. Driscoll, of the Postal force, received an ovation at the end of his delivery of Othello's Apology. Mr. T. F. Masterson, also of the Postal, received round after round of applause for his clever buck dancing. An original sketch by Herbert A. Yoell, in which he was assisted by J. B. Driscoll and Miss Mildred Gilmore, also pleased those who attended. Appreciation was also expressed for the efforts of Mr. O. M. Mitchell, an old time telegrapher, but now a professional vaudevillian. The remainder of the programme consisted of songs, dances, recitations, etc., rendered by M. T. Herrick, Steel and Murray, Lee Butterfield, Miss Vera Marlowe, Miss Mildred Gilmore and Miss Louise Dacre.

Associate National Presidents I. J. McDonald of Chicago, and Percy Thomas of New York, chaperoned by Chancellor Eastlake of the local lodge, were the guests of honor.

SALT LAKE CITY, UTAH, WESTERN UNION.

The following is the personnel of the Salt Lake office: Manager, E. T. Moore; day chief, A. W. Long. Operators: Mrs. E. F. Beach, Miss Minnie Dermody, Miss A. Graham, Miss A. Guernsey, E. H. Graham, L. Harris, C. I. Lawton, O. Marshall and R. K. Peak. Split trick: J. W. Whiteley, Night force: W. B. Mundy, chief operator; C. W. Leiser and R. P. Moore, operators. All night chief operator, J. W. Booth. Extra list: G. D. Bailes, C. W. Bassett, R. Ensign, F. F. Jesse, Mrs. I. Markey, C. E. Randall, J. Rogerson and W. H. Wallack.

THE ASSOCIATED PRESS.

The telegraph operators of The Associated Press, to the number of two hundred or more, have signed a petition which has been forwarded to General Manager Melville E. Stone, asking an advance of twenty per cent. in their salaries. Mr. Stone has made a statement to the effect that no

action could be taken on the matter until it was presented at the next meeting of the board of directors which takes place in May.

A daughter was recently born to Daniel Callahan, of The Associated Press, New Haven, Conn.

Wireless Telegraphy.

An enterprising stock broker is said to have made application to furnish stock quotations to the "Twentieth Century Limited" on the New York Central as soon as a wireless telegraph system now in course of preparation for this train shall be completed, and it is said that a news ticker service is contemplating similar action.

Work upon the Marconi Company's installation for the United States Government in Alaska, will be resumed early in May and it is confidently expected that the system will be completed and turned over to the representative of General A. W. Greeley, chief signal officer, during the coming summer. This will establish wireless communication between Fort Gibbon on the Yukon, and Tolavana and Chena on the Tanana River, approximately one hundred and two hundred miles distant, and will, no doubt, result in the ultimate and speedy adoption of the Marconi system throughout that region when once its superiority and reliability have been demonstrated. This, in view of what the company has already done—is doing every day—and its experience in the field, will not be a difficult matter, in spite of the by no means favorable conditions existing in that section of the country.

The difficulties attending the maintenance of hundreds of miles of poles and wires in a workable condition, in an absolute wilderness and across numerous swamps and through dense forests, with frequent blizzards and intense cold during the long winter, and the maintenance of cables across rivers filled with moving ice in the spring, and what it means to replace all this, with a single pole at each station, can only be fully appreciated by those familiar with similar work under vastly more favorable conditions.

The station at Fort Gibbon was completed last August, and the other two would also have been completed last season had not a statement in the contract, as to the accessibility and availability of one of the sites named been found to be incorrect. This necessitated the selection of another, and the obtaining of the approval of the Department at Washington before continuing operations, and this unfortunately had to be done by mail, and took so long that when it finally arrived, winter had already set in and nothing further could be done until this season. The party, therefore, with the exception of Stanley Cook, who was left in charge at the Fort, returned to the States and will leave again about April 1st.

In connection with the above, it is interesting to note that the Marconi people were the only ones who made any attempt at all to carry out their Alaskan contract, and that one, the most

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difficult of the two entered into by the Government last summer. The company having the other and easiest, covering a connection across Norton Sound between St. Michael and Nome, a distance of about one hundred miles, all over water, doing nothing whatever beyond shipping two small and entirely inadequate poles to both points.

Canadian Telegraph Linemen.

The telegraph has become so much of an everyday affair that few people take time to consider what a vast amount of alert forethought and active supervision is alone required to keep the lines in constant and uninterrupted operation. To the uninitiated, says the *Globe* of Toronto, Ont., the work of the linemen may appear very simple and of little consequence, yet his duties, though unpretentious, and, it may be, obscure, are unceasing, vital and arduous, and are probably, relatively speaking, as important as any rendered in connection with the entire telegraphic service. It is acknowledged by the cognoscenti in telegraph matters that a strong, well-managed and up-to-date "maintenance and construction department" is not only one of the most essential, but also one of the most indispensable adjuncts of a modern telegraph system. In this connection a few words regarding the methods adopted in Canada to keep the lines up to the highest standard of efficiency may not be uninteresting.

The Great North Western Telegraph Company, of which Mr. H. P. Dwight is the able and popular president and general manager, has over one hundred regular linemen in its employ. This number is largely augmented in the summer season, when the lines are given a general overhauling by the repair gang. The regular linemen are stationed at the most advantageous points on the various routes covered by this extensive telegraph system, from which prompt repairs can be made, embracing all the intervening inhabited portions of that great stretch of country extending from New Brunswick to Manitoba and including a section of British Columbia. Every one of these men is a line-builder of experience and trained to his business. Each man has a certain amount of territory allotted to him, and it is his duty to see that the wires running through this territory are kept in good order. The "beat" of each repairer being clearly defined, when a break or interruption occurs he starts out prepared to go to the end of his "beat," should he not find the trouble this side of it, and the repairer coming from the other end does the same. Each man knows precisely what he has to do in order to put the line in operation again, and his work is performed with intelligence and alacrity.

The linemen are stationed at central points selected with a view of obtaining the most prompt and frequent train service, and they hold themselves in readiness for duty at all times, including Sundays and holidays. Conductors of trains are instructed by the railway authorities to stop and

let the men off between stations or wherever a break in the line is discovered. The linemen are held to strict account in the matter of keeping the lines in their respective sections in good repair, and when they are not engaged in looking up interruptions they make frequent trips of inspection over their jurisdiction, and do what is necessary to strengthen the weak spots and improve the conductivity of the wires. It may be confidently asserted that this great army of linemen are never idle, but are constantly, from day to day, on the move, going backwards and forwards over their "beats," putting on an insulator there, tightening the lines here, or, it may be, straightening an old pole or putting in a new one at another place.

These men report to their superintendent, Mr. A. B. Smith, whose headquarters are at Toronto, and their movements are controlled and directed by him. The predominating characteristics of Mr. Smith's management are system and personal attention, and it may be said that he has pretty accurate knowledge each day of what each individual repairer is about. Of course the discipline is necessarily rigid, and the men are not allowed to leave their posts for an hour without permission, and without arranging for relief. In addition to all this a gang of linemen is sent over the lines every summer to make permanent repairs and to give the lines a thorough furbishing up. These men are organized into hatches of 15 or 20, and each has a foreman or "boss." Early in the spring these gangs are told off, and to each is apportioned a certain amount of work, and from New Brunswick to Manitoba these clever artisans are busily employed in putting in new poles, taking out rusty joints, trimming trees, tightening the wires in some places, giving them more slack in others, and in every possible manner strengthening the general outfit and improving the insulation of the wires.

The men employed in this work camp out if working on the highway lines, and if on the lines running along the railway tracks they have a couple of specially-equipped cars set apart for their use. The men have sleeping accommodation in these cars. They do their own cooking, but such lusty fellows are in no way dainty about their grub, and the menu consists mainly of boiled pork, bread and butter and strong tea, such a decoction of the "cup that cheers but not inebriates," as would be called strong if partaken of at one's home is not meant, but a powerful bitter black liquid that would pucker an ordinary person's mouth in such a manner that he might easily despair of ever recovering his natural taste—a beverage, in fact, not unlike what one might expect from an infusion of bitter aloes mixed with blackstrap tobacco. The men, however, thrive on this diet, and are muscular and active fellows, who never know what it is to be sick or to feel out of sorts for even a day. The toughened lumbermen in the shanties in the northern woods are not more hardy or equipped with constitutions better fitted to stand fatigue or exposure than are

these linemen. When the summer gangs are through with their day's work the men sit around the camp, tell stories, sing songs, play the fiddle or amuse themselves in some other harmless way, but card-playing is not allowed.

Of course in the winter season the regular linemen are not kept so busy right along as during the summer months, but no Canadian need be told that an ordinary Canadian winter can be depended on to furnish at least one or two heavy storms of wind, sleet and snow. These severe wind and sleet storms play havoc with the wires, and it is well that they are then trim and fit, and in good condition to withstand these sudden onslaughts, or the destruction would be terrific. As it is, the damage is often very serious, and it is then that the linemen are called upon to show the grit they are made of, and if the storm has been an unusually tempestuous and frolicsome one they may be kept busy for two or three weeks, during the most inclement weather, setting poles and splicing and untangling great masses of wire, which, to the unsophisticated, has often the appearance of such utter wreck and ruin as to be beyond the power of man to straighten out again. When these storms take place there is a great scurry among the linemen, and they are to be found at the scene of the trouble just as soon as means can be obtained to transport them thither. The lines are hurriedly repaired in a temporary manner, not a minute being lost in placing them in such a condition as will allow of a through connection. This done, permanent repairs are rapidly and systematically carried on, the men working early and late until the lines are in about as good shape as they were before the storm. As may be readily imagined, this is a very anxious and trying time for the superintendent of construction, and he is to be found on these occasions battling with the men during the most adverse meteorological conditions—directing and encouraging them in their work until all is serene again.

These men become very expert pole climbers, and possess the knack of being able to work on top of a pole 30 or 40 feet high with as much freedom as they would on terra firma. No one, except those who have had some experience in these matters, can form an idea of the awkwardness and the difficulties in making repairs at such a height. There may be fifteen or twenty wires on the same pole, and the lineman has to crawl in amongst this network of metal and make a splice on heavy No. 4 wire, or it may be unravel a clinging and intricate cross. Here a level head, great physical strength, an aptitude to handle the nippers with dexterity and precision and the daring and skill of an acrobat or an aeronaut are all required, and this work may have to be carried on while it is blowing great guns, accompanied by snow, or a cold, drenching rain. Although the life of a lineman is not entirely devoid of danger, serious accidents are rare on telegraph lines, but the records show that on wires carrying a heavy voltage, such as electric light and trolley wires, the same

cannot be said, and the utmost care must be exercised in handling these wires.

At one time most of the linemen in Canada were French-Canadians, but latterly a large number of English-speaking men have also been employed, and these, when properly trained, and of the right cast, give perfect satisfaction. The French-Canadian, however, is by nature peculiarly adapted for line repairing, being strong, wiry, agile and natty, possessing great endurance and determination, and a wonderful capacity for complicated and fatiguing outdoor work under the most trying conditions. They are easily controlled, and are thoroughly reliable, and have an amazing genius for the work above described. In a word, they are born linemen.

The Great North Western Telegraph Company has 18,000 miles of poles, 40,000 miles of wire, with some 1,800 offices throughout Ontario, Quebec, New Brunswick, Manitoba, and a section of British Columbia. As already stated, the whole of this important and influential telegraph service is under the immediate management of General Manager Dwight, who has been in the telegraph business for over half a century, and who is familiar with every feature and interest of this extensive and ramified system, from the handling of weighty questions in connection therewith down to the most minute detail—even to the practical manipulation of the instruments.

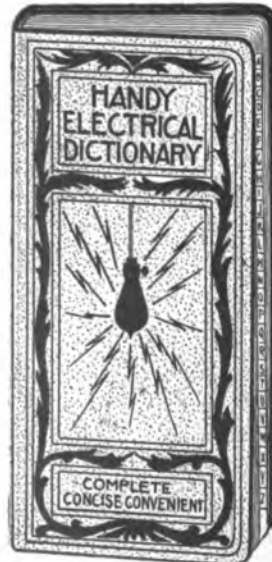
The Canadian Pacific Telegraph Company has 42,000 miles of wire in operation in Canada and 1,100 offices. In certain remote localities along the lower St. Lawrence River, and in the Northwest Territories, where private companies would hardly be justified in extending their lines, the

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In Canada the telegraph companies have always kept well abreast of the times in promptly adopting the various improvements in apparatus, which from time to time have been placed in the market, and both the quadruplex and duplex systems are in daily use over some of the most important routes, and direct and rapid communication is maintained between all the larger Canadian cities, as well as with New York, Chicago and other important American points.

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It was a rare incident that occurred at a Santa Fe depot. It was a knock down and drag out fight between two well known telegraph operators, the result of a feud engendered on the wire. Fierce wire "scraps" are common in all telegraph offices and challenges to mortal combat are often issued and the belligerents agree to meet and fight it out. Anger usually cools, however, before they reach the rendezvous and they meet to laugh over the matter and wind up by having a good time together. Upon this occasion it was different. One of the operators is a Scot, the other Irish. They had been assigned to the Galveston-Houston wire. The Irishman was employed at Galveston and the Scot at Houston. Ere long a quarrel occurred. Grasping the key with both hands the Irishman said: "You are a flea, an insect, a telegraphic tomtit." The Scotsman's blood boiled as he retorted: "You are an unnamable nincompoop and I'd give a month's salary to punch your face," etc., etc. Then a test of skill was made, each endeavoring to chase the other off of the wire. Failure in such a case is considered ignominy and both made a desperate effort. The result was a tie, the chances in the Scotsman's favor. The chief operator then interferred and separated the combatants, but not before they had hurled anathema back and forth between the rival cities. The wire trembled with indignation, the poles shook, the insulators almost melted, the current was stirred to the end of the ground

wires, and the dynamos emitted showers of sparks.

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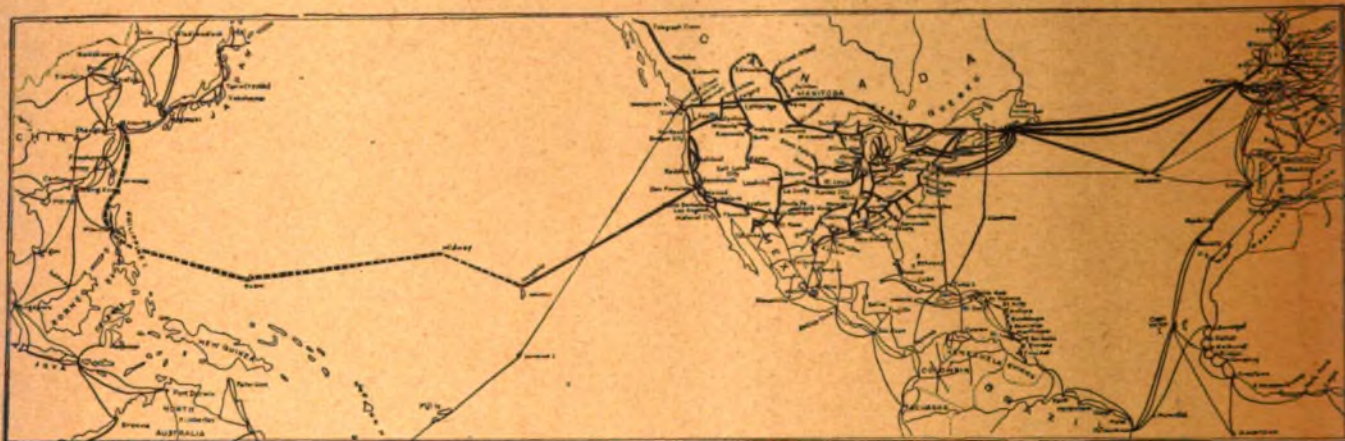
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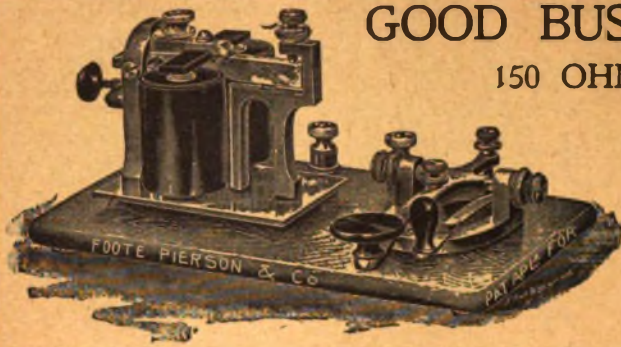
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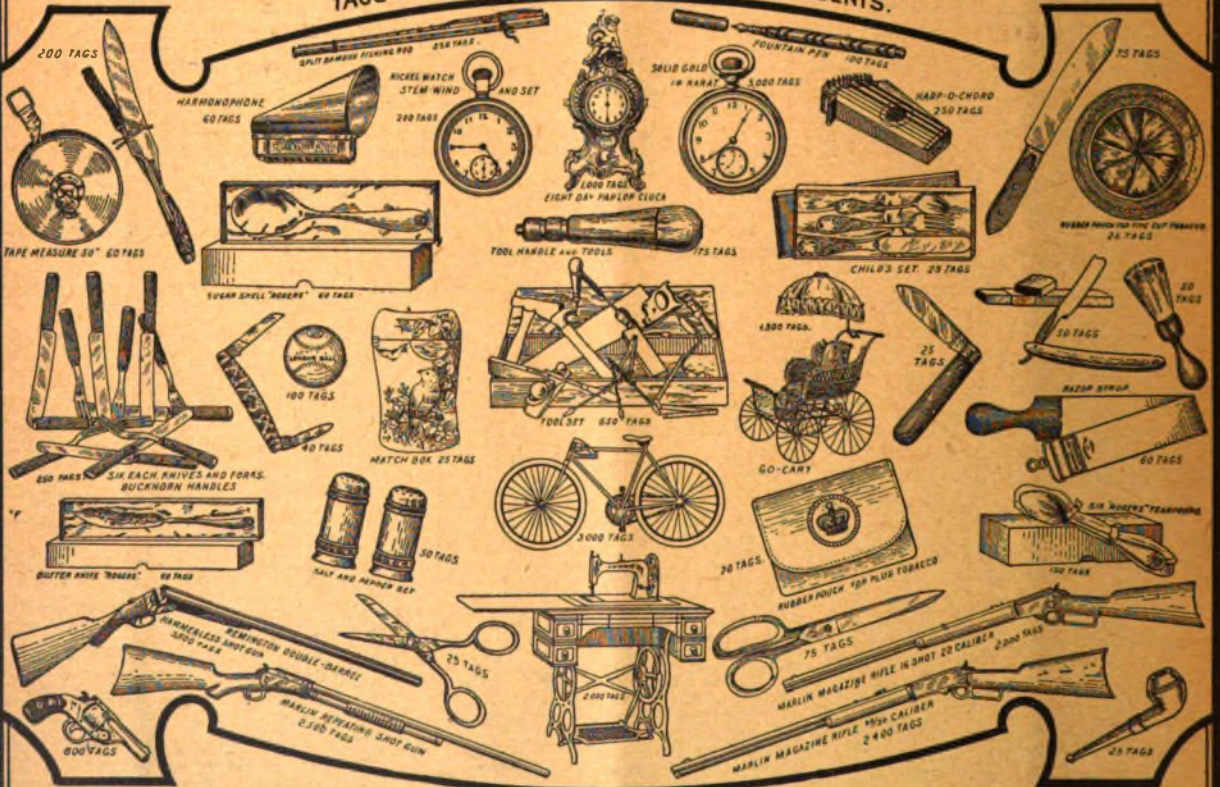
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CONTENTS.

Some Points on Electricity.....	189
Recent Telegraph Patents.—The Railroad.—The Cable.—Personal Mention.....	191
General Mention.—Resignations and Appointments.—Obituary.—Recent New York Visitor.....	192
Wireless Telegraphy.....	193
A Handy Combination of Telegraph Instruments.—Directory of Annual Meetings.....	194
Telegraphic Bookkeeping.—Underground Telegraph Cables in England.....	195
The English Post Office Telegraph System.—One on the Telegraph Company.....	196
Editorial.—The Magnetic Club Dinner.—John C. Barclay.....	197
Telegraph Libraries.—The Western Union and Pennsylvania Railroad.—Simultaneous Telegraphy and Telephony.....	198
J. L. Miller of the St. Joseph Western Union Office.—The Paths of the Telegraph Poles.....	199
The New Home of the Eastern and Associated Submarine Telegraph Companies, London.....	200
International Telegraph Conference.....	201
Important Legal Decision.....	202
The Associated Press.....	203
The Early Days of Telegraphy.....	205
An Isolated Pacific Cable Colony.....	207
St. Paul Notes.—Boston, Postal.....	208
Buffalo, Postal; Des Moines, Western Union; Philadelphia, Western Union.....	209
Philadelphia, Postal; St. Louis, Western Union; Montreal, Great Northwestern; Chicago, Postal; Waco, Western Union; New York, Western Union.....	210
New York, Postal.....	211
The Tournament Postponed.—Difficulties in Alaska Telegraph Construction.—Business Notice.....	212

SOME POINTS ON ELECTRICITY.

BY WILLIS H. JONES.

A Duplex Repeater With Branch Office Drop.

It is a very simple matter to connect a branch office loop in the local circuit of multiplex apparatus at a terminal station in such a manner that the former may have full control of the transmitting apparatus at all times, but it is not so simple a problem where the loop is to be placed on a through circuit at the repeating station. The difficulty lies in making the connections such that the branch office operator can control either or both of the transmitters at the repeating station, and at the same time make his signals heard by the operators at the terminal stations. Arranged in the usual manner employed at terminal stations, the branch office could only send in one direction—the side of the repeater he was on, and the other terminal could not hear him.

Several methods have been employed to meet the emergency, among which is the following, the diagram of which was contributed by Mr. Geo. H. Kendrick, of the Western Union quadruplex department, Pittsburg, Pa., which shows the arrangement in use at that point. Mr. Kendrick claims that this method has given entire satisfaction, and is in practical operation on several very fast broker circuits between New York

and Chicago and elsewhere. It will be seen by the illustration that each terminal station is entirely at the mercy of the branch office operator who can cut either terminal off in case he should not be disposed to yield the circuit or permit him to break.

In order to describe the operation of this device let us assume that the diagram (Fig. 1) shows the eastern and the western repeating apparatus, respectively, at Pittsburg, of a New York and Chicago multiplex circuit with a branch office at Pittsburg. The New York and the Chicago office apparatus are not indicated as their presence is not necessary. Let us suppose that New York is sending to Chicago, and that the

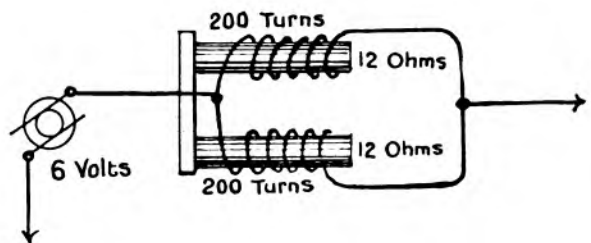
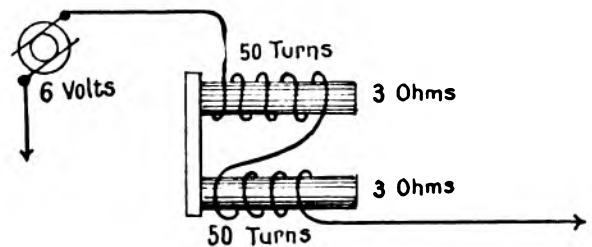


FIGURE 2.

branch office at Pittsburg desired to break in at the end of a message in order to send to Chicago. If New York gives way to the Pittsburg branch office gracefully he (the New York operator) simply closes his key as he would do were it a single circuit, but should he be disposed to contest the circuit with Pittsburg, the latter could throw the lever of number 3 switch to the left, an operation which would cut off New York's control of the polechanger on the Chicago side of the repeater and give it to the branch office via a ground wire. The operation would not interfere with the Chicago operator sending to New York, should he happen to be doing so at the time, but the New York operator could not

break Chicago under these conditions until the branch office again restored the lever to its normal position. This would, of course, be done the moment the branch office operator had finished his message, or New York had determined to yield and close the circuit.

This switch is merely an emergency device and seldom used when everything goes right, still it comes in handy also when the circuit fails on one side of Pittsburg, as the branch may still work towards the good end of the line.

Figure 2 represents a problem, contributed by a correspondent, in the solution of which so many interesting points may be brought out in regard to magnet winding, that for the present,

We will give the reader the following points as a starter:

The magnetic strength of a sounder or relay is in proportion to the ampere-turns which encircle the iron; that is to say, the strength of the current multiplied by the total number of convolutions of magnet wire in the spools will give its strength.

In figure A, the total resistance of the circuit being 6 ohms, and the electromotive force 6 volts, the circuit is obviously filled with one ampere of current throughout its entire length. The two coils of 50 turns each give 100 ampere turns as the strength of that magnet.

In circuit B the total resistance is the same, as the joint resistance of 12 and 12 is 6. The

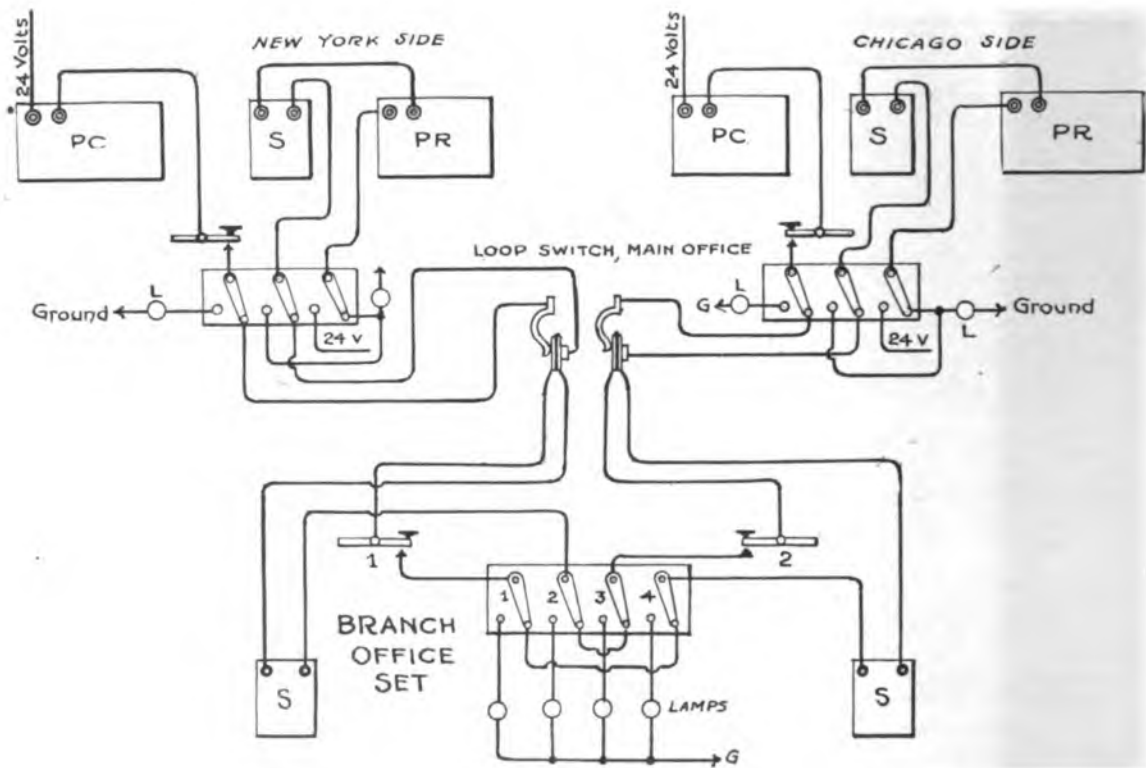


FIGURE 1.

at least, we will content ourselves in simply presenting the idea as submitted in diagramic form, withholding detailed explanation, leaving it to our readers to determine for themselves wherein the proposed method is at fault, considered from a practical standpoint.

Briefly, however, it may be said, the proposition is to wind the magnet in such a manner that its strength will be doubled, without increasing the amount of current drawn from the battery. This would be an ideal method for saving battery power, but where is the catch? With the figures used by the correspondent and method of winding shown in the illustration, magnet B certainly will be twice as strong as magnet A, because twice as many ampere-turns encircle the iron core of B as A.

one ampere of current drawn from the battery divides equally between the two coils which are in multiple, thus making but one-half of an ampere through each, but as there are 400 convolutions in all, there must necessarily be 200 ampere turns of current flowing around the core, hence twice the magnetic strength should be obtained by the latter method of winding. Try method B in the construction of a sounder with which to replace a 4 ohm instrument and see how you come out. The 4 ohm sounder, as normally constructed, requires one-quarter of an ampere of current; is usually wound with No. 18 insulated copper wire and contains about 600 turns.

The following letter has been received from

Ralph E. Scolah, manager of the Western Union Telegraph Company, at Bedford, Ind.:

"I should be glad to see in one of your articles in TELEGRAPH AGE, in the near future, your formulas for determining the number of gravity cells necessary to operate duplex and quadruplex circuits. I thank you for your valuable book of 'Pocket Edition of Diagrams,' etc., and for the instructive articles now appearing."

The subject of this question is referred to at length in Chapter XXXII in the "Pocket Edition of Diagrams and Complete Information for Telegraph Engineers and Students." We may say, however, that each quadruplex apparatus contains about 1,200 ohms; two sets on each circuit would, of course, mean 2,400 ohms. Long circuits of, say, 400 miles of copper wire, 6 ohms per mile, would add 2,400 ohms more, or a total of 4,800 ohms. The current for the long end must be at least .050. From this $.050C \times 4800R = 240E$ or 240 volts.

As we must allow for wet weather and sometimes for a wire of higher resistance when the regular one is patched, it is customary to use about 320 volts on 400 and 500 miles of wires, two hundred and forty volts on two to three hundred mile circuits, and shorter circuits in proportion. Duplexes should have 25 or 30 milliamperes.

As the few hundred ohms internal resistance of gravity quadruplex battery is so small compared to the total resistance of the circuit the $\frac{E}{R} = C$ formula is all that is required.

Recent Telegraph Patent

A patent, No. 723,253, for a telegraph key, has been awarded to W. E. Duncan, Macon, Ga.

The Railroad.

Mr. J. C. Bennett, who for the past sixteen years has been chief clerk to Superintendent of Telegraph O. C. Greene of the Northern Pacific Railway Company, St. Paul, Minn., resigned March 31, to become the Northwestern representative of the National Surety Company of New York. Mr. Bennett is succeeded by Mr. Oliver Whaley, manager of the Helena, Mont., relay office, who in turn is succeeded by J. A. Jackson, manager of the Fargo, N. D., office. On the eve of Mr. Bennett's departure he was presented by his fellow employees in the telegraph department with a beautiful and appropriate framed resolution, bearing the signature of a dozen of his general office associates, together with a valuable gift in the form of a substantial addition to his library.

The Cable.

The cable steamers Anglia and Colonia sailed from London April 8, with the remaining sections of the Commercial Pacific cable from San Francisco to Manila. It is expected that the cable from Honolulu to Manila by way of Midway

(Brook) Island and the Island of Guam, will be completed by July 4.

Mr. Charles Cuttriss, of New York, chief electrician of the Commercial Cable Company, started for the Philippine Islands on April 4, where he will remain until the Pacific cable is completed to that point. Mr. Cuttriss will be absent several months.

It appears that the new British Pacific cable has thus far not been a paying investment, for according to the estimates made by the cable board, there will be a loss on the working of the cable of \$460,000 for the year ending March 31, 1904. This will throw a responsibility of \$153,500 on to New South Wales, Victoria and Queensland. The contributors to the Pacific cable and their proportions are: Great Britain, 5-18ths; Canadian 5-18ths; New Zealand 2-18ths; Victoria 2-18ths; New South Wales 2-18ths; Queensland 2-18ths.

Personal Mention.

Mr. T. A. Edison has returned to his home in Orange, N. J., from his plantation in Florida, where he always spends a part of the Winter.

Mr. W. D. Sargent, vice-president and general manager of the New York and New Jersey Telephone Company, has returned to his home in Brooklyn, from his wedding trip in the South.

The act of the General Assembly of the Commonwealth of Pennsylvania to recognize the services of William Bender Wilson, of Philadelphia, as telegraph operator and scout during the Civil War by giving him a commission as Colonel of Volunteers and a gold medal of honor, became a law on March 29, last.

President Roosevelt in his absence from Washington on his western trip is at all hours of the day and night in close touch by telegraph with the White House. Two operators, Mr. P. W. Williams, of the Western Union Telegraph Company, Detroit, Mich., and Mr. J. P. Gooch, of the Postal Telegraph-Cable Company, Washington, D. C., accompany the presidential party.

Melville E. Stone, general manager of The Associated Press, gave a dinner at the Lotus Club, New York, on April 2, in honor of Baron Speck von Sternburg, the German Minister. Among the guests present were: Col. Robert C. Clowry, president of the Western Union Telegraph Company; George G. Ward, vice-president and general manager of the Commercial Cable Company, and Charles H. Boynton, superintendent of the eastern division of The Associated Press, New York.

Western Union officials are on a general tour of inspection of the system in Texas, which has covered a period of several weeks. The party is made up of Theodore P. Cook, of Chicago, general superintendent; G. J. Frankel, superintendent, St. Louis; D. R. Davies, superintendent of construc-

tion, Chicago; George Gudgeon, general foreman, St. Louis; M. T. Cook, secretary to Superintendent Cook, and C. H. Gaunt, superintendent of telegraph of the Atchison, Topeka and Santa Fe Railroad, Topeka, Kan., and others.

General Mention.

Mr. O. T. Anderson, a well known Chicago operator, is an applicant for a patent for a resonator, which he claims to be superior to anything of the kind now on the market.

Mr. Sam. R. Parke, of Creston, Iowa., a former well-known telegrapher, now the representative of a Chicago concern, was married on March 24 to Miss Goldie R. Williams of Farmer City, Ill.

Mr. H. H. Demarest, manager of the Western Union Telegraph Company, St. Joseph, Mo., says: "TELEGRAPH AGE is an invaluable assistant to any progressive manager or operator, and I should be lost without it."

"Enclosed find check for renewal. I want to compliment you on your paper, which I enjoy very much, and I wish you all the success possible." Extract from a letter received from Dr. L. M. Rheem, Minneapolis, Minn.

Mr. Sidney J. Thibodeaux, telegraph operator of the East Louisiana Railroad Company, at Florenville, La., writes: "Jones' Pocket Diagrams is what every telegraph operator and lineman needs and should have; moreover it is of a size so convenient to carry in the pocket."

"Herewith check for another year's subscription. I am glad to see the good work you are doing and you have my best wishes for continued prosperity," is the strain in which S. A. Duncan, assistant superintendent of the Postal Telegraph-Cable Company, Atlanta, Ga., writes.

Messrs. John J. Mangin, Richard Battin, Lawrence T. Hynes, John J. Lonergan, Maurice J. Coughlin and Patrick H. Devery, telegraphers at police headquarters, New York, have had their rank as sergeants, which was disputed, re-established by a recent decision of the Supreme Court.

Mr. H. B. Cerveny, manager of the Postal Telegraph-Cable Company, Beaumont, Tex., in renewing his subscription for another year writes: "Enclosed find check for the amount; have been a subscriber for more than a decade and would feel lost without the 'Age' as a 'comforter' in the business."

Mr. W. T. Gentry, an old-time telegrapher, once the manager of the Western Union Telegraph Company at Atlanta, Ga., has been elected to the dual office of vice-president and general manager of the Southern Bell Telephone and Telegraph Company, at Atlanta, Ga., a well merited promotion.

In renewing his subscription for another year, Mr. Adam Bosch, superintendent of fire alarm telegraphs, Newark, N. J., remarks: "I have come to value your publication very highly. The

articles are bright and instructive, and the letters from your agents keep me in touch with old friends. This latter feature alone I consider more than an equivalent for the small expenditure for subscription."

Resignations and Appointments.

Mr. L. R. Thompson has been appointed manager of the Postal Telegraph-Cable Company at Newburg, N. Y.

Mr. R. G. Callum, assistant superintendent of the American District Telegraph Company, Washington, D. C., has resigned.

Mr. R. W. Robinson has been appointed manager of the newly opened Postal Telegraph-Cable Company's office at Spartanburg, S. C.

Mr. Clyde Whelpley has been appointed manager of the Postal Telegraph-Cable Company at Ashtabula, O., vice E. E. Cassie, resigned.

Miss May Thompson has been appointed manager of the Western Union Telegraph Company at Stamford, Conn., vice C. W. Waterbury, resigned.

Mr. V. A. Doty has been appointed manager of the Western Union Telegraph Company at Montpelier, Vermont, vice Dwight E. Mason, resigned, going to that point from Bellows Falls, Vt.

Mr. Charles R. Hamilton, formerly with the Western Union Telegraph Company, has been appointed manager of the newly opened office of the Postal Telegraph-Cable Company at Huntington, W. Va.

Mr. A. P. Stowell of St. Paul, Minn., was recently appointed manager of the Western Union Telegraph Company at Huron, S. D., vice Wm. C. Jones, transferred to the office of I. McMichael, superintendent at Minneapolis, Minn.

Obituary.

W. S. Madden, a Pittsburg, Pa., operator, died recently in Cleveland, Ohio.

Harold S. Blair, an operator, died at Kansas City, Mo., March 29, aged twenty-seven years.

Fred S. Smith, aged sixty-eight years, the city treasurer of Cairo, Ill., a former manager of the Western Union Telegraph Company at that place, died on April 6 of telegraphers' paralysis.

Recent New York Visitor.

Mr. W. E. Peirce, of the Western Union Telegraph Company, Pittsburg, Pa.

The testimony of progressive operators is that TELEGRAPH AGE is so thoroughly comprehensive in character as to make it absolutely indispensable to those who would keep informed. Its technical articles are of high practical value. Write for a free sample copy.

Wireless Telegraphy.

It is stated from Berlin by special cable dispatch that the Allgemeine Electricitats-Gesellschaft has received orders for twenty-five sets of Arco-Slaby wireless telegraph apparatus from the United States Navy Department. Another cable dispatch states that the German military authorities have successfully experimented with wireless telegraphy along the line of the military railroad between Berlin and Zossen, eighteen miles, for several weeks past, and continuous communication has been maintained between moving trains and the signal stations.

The Northern of France Railway Company, it is stated, has decided to install wireless telegraphy on its Dover-Calais cross-channel steamships. A station will be erected at Calais harbor. Some time ago an effort was made to introduce wireless telegraphy on all the packets running between Dover and Calais, but the obstructions of the English postal authorities prevented a receiving station being erected on their side of the Channel. Even now the French mail packets, like the Belgian boats, will be unable to communicate with Dover, however necessary a message may be, as in the case of a break-down similar to that which befell the Pas de Calais not long ago.

In London, on March 31, at the annual meeting of the Marconi Company, Mr. Marconi said he attributed the criticism of his system chiefly to the "cable companies and the sections of the English technical press controlled by the cable companies." He announced that Lord Kelvin, Lord Rayleigh and Prof. J. A. Fleming, professor of engineering, University College, London, were soon going to Poldhu, Cornwall, at his invitation to examine thoroughly his transatlantic wireless system of telegraphy. An extension of the plant, he added, was necessary before the company entered into commercial business of large scope. The capital of the company was then increased from \$1,000,000 to \$1,500,000.

The London Times on Monday, March 30, published two messages of over one hundred words from its New York correspondent, giving items of American news sent from America by the Marconi wireless system. In an editorial article the Times says these messages mark the establishment for the first time of the regular commercial transmission of news by the Marconi Company. The paper announces that the day-by-day transmission of news between the new and old worlds by the Marconi system has been undertaken for the Times upon a contract basis. It says this marks an epoch in the development of telegraphy. It is added that messages can be sent between England and America by the new system at a rate not much in excess of that for messages between England and France by the old system.

An innovation in the way of newspaper publishing has been started by the Los Angeles Times of Los Angeles, Cal. A new paper called

the Wireless, and issued under the auspices of the Times, is published at Avalon, Catalina Island, 25 miles out in the Pacific Ocean. The interesting feature about this paper is the fact that it is the first regular daily newspaper in the world depending entirely on space telegraphy for its general news service. Each morning, it is said, the epitome of the news will be telegraphed from the Times office to the Wireless by the Pacific Wireless Telegraph Company, which has been doing a commercial business with the Island for a number of weeks. The first issue of the Wireless, published March 25th, was but a small, four-page sheet, but the demand for the paper is said to have been so great that it will be enlarged at once. Heretofore the news of the world has not reached the Island until the arrival of mail by steamer at one o'clock daily. The heavy storm in progress at the time the first news items were sent did not interfere with the prompt delivery of the messages, it is asserted.

With regard to the handling of Marconi messages by the British Postal Telegraph system, the London Daily News says: "The government consents to the two systems being linked, but it does not consent to messages being exchanged. So far as immediate advantage is concerned, therefore, neither the Marconi Company nor the public has cause for exuberant rejoicings. True, the concession involves one immediate boon, which, though of modest dimensions, is not to be disregarded. It will be possible for the public to visit the London office of the Marconi Company, and there hand in messages intended for ships at sea or for Canada. For, as the reader will scarcely need to be told, the decision of the Post Office not to consent at present to intercommunication between the system of visible wires and the system of invisible waves reposes on a purely negative basis. No prohibition will be necessary. Nay, there will be nothing to prevent the public sending to Poldhu from any part of the country messages intended for Hertzian transmission from Cornwall. All that will happen is that the clerk in the telegraph office will decline to accept payment for wireless transatlantic transmission."

THE DE FOREST WIRELESS SYSTEM.

The De Forest Wireless Telegraph Company of Canada has been incorporated in Toronto and two stations at Toronto and Hamilton, 40 miles apart over the lake, have been opened and are now in commercial operation. A public demonstration accompanied the opening of communication at which there were present city officials, professors of the Toronto University, officials of the Canadian Pacific, Grand Trunk, Canadian Pacific Telegraph, Great Northern Telegraph Company, and others. It is reported that several prominent men of the Canadian General Electric Company are financially interested in the enterprise, and that the Canadian Company proposes to establish communication on the Pacific Coast from Vancouver north, ultimately reaching Dawson, and is

endeavoring to secure governmental subsidy for this work. Stations are also to be opened by the Canadian Company this spring on Lake Huron. It is stated that signals have been received at Toronto from the Glace Bay station.

The De Forest Company announces that it has purchased land on the lake at Buffalo, Cleveland and Grosse Isle, Detroit, and that stations are now under way at these three cities, that at Buffalo to be completed first. All three of these stations are to be of 10-h p and will comprise two masts at each station, each of 200 feet in height, placed 100 feet apart. Between the tops of these masts a horizontal wire supports 20 vertical wires which converge into the station house placed midway between the two masts. The plans of the company are to carry on private "leased wire" service between these three cities, and it is stated that arrangements have already been completed with newspapers in Cleveland and Detroit for transmitting their local news at night between these cities.

It is also announced that a contract for equipping the boats of the Cleveland and Buffalo line, has been obtained. The Detroit and Buffalo line boats will make use of the service upon the completion of the Detroit station and it is hoped to have wireless apparatus on a large number of lake carriers before the close of this season, and to get the above three stations into operation early in May, after which other small stations will be erected at Port Huron, Sault Ste. Marie, Mackinac, Marquette and Duluth. It is stated that a site for the Chicago station has been obtained near Evanston, and there a tower of 200 feet in height will be erected, to be followed next year by two others of similar height, the three to comprise a very powerful station for operating with St. Louis during the World's Fair. The Chicago station will completely cover Lake Michigan, Milwaukee and St. Joe being also in the circuit. At White Fish Bay and Grand Island, Lake Superior, are harbors of refuge into which vessels are frequently driven by storm, and where they lie sometimes for several days without means of communicating with their owners. It is under consideration to connect these two points with the "Soo" and Marquette respectively by wireless during the summer.

A demonstration plant has been installed at Armour's stock yards and another station upon the roof of the Home Insurance Building, La Salle Street, Chicago, where are Armour's general offices. The officials of Armour & Co. are reported to be much interested in a proposition to connect their offices at Chicago and Omaha, and from Omaha to Kansas City, as with wireless telegraphy they will be enabled to save several thousand dollars per year which is now paid for leased wires to the Western Union Telegraph Company. It is expected that the Northwestern Commercial Company of Seattle, Wash., will establish communication by this system with its stations in Eastern Siberia.

A Handy Combination of Telegraph Instruments.

Mr. James Wilson Leech, manager of the Western Union Telegraph Company of Staunton, Va., has invented a handy combination of telegraph instruments. Crowded telegraph offices have, according to the inventor, long wanted some combination that would economize space; and this invention makes the entire apparatus occupy a space on the desk of only six by eight inches. It can be moved about in any position desired, and when not in use can be taken from the desk and placed in a cabinet or drawer until needed.

The combination consists of a base for the resonator post and the telegraph key. On the post is a relay and over this is the resonator. On the table is a small double jack box into which the main line and local wires are run to the two spring-jacks. A flexible cord with two spring-jack plugs on one end is run from the jack box to the base of the resonator. The wires are then carried up through the metal post to the relay and sounder, the sounder circuit passing through two brass pieces which support the resonator above the relay box. The only wire visible is the cord from the jack box to the base.

The telegraph key used is also an invention of Mr. Leech's, there being an ingeniously contrived circuit closer which will hold the circuit unbroken in case the circuit closer should in any manner be accidentally knocked open. This is the reverse of the circuit closer now in use.

Directory of Annual Meetings.

Association of Railway Telegraph Superintendents will meet on May 13, 14 and 15, at New Orleans, La.

Commercial Cable Company meets the first Monday in March, at New York.

Gold and Stock Life Insurance Association meets the third Monday in January at New York.

Great Northwestern Telegraph Company meets the fourth Thursday in September at Toronto, Ont.

International Association of Municipal Electricians meets at Atlantic City, N. J.; time not yet selected.

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

Old Time Telegraphers and Historical Association meets at Milwaukee, Wis.; time not yet agreed upon.

Postal Telegraph-Cable Company meets the fourth Tuesday in February at New York.

Telegraphers' Mutual Benefit Association meets the third Wednesday in November at New York.

Train Despatchers' Association meets June 16, 17, 18, at Nashville, Tenn.

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

Telegraphic Bookkeeping.

SIXTH ARTICLE.

BY W. H. DOHERTY.

In all independent offices, that is, where an office is not managed by a railroad agent, it will be found that three books, namely, a day book, a cash book and a ledger, are necessary to carry on the work of the office in a satisfactory manner. A modified style of bookkeeping may be observed in the very small independent offices, where but little cash is handled, and for this class of offices the books mentioned in article five, appearing April 1, will suffice; that is, a day and cash book combined and a ledger. Where a fair amount of cash is handled the day book should be used and for no other purpose than to secure a daily balance on the cash. If a manager will balance his cash once a day he need have little fear of being astray on his accounts when the auditor comes around. Starting with a certain amount of cash in the morning, and a clear page in the day book, the first debit will be cash on hand (\$—); then follow itemizing each cash transaction of the day, whether a debit or credit. Care should be taken to make entries as the transactions occur, for one is liable to forget it if dependence be placed on the memory to make the entry later. All cash received is debit; all cash paid out is credit. There are many little items both debit and credit that are put in the day book, that will be found of much benefit to the manager from four to six months later when accounts are being squared with the auditor's office. The practice many managers or cashiers have of putting money up in little packages, marking it, and holding until wanted, is a poor one. The money should be placed with the general funds of the office, make the entry on the day book, and in case a shortage comes up, no matter what particular item it may be, if the day book does not show the record it is plain that the money never has been received. If on the other hand, it does appear, the manager is satisfied, and can settle it, without making a fuss over it. The best way, of course, is to make a remittance at the time any shortage is discovered, providing the collection can be made, but there are times when little amounts of cash are carried until called for by the auditor's office.

A certain time each day should be taken by the manager to balance his cash. (My preference was in the morning before the opening of business.) The cash on hand should be counted and each denomination entered separately on the slip of paper used. The total amount of "cash on hand" is then entered in the day book as the last entry on the credit side; then, by footing up both sides, it will be found that one will agree with the other, if accurately entered during the day. Always preserve the slips used in itemizing the "cash on hand," as they will be found useful sometimes in looking up an error or in tracing back for certain amounts of cash, etc.

Underground Telegraph Cables in England.

Extensions have recently been planned or made for the underground telegraph service from London northward, the first section of the system, to Birmingham, having proved very useful in the last two years. The extraordinary manner in which the British aerial circuits get out of order or become useless can only be realized by those who have to study the subject, says the *Electrical World and Engineer*, and the underground wires have become absolutely necessary. The next stage to be completed is to Warrington, the ultimate idea being to extend the cable as far as Glasgow. The line of route to be taken from Birmingham is through Walsall, Bloxwich, Bridgetown, Cannock, Stafford, Eccleshall, Woore and Nantwich to Warrington. Roughly speaking, this is about 80 miles, and when this section is completed the total length of cable will then be 200 miles or so. The London and Birmingham cable carries 76 wires, but the Warrington extension will comprise 60 wires only.

The preliminary work of constructing the line of pipes between Birmingham and Warrington for the reception of the cable itself has already been completed, and as a temporary safeguard against the disintegrating effects of the Winter storms a temporary cable of seven wires has been drawn in. The wisdom of this precautionary measure was amply demonstrated recently, for had not these wires been available on the day immediately following the gale which swept across the country with such destructive force, the telegraphic interruptions with Northern towns would have been much more serious than they were. The permanent cable of sixty wires is now in course of preparation, and during April a start will be made to place it in position inside the three-inch iron pipes. Great care has to be exercised in the making and completing of the cable. Like the one in use between Birmingham and London, it is a paper covered cable. Only the most skilful and trustworthy workmen are employed and some idea of the magnitude of the job may be gathered from the fact that in connection with the Birmingham and London cable there are no fewer than 2,000 "wiped joints." Though sixty is mentioned as the probable number of wires which the cable will comprise, the number has not yet been definitely decided upon. Testing stations will be provided at Walsall, Stafford, Woore and Nantwich. The laying of the cable will, it is expected, take close upon twelve months; and by this time next year it is anticipated that the whole affair will be in working order.

No telegrapher, no matter what his position may be, who values his place and aspires for promotion based on all-around practical knowledge, can afford to be without "Pocket Edition of Diagrams and Complete Information for Telegraph Engineers and Students." See advertisement.

The English Post Office Telegraph System.

The annual return showing the gross amount received and expended on account of the British postal telegraph service during the year ended March 31, 1902, has just been issued. From this it is seen that the balance of expenditure over receipts is \$3,259,000, while the total deficiency of telegraph revenue, during the period in question, to meet expenditure and the interest of telegraph stock created, amounts to \$4,753,700. The items of revenue include \$20,167,610 for telegrams, private wire rentals, etc., \$2,692,500 paid to cable companies, and \$397,245, the estimated value of telegraph services rendered to the other public departments without remuneration. Mr. Henniker Heaton in the House of Commons asked permission to name a committee of business men to inquire into the cause of this heavy loss on the telegraph service of that country. The Postmaster-General, it appears, objected to this course and stated that as the reasons for the deficit were well known no useful purpose would be served by the appointment of such a committee. It was intimated, in fact, that the English people, speaking through its members in the House, had declared a preference for greater postal facilities, rather than that service should be hampered by the necessity of producing a revenue return, hence the loss. A very specious plea, but a case of fooling the English public all the time.

The average Englishman fancies that his is the best and cheapest telegraph service on earth. It is a good service, per se, but it is run almost wholly in behalf of the business interests of the country, just as it is in almost every other land. The people at large are paying for what the business man alone practically derives supreme advantage. In England the users of the telegraph have for the sake of economy a telegraph code address in which there are some 200,000 registrations. This number practically represents the entire business community of Great Britain, which almost alone use the telegraph. The vast remaining number of people imagine that somehow they too, even if it be not clearly perceived, are receiving some benefit for the increased burden of taxation imposed to support the telegraph as administered by the Government.

One of the greatest boons, we are told, which the Englishman enjoys is the twelve cent universal rate. That sum covers a telegram of but ten words including the address and signature. Yet those who do not or who cannot afford to pay five dollars a year for a telegraph code address are able but seldom, if ever, to condense their messages into less than twenty words. This is about the average length of telegrams sent by those outside of the business world, and the cost thereof is twenty cents. Yet, curiously enough, the fact remains that all Englishmen as a rule are proud of their nominally low telegraph rate.

In the United States there are certain people who are continually advocating Government con-

trol of the telegraph because Uncle Sam, it is said, has successfully managed the Post Office. It may very properly be questioned whether the Post Office has been managed as successfully by the Government as some would like us to believe. It can be said with certainty that the department is very unsatisfactory to business people. It will be conceded that the farmers and others who are not in the habit of utilizing the mails to transmit valuable communications, are fairly well served, but the experience of the average business man, is far different. His list of lost valuable letters is a long one, and he has long since concluded that if the Post Office were in the hands of a private corporation, a better and cheaper postal service would result.

Private delivery corporations and express companies even now carry much of our mail and packages for the reason that the private concerns do their work more efficiently, more cheaply and more promptly. The politicians in the United States may fool the people some day and persuade them to assume the burden of the telegraph, but it would assuredly be to the detriment of the service.

"It does not take much to fool all the people some of the time and some of the people all of the time, but you cannot fool all of the people all of the time." These words, which were uttered by the lamented Lincoln are as true today as they were forty years ago. In support of his bill to regulate the trusts, United States Senator Hoar of Massachusetts, in an able speech in the National Capitol a short time ago takes strong ground in opposition to the government ownership of public utilities. What he had to say applies equally as well to the telegraph as to the public ownership of coal mines or of railroads.

One on the Telegraph Company.

A Genoa, Italy, paper tells this story at America's expense:

When the Duke of Veragua, the descendant of Christopher Columbus, visited Chicago, he enquired at a telegraph office the charge for a telegram of ten words to the City of Columbus. "Twenty-five cents," answered the official, "not including the signature, which is wired free."

Whereupon the Duke wired: "Mayor Columbus—Shall visit your city next Monday or Tuesday."

And he signed it: "Cristobal Colon de Toledo y Larreategui de la Cerda Ramirez de Baquedano y Gante Almirante y Aledantado Mayor de las Judias, Marques de Jamaica, Duque de Veragua y de la Vega, Grande de Espana, Senator del Reino, Caballero de la insigne orden del Toison 'Oro Gran Cruz de la Conception de Vilaviciosa, Gentil Hombre de Camara del Rey de Espana."

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NEW YORK, April 16, 1903.

The amount of information contained in each issue of TELEGRAPH AGE of the utmost practical value to the progressive operator who is ambitious to succeed, to acquire a more thorough knowledge of his profession, and not only to better qualify himself for the position he now occupies, and consequently for advancement, should, prompt many to send in their subscriptions to this journal without delay. The first article in each issue, contributed by Willis H. Jones, under the standing heading of "Some Points on Electricity," contains more positive instruction concerning the telegraph, than can be found anywhere else, and worth more to the operator than many times the cost of the paper itself. Subscriptions should be sent direct to this office, or to any of our agents who may be found with both the Western Union and Postal companies in nearly every large centre in the United States.

We are prepared to furnish a limited number of bound volumes of TELEGRAPH AGE, which embraces 536 reading pages, besides the index, for the year 1902, at the uniform rate of \$3 a volume. The binding is substantial and the lettering is done in gilt. The volume furnishes a complete record for the year named of the telegraph, the cable, wireless telegraphy and other allied interests, the whole constituting an interesting work of reference of the highest worth to all telegraphers, libraries, etc., to which the carefully prepared cross-index lends additional value. Single copies of the index for volume XIX, covering the year 1902, may be had at ten cents apiece. Our friends who require copies of the bound volume, or of the index alone, should send in their orders promptly so that they may be filled while the supply lasts.

The Magnetic Club Dinner.

It is desired by the secretary of the Magnetic Club, R. J. Murphy, 195 Broadway, that he be immediately notified by members of their intention to attend the dinner at the Hotel Vendome, Broadway and Forty-first street, New York, on Saturday evening, the 18th inst., so that space at the dinner table may be arranged and reserved for them. Acceptances for the dinner have been received from Colonel Robert C. Clowry, Justice Julius M. Mayer, Frank Munsey and H. D. Estabrook, who will be guests of the club. Several other prominent gentlemen have also signified their purpose to be present and a most interesting occasion is already assured.

John C. Barclay.

An object lesson of unusual significance, affording an apt illustration of the thought TELEGRAPH AGE has sought to convey in many of its editorials of late in which men in the telegraph service have been urged to greater diligence and ambition in their profession, is shown in the career of John C. Barclay. Starting in life in the humble capacity of a messenger boy, this man has steadily risen, step by step, through the various grades in the service until now, at just forty-seven years of age, he stands next to the president in the general management of the great corporation of the Western Union Telegraph Company. Col. Clowry himself also began life as a messenger, and most men who have achieved success and gained high positions in both the Western Union and the Postal Telegraph-Cable Companies, have commenced at the lowest round of the ladder. These places of trust and responsibility are not obtained by favoritism, as it is sometimes weakly remarked, but are reached because men by force of character, by honesty of purpose, by patient and careful study become thoroughly familiar with and make themselves masters of the business in which they are engaged, and thus emerge from obscurity and rise to the top. It is the indomitable courage born of energy and persistent endeavor that kindles, renews and keeps alive the flame of ambition. It is a worthy desire to succeed in life, to gain recognition and to be vested with power. But hard work, not alone of the hands but of the head, and stimulating thought and research should be the motor generator in the lives of men.

Mr. Barclay has come into his high estate because he has earned the right to be there. He has qualified himself by acquiring broad and practical knowledge of the electric telegraph to be thus able to act as the first executive officer of his chief.

He could not anticipate what the future had in store for him when as a small lad in a Pennsylvania village he, like many another boy before and since, with his mother's tearful God-speed strong in his memory, started out to face and do battle in the hard struggle of life, but he had

pluck and determination, and when as early as thirteen years of age he became a telegraph operator, he made a good one. Thoroughness has been characteristic of the boy and of the man, and in every succeeding place filled by him in his upward climb, he became the master of the situation, never being mastered by it. While modern requirements, more exacting and complex as time passes, demand a broader, better trained and technical knowledge in the individual than formerly, it should not be forgotten that the widening scope in the field of telegraphy offers better opportunities for capable men than ever before in its history.

Telegraph Libraries.

EDITOR TELEGRAPH AGE:

The considerate editorial in your issue of March 16 was a pleasure to the members of the Cleveland Postal Library, and in view of the good resulting from our recently established reading room, we wish to recommend the general plan to all large offices.

Factory owners and others throughout the country, especially in Cleveland, entertain very different ideas from those held a few years ago as to the desirability of affording their employes conveniences and pleasures which shall relieve the monotony and weariness of the day's continuous work; and it was natural, perhaps, that we, here in Cleveland, should try to find some plan of relief and instruction. Our superintendent, Mr. E. W. Collins, originated the project, which has since been entirely under the care of the employes. It is by no means intended as an attempt to equal or compete with the advanced methods followed by some other institutions, but the design as followed has resulted in the awakening of a feeling of mutual interest among members and has promoted acquaintance, while before we knew each other merely as workers in the same room.

Our library room, also used for a lunch room, is plain, embellished only with a few pictures, tables and bookcases, the expense of which was covered by the membership fees of fifty cents, and monthly dues of ten cents. Its affairs are in the hands of an elected board of trustees, the president of which is our chief operator, Mr. A. A. Briggs. We have a number of magazines on the tables, and 250 of our own books on the shelves. Books of fiction and travel are most read, but next to these text books and technical works are in demand by those more studiously inclined. History comes third and many show an interest in the arts and sociology.

We appreciate the interest shown in our undertaking and the contributions that have been made in its behalf, especially by friends in other cities, and we will not be averse to adding others to our list of contributors, some of whom are W. H. Baker, E. S. Butterfield, C. P. Bruch, E. W. Collins, Col. A. B. Chandler, T. L. Cuyler, Jr., M. M. Davis,

T. E. Fleming, S. A. D. Forristall, F. W. Jones, E. B. Pillsbury, C. S. Rindfleisch, J. B. Taltavall, G. S. Thomas, G. H. Usher, A. A. Briggs and E. W. Carman.

R. S. INGLE, Librarian.

Cleveland, O., April 2.

[The library at Cleveland, instituted under the auspices of the Postal Telegraph-Cable Company, is an enterprise that is entitled to all praise, and one that is well worthy of emulation elsewhere. We are glad to learn of its flourishing condition. Library influences are always wholesome; the very atmosphere of books and the quiet of a well-ordered reading room is conducive to refinement, to studiousness and to the awakening of a higher moral sense in the individual. The establishment of libraries for telegraphers, such as those at Cleveland, Chicago and elsewhere, should, therefore, be encouraged, as we have frequently urged, and telegraph officials high in rank in every part of the country would do well to give this library question their active, sympathetic and earnest support. They can well afford to do this whether the actuating motives be philanthropic or selfish, because for obvious reasons it would be good policy.—Editor.]

The Western Union and Pennsylvania Railroad.

The Western Union Telegraph Company has entered suit in the United States Circuit Court against the Philadelphia, Baltimore and Washington and the Philadelphia and Baltimore Central Railroads, both controlled by the Pennsylvania Railroad, in which the same points are involved as in the suits against the Pennsylvania Railroad, the decision upon which is now pending in the United States Circuit Court of Appeals. The plaintiff seeks to have the railroad companies restrained from interfering with its poles and wires, and asks the court to assess the amount of rental that should be paid for the continued use of the right of way. The plaintiff contends that the contract entered into on March 1, 1863, is still in force, while, on the other hand, the railroads hold that the time limit has expired.

Simultaneous Telegraph and Telephony.

Italian newspapers of recent date announce an invention by Signor Turchi, an engineer, and Prof. Brune, by which telegraphic and telephonic messages can be transmitted simultaneously over the same line. It is further stated that Signor Galimberti, Italian Minister of Posts and Telegraphs, is about to test the invention on the Government lines, and that if its operation is satisfactory it will be adopted by the Government.

Everybody in the telegraph service is reading "Pocket Edition of Diagrams," etc. It is endorsed by experts, and no telegrapher who would gain a thorough knowledge of his business, told and illustrated in a manner clear to every reader, should fail to procure a copy. See advertisement.

J. L. Miller of the St. Joseph Western Union Office.

Mr. J. L. Miller is the new day chief operator of the Western Union Telegraph Company at St. Joseph, Mo. He is still a young man, the date of his birth, which occurred at Great Bend,



J. L. MILLER.

Chief Operator of the Western Union at St. Joseph, Mo. Kan., being February 24, 1876. He began his telegraphic career as a messenger boy in his native place, subsequently becoming an operator for the Western Union. Later, he transferred his services to the Postal Telegraph-Cable Company at Wichita, Kan., thence going to Hutchinson, Kan., in the capacity of chief operator. From this point Mr. Miller went to Topeka, Kan., there once again entering the employ of the Western Union Company. About eight months ago he went to St. Joseph as an extra operator, was soon made night chief, and on the first of March was appointed day chief operator relieving Mr. George Hale.

The Pathos of the Telegraph Poles.

"Telegraph poles," an American photograph, was awarded a gold medal at the Turin International Modern Decorative and Fine Arts exhibition.

A committee of critics who had never seen an American city and its telegraph poles awarded the gold medal.

There were other photographs of great merit in the exhibition—photographs of beautiful women and picturesque scenes—but the telegraph poles caught the eyes and the hearts of the judges.

Come to think of it, there is profound expression in the telegraph poles.

The men who awarded the prize were genuine artists.

The telegraph represents modern civilization in the highest degree. It annihilates space.

The President of the United States at Washington can order United States troops from the Presidio to check a riot or a revolution in a few minutes.

In New Orleans the quotations of stocks and bonds in New York and of wheat and corn in Chicago are known forthwith.

The singing and the thrumming of the telegraph wires mean a gigantic achievement—the North American continent can be held together as one nation.

A son can be summoned to the sick bed of his mother a thousand miles away.

A young man can send a fiery appeal to the woman he loves from the distance of hundreds of miles urging her to postpone going to the altar with another and stop a wedding.

Strange to say, in the great city the telegraph poles stand thickly in squalid streets.

Overhead—the hum of the wires telling the story of the magnificent ball at the Waldorf-Astoria in New York.

Beneath—a pallid child of poverty playing in the filthy street.

The tall masts cast sharp shadows across the wretched houses of the poor and haunts of sin.

The telegraph poles are ugly. They represent hasty construction. But they are of enormous and vital importance.

The telegraph pole is about the most un-beautiful thing possible.

Rags may be picturesque, but not the telegraph poles.

On the fine streets of the modern city they are cursed.

"Put the wires underground!" say the people.

Nothing so simultaneously expresses the grandeur, the squalor, the virtue, the vice, the beauty and the hideousness of modern progress as the telegraph pole.

Such are modern facilities that for a few dollars a noble pine may be hewn down in the distant northern forest, denuded to ghastly nakedness, and set up on a street corner in the slums, where drunken men lean against it.

The power of progress uses it to uphold wires which hold together modern society.

Across the continent, on the wires held aloft by the gaunt forest giants, may be sent a declaration of war to startle the world, or the last words of a dying child.

And the means of communication which are a crown of glory are also a destroyer of the beauty of streets and avenues.

A fat man with a gigantic gold watch chain visits a place called the lobby of the common council and the poles stay.

Some one remarks that if the best man's faults were written on his forehead, it would make him pull his hat over his eyes.

The New Home of the Eastern and Associated Submarine Telegraph Companies, London.

Electra House, the new home of the Eastern and Associated Submarine Telegraph Companies, London, England, has reached completion, and the companies forming what is known as the "Eastern" group are now, says *The Electrician*, in occupation of a magnificent building, forming nearly the entire front of Moorgate street from London Wall to West street.

Electra House is six stories in height, the first

two stories being constructed of granite and those above of Portland stone. The structure is architecturally attractive, massive and dignified in appearance, the detail and sculpture being carefully worked out. With a frontage on Moorgate street of 198 feet and a depth on West street of 78 feet, it covers an area of about 15,700 square feet. The main entrance, which is arched, and situate midway of the front of the building, is twenty-two feet wide, the apex of the arch reaching to the top of the second story. The sculptured spandrels are symbolical of the electric telegraph. A figure on the left is represented as transmitting a message to a second figure on the right, which is receiving it. The insulators and wires, decoratively treated, present a novel feature in sculpture. The building is surmounted by a dome capped with a bronze device, the summit of which reaches a height of 141 feet above the street level.

The interior of the building is conveniently arranged, handsomely finished and decorated.



ELECTRA HOUSE, LONDON, ENGLAND.

(From *The Electrician*, London).

story being constructed of granite and those above of Portland stone. The structure is architecturally attractive, massive and dignified in appearance, the detail and sculpture being carefully worked out. With a frontage on Moorgate street of 198 feet and a depth on West street of 78 feet, it covers an area of about 15,700 square feet. The main entrance, which is arched, and situate midway of the front of the building, is twenty-two feet wide, the apex of the arch reaching to the top of the second story. The sculp-

Nearly every part is used for the various offices of the Eastern and Associated Telegraph Companies, the public offices having a readily accessible location on the ground floor. An important room is that of the electrical laboratory. This is fitted up with artificial cables, and all the necessary apparatus to enable the electrical staff to investigate any new problem, and to test apparatus, with the view of improving the working of the companies' cables. The artificial cables are so constructed that they can be arranged to repre-

sent any of the different lengths and types of the cables, so that the exact conditions of the various sections can be reproduced.

A few brief historical details in relation to the establishment and housing of the submarine cable companies referred to will not be without interest. In the later sixties, the first of the companies found a home in what was considered at that time a fine range of new offices at Palmerston Buildings, with its main entrance in Bishopsgate street, London. On the growth of the companies' business, more extensive general offices were taken at 66 Old Broad street, opposite their chief London telegraphing station, and these were occupied until the immense growth of the cable business called for larger and better arranged premises being rented. These were found in the block of offices known as Winchester House, 50 Old Broad street, where all the companies have been located since 1885. Historic interest attaches, in a telegraphic sense, to No. 50 Old Broad street, for this was the original home of the first of the submarine cable companies—the Cuba Submarine Telegraph Company, which established itself at this address in January, 1870. The Cuba Company was subsequently joined at the same address by the Panama and South Pacific Telegraph Company (established January, 1870) and the West India and Panama Telegraph Company (established August, 1869). Immediately facing No. 50 at that time were, and still are, the head offices of the Telegraph Construction and Maintenance Company, which was established as far back as April, 1864, and from which may be said to have sprung many of the chief submarine cable companies of that time, for the directors of the "T. C. & M." were closely associated with these enterprises. At Winchester House sufficient office space was found to enable the companies to provide separate accommodation for the several departments of the business, which had by this time considerably increased. Very few years elapsed before business requirements necessitated still further room, and the idea of a separate home for the Associated Companies, which had been for some years under consideration, developed, and resulted in the acquisition of the site upon which Electra House has been erected.

The following companies are located in the building:

	Established.
Eastern Telegraph Company, Ltd.....	1872
Eastern and South African Telegraph Company, Ltd	1879
Eastern Extension Australasia and China Telegraph Co., Ltd.....	1873
Western Telegraph Company, Ltd.....	1873
African Direct Telegraph Company, Ltd....	1885
Black Sea Telegraph Company, Ltd.....	1873
Direct Spanish Telegraph Company, Ltd....	1872
Europe and Azores Telegraph Company, Ltd	1893
London Platino-Brazilian Telegraph' Com-	

pany, Ltd	1878
Pacific and European Telegraph Company, Ltd	1892
River Plate Telegraph Company, Ltd....	1865
West African Telegraph Company, Ltd....	1885
West Coast of America Telegraph Company, Ltd	1897
Deutsche See Telegraphen-Gesellschaft (London Agency)	1896
Globe Telegraph and Trust Company, Ltd..	1873
Submarine Cables Trust	1871

This group of companies owns in all 100,839 nautical miles of submarine cables, 5,705 miles of overhead lines, and has 227 stations established in all parts of the world excepting North America. Of these stations, 93 are in Europe, 27 in Asia, 49 in Africa, 49 in South America and 9 in Australasia and New Zealand, so that it is evident that this important enterprise is one of the greatest and most far-reaching commercial undertakings in the world.

The entire staff employed by the Associated Companies at home and abroad numbers about 3,200, and of these Electra House accommodates about 350.

International Telegraph Conference.

The probable adoption, at the coming International Telegraph Conference, which meets in London on May 26, of the cable cipher words, known as the Official Vocabulary, which has been a long time in preparation, is awakening a storm of protest in this country among those who use the cable. A compulsory adoption of such a code, thereby placing a limitation on all others, is regarded as an arbitrary and unjust measure, against which numerous petitions from American bankers, commercial and shipping firms and others will be presented at the conference itself. The New York Chamber of Commerce voiced its disapproval of the impending action at London when at its regular meeting on April 1 it adopted the following preamble and resolutions:

"Whereas, It is reported that an effort will be made at the International Telegraph Conference in London, on May 26, 1903, to put into compulsory use in cable telegraph messages the so-called 'official vocabulary' of cable code ciphers prepared under the direction of the International Telegraphic Bureau; and

"Whereas, Such official vocabulary is inadequate for commercial business, and not adapted to existing conditions; and

"Whereas, The enforced use of such official vocabulary and the exclusion of cable code systems now in use would entail serious expense, inconvenience, and labor upon commerce; therefore, be it

"Resolved, That the Chamber of Commerce of the State of New York again enter its protest against the compulsory use of an official vocabulary in cable telegraphy; and be it further

"Resolved, That the Committee on Foreign Commerce and the Revenue Laws be instructed

to enter into communication with other commercial bodies, both in this country and in other parts of the world, for the purpose of bringing every possible influence to bear to cause a reconsideration of the proposed plan for the compulsory use of the 'official vocabulary' in cable correspondence."

A lengthy circular, which gives a carefully expressed detail of the situation, is being sent to users of cable codes calling their attention to the threatened proceeding and presenting reasons why the new vocabulary should not be adopted and its use made compulsory. A paragraph of this circular is as follows:

"Commercial exchanges, chambers of commerce and mercantile houses generally protest strongly against any new or restrictive measures which jeopardize their large number of private and general cable codes compiled at untold expense. The great number of patrons of the cable companies expend enormous amounts annually in transacting business by cable and telegraph the world over, and their code mediums require a wider instead of a restricted number of ciphers. The United States Government has no official representative in the Berne convention, hence the great importance of a united movement by the financial and commercial people of America."

A reference to the coming International Telegraph Conference in London, on May 26, at this time will not be without interest. It will be the holding of a postponed meeting originally announced to meet in London two years ago, and first deferred on account of the death of Queen Victoria. As TELEGRAPH AGE has already stated in a previous issue, the Conference is made up of delegates representing all the countries of the world which control and operate their own telegraphs.

These conferences have previously been held in turn in the principal European capitals, as follows: Paris, 1865; Vienna, 1868; Rome, 1871-72 (at which the cable companies were first represented); St. Petersburg, 1875; London, 1879; Berlin, 1885; Paris, 1890; Budapest, 1896. The delegates include representatives of nearly all the government administrations in the world which work telegraph lines, as well as of all the companies working cables and land lines. The latter are allowed to speak, but not to vote.

The object of the Conference is to promulgate from time to time service regulations for the efficient working of international telegraphy, the adjustment of accounts, tariffs, etc. The director-general of telegraphs of the country in which the Conference is held presides over its deliberations, and matters of detail, together with the framing of the rules, are delegated to two commissions, one dealing with all tariff matters and the other with the rules for working. All the decisions of the commissioners are, however, subject to confirmation by the full Conference.

The International Telegraph Conference now embraces almost all of the countries of the world,

the only exceptions being China, the United States and Canada. It was understood that China had agreed to join the London Conference. In the United States and Canada the telegraph companies are private corporations, and are, therefore, not eligible to membership. They can, however, take part in the discussion, but they have no voting power.

The settlement of all questions, whether of regulations or of tariffs, so far as the latter are dealt with by the Conference, rests with the government delegates; and the companies may find their interests seriously affected by decisions in which they have no part. The Conference, as a whole, is usually very considerate to the companies, but if their legitimate interests are attacked the duty of defending them devolves very largely on the representatives of the country (if represented) to which they belong.

The most important work before the Conference at Budapest, that interests the public was the consideration of what is known as the Official Vocabulary for code telegrams. This is a compilation of some twelve hundred thousand words, for use by the patrons of the cable. This vocabulary was decided upon at the Paris Conference, since which time experts have been at work at the International Telegraphic Bureau's general offices located at Berne, Switzerland, arranging words suitable for cabling purposes. The use by the public of this vocabulary was made compulsory at the Paris Conference, to go into effect on January 1, 1898. At the Budapest Conference, however, it was clearly shown that the vocabulary finished up to that period contained only 260,000 words, a number wholly inadequate for the transactions of the world's commerce. The postponement of the above date was, therefore, agreed upon in order that the number of words might be increased, with the result that the Official Vocabulary, now finished, contains, as above stated, the vast aggregate of nearly a million and a quarter of words.

The London Conference will no doubt set a date when this finished vocabulary will finally be approved on all international lines, when, of course, it will then become binding to all concerned.

Important Legal Decision.

In a decision rendered on March 31 by the Appellate Court of the State of Indiana, the Postal Telegraph-Cable Company wins an important right of way case against a railway company, gaining a right to set its poles along the line of the Chicago, Indianapolis and Louisville Railroad, the court holding that a telegraph company has a right to condemn for use property already appropriated for a right of way in cases where the two uses are not inconsistent.

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

The Associated Press.

At a meeting of the Commercial Club of Kansas City, Mo., on March 24, Mr. Edgar T. Cutter, a telegrapher and the local agent of The Associated Press, delivered an address on the practical workings of that great news-gathering organization. While every newspaper reader knows of the existence of The Associated Press, and is familiar to a certain extent with its functions, yet it is quite probable that not all, even of our telegraph friends, fully understand the system by which the "A. P." as it is termed for brevity's sake, collects the news of the world and distributes it among the papers of the world. In his interesting address Mr. Cutter said in part:

"A history of The Associated Press is in a way a history of the growth of the American newspaper of the past half century. This association had its origin in the necessity of the newspaper and its remarkable growth to the position it now holds, that of the greatest news-gathering association ever known, is but a natural result of the expansion of the great dailies of today.

"The first news-gathering association in the United States was formed in the '40s by two or three New York city newspapers, which originally collected their news from Washington by carrier and post boy and their foreign news from incoming steamers. When the telegraph had become firmly established, similar associations were organized in different parts of the Eastern and Central States. They exchanged news with each other and finally, in 1882, merged into one organization, which immediately assumed National proportions.

"The original and proper purpose of The Associated Press was the control and administration of the news-gathering and distributing business of the country by the newspapers themselves, and this principle has always been strictly adhered to. While it is in form a corporation, organized under the laws of New York, this association is essentially a co-operative society, based upon an agreement between its members to collect and furnish news to each other. It is not engaged in news-gathering as a commercial enterprise, and it carries on its business without any effort at profit-making. It includes among its members all the established telegraph news-dealers of the country with few exceptions and its annual revenues derived from these sources exceed two millions of dollars.

"The only formidable rival association was The United Press, a money-making concern that failed in 1897, with large liabilities and no assets. Its death marked a most important epoch in newspaper history, for it established firmly the principle of co-operation for which The Associated Press stands.

"The Associated Press has about 700 members, constituting the important dailies of the country, and there are about 2,500 smaller daily and weekly papers, which are served through minor agencies. The great majority of these papers

are in the United States, but there are about sixty in Canada, and some in Mexico, Cuba, Porto Rico and Hawaii.

"Other news-gathering associations now in the field include The Publisher's Press and The Scripps-McRae Press associations, which work together, the former operating principally in the East, the latter in the West, and both in a way taking the place of The United Press.

"For administrative purposes, The Associated Press organization consists of general manager, with headquarters at New York city; an assistant general manager, with an office at Chicago, a superintendent of leased lines, and four division superintendents. There are also a president, two vice-presidents, and a set of directors, besides advisory boards in each of the four divisions, all made up of the leading editors of the country. In addition, agencies with forces of from five to fifteen men each, are maintained at twenty of the principal cities. In all there are about 700 salaried employes, while an equal number of men, who write on space, are scattered over the country in the smaller cities and towns.

"In collecting news, every available source is made use of. In all cities the individual newspapers furnish not only the local news gathered by its reporters, but a great amount of its private telegraph news, which most newspapers bring in as 'special' from their own correspondents, which is sent by wire to the nearest agency for final distribution. In the larger cities, such as New York, Philadelphia, Boston and Chicago, much other news is received from city press associations, which confine their operations to the city in which they are located.

"In New York city special men are assigned to the various exchanges in Wall Street, and to report steamship arrivals and departures, and so on, while at Washington writers are stationed in the separate Houses of Congress and in the different Departments. Upon big occasions, such as National Conventions, in times of war, or other unusual periods, special correspondents are sent out.

"The Associated Press covers Canada through an exchange arrangement with the Canadian Pacific Railway, by which that company gathers all the news along its line, the exchange being made at four points on the border, at Bangor, Buffalo, Detroit and Seattle. Alaska and the islands of the North and South Pacific are covered by mail to San Francisco and Seattle, while news of the Hawaiian islands is sent by cable from Honolulu to San Francisco.

"For the purpose of gathering other foreign news, offices are maintained at London, Berlin, Paris and St. Petersburg, and The Associated Press has correspondents in ninety other principal cities, covering every country on the globe. It also has contract relations with the different news agencies all over the world—with Reuter and Havas, which covers Great Britain and her Colonies, France, Belgium, Switzerland, Portugal and some parts of South America; with the Wolf

agency, which covers Germany, Austria and Hungary; with the Stefanie agency, which covers Italy; with the Nordisches Telegram Bureau, which covers Russia; with the Norsky Telegram Bureau, which covers Norway; with the Svenska Telegram Bureau, which covers Sweden and with the Agence De Constantinople, which covers Turkey.

"The great volume of foreign news is cabled from London to New York. On the other hand, the Reuter agency has its representative in the New York office of The Associated Press, selecting and sending to London whatever may be of interest to Europe, and by this means there is a perfect system of exchange all over the world.

"The great bulk of news originates in the East, and New York and Washington naturally are the most important points in the service, with Chicago the news depot and principal distributing point of the Central and Western divisions.

"The amount of news distributed daily at each of the more important offices aggregates about 50,000 words, or the equivalent of thirty-five columns of the average newspaper. The news is sent over wires leased by The Associated Press, and which for the day service covers 9,350 miles, and for the night service 20,450 miles.

"Up to 1885 all news was sent over the wires of the telegraph companies and was paid for by the word. This proved too indirect, however, and in that year the first leased wire of The Associated Press, running from New York to Chicago, was established. It was regarded as a great innovation, as it made possible the employment by the association of its own operators and the handling of news direct into its general offices. The leased wires were gradually extended until today they reach 210 cities and take in every State in the Union, as well as the City of Mexico.

"The operators receive the incoming report on typewriters at an average speed of about 75 words a minute, and are the most expert in the world. In order to reach the highest speed, a code is employed by the sending, or transmitting operator, in which single letters stand for words or groups of letters for whole phrases.

"Sheet by sheet as the news is received it is hurried by messengers to the different telegraph editors. In New York and Chicago, however, where the newspapers are scattered over too wide a territory to make quick delivery by messenger possible, the report is distributed through pneumatic tubes, which underly the streets and go direct to the desks of the editors.

"In the earlier days the operator copied his report with the stylus. This was not only laborious, but it had its limitations. The use of the typewriter had many times been talked of and tried, but always without result. It was for a time considered an impossibility for the reason that the noise of the machine was confused with the ticking of the telegraph instrument. Only ceaseless experimenting persisted in by Superintendent A. C. Thomas finally, in 1886, made the typewriter feasible. Its introduction marked a

decided advance in the method of news transmission, for it made it possible to handle 100 per cent. more news than formerly, the copy furnished the editors was as perfect as any amanuensis could produce, and the operator's work lessened. Today the typewriter is indispensable not only in press, but in commercial and railway telegraphy.

"In 1894, through the co-operation of the Western Union Telegraph Company, the leased wire system was extended to the City of Mexico, thus uniting two Republics. The latest acquisitions are three newspapers at Honolulu, which began receiving Associated Press dispatches on the very day in January last that the Commercial Pacific Cable Company landed its cable at that point.

"As to the class of news handled. The Associated Press, in its dealings with the world must of necessity be not only impartial in its handling of news—so long as it is legitimate and sought after—but, as a co-operative institution, must be absolutely non-partisan, non-sectarian and broad, and its clientage of every shade must be satisfied. So, whether in its dealings with a National Convention, a great temperance movement, a hanging or a prize fight, its province is only that of a news gatherer in presenting to the public prompt and accurate reports of what occurs. News is never anticipated.

"Time and brevity are indispensable features. In cases of startling pieces of news, brief bulletins are rushed ahead, to be followed by the completed story. Matters of a trivial or unsavory nature, such as small crime, libelous statements, or anything local in character, are eliminated, as likewise are wildcat moneymaking schemes and all enterprises with an advertising feature.

"Examples of recent great stories handled are found in the battles of Manila and Santiago, the sinking of the Spanish fleet off Cuba and the battles incident to the South African war, all of which were spread over the world, complete and full, in the lead of any other agency.

"In the case of the Spanish-American war, a large staff of experienced correspondents was placed in the field in Cuba, stationed at the various army camps or at the different central points on the island, while tugs, carrying writers, were chartered to follow and report the movements of the fleets. A daily story of events was hurried to some central point and cabled to the New York office, whence it was spread to all parts of the world. The accounts of this war, covered by The Associated Press, which were gathered under the personal supervision of Assistant General Manager Diehl, have been accounted the greatest war report ever known.

"At the Democratic National Convention held in Kansas City, over 50,000 words of news was handled daily on this one subject, a staff of thirty-two men, including the picked writers of the service, as well as a corps of expert telegraphers and shorthand men, being stationed at Kansas City outside of the regular office force of fifteen.

"One story, although written fourteen years

ago, still stands forth, however, as the greatest single telegraphic report on record. This was a recital of the terrible hurricane in March, 1889, that destroyed six battleships in the harbor at Apia, Samoa. This story, which told in great detail and with thrilling accuracy of the heroism exhibited by American and German seamen in that crisis, called out the admiration of the world. It was the work of Mr. John P. Dunning, who later won added glory from his spirited war stories sent from Cuba during the conflict with Spain, and the story was so perfectly written that it has secured a place in the textbooks of several of the public schools of the country.

"This association, by its strict adherence to facts, has established a name for trustworthiness that is worldwide, and the caption, 'The Associated Press,' at the head of an item of news has come to be taken as a stamp of reliability.

"The fate of The Associated Press, upon which the great majority of the 15,000,000 newspaper readers of the country depend for a knowledge of the world's doings, has always been in the hands of the great editors of the United States, and it stands today without a peer—the greatest example of the century of the success of the principal of co-operation."

The Early Days of Telegraphy.

"An old operator," in a reminiscent mood, writes interestingly of the early days of the telegraph in the *Western Electrician* as follows:

The ways of handling the telegraph when I was just a common operator like the rest of the boys were very much different from what they are now; and in those primeval times there were very many peculiarities in the business which sound strangely now when related.

Those enterprising fathers of the express business, Livingston and Wells, early saw a huge outcome to the telegraph idea, and, while engaged at the same time as messengers, doing their carrying between New York and Buffalo, conceived the idea of a telegraph line between those cities. Being a well known and responsible firm, they solicited subscriptions to the stock of a telegraph corporation, with fair success, and commenced the construction of the line from Albany to Buffalo. The further west they came, however, the more chary the people proved to be, until, arrived at Syracuse, the work was stopped for want of funds. Nothing dismayed, however, they came to the western terminus of the route, and endeavored to enlist capital there. The disbelief there was so universal that in order to convince the people of Buffalo and vicinity of the practicability of the scheme, a line about twenty-two miles in length was constructed to Lockport, and an operator from Albany was put in charge of the Buffalo office. A middle-aged gentleman was hurriedly made into an operator. He was a resident of Lockport, who took charge of that office. Two operators were all there were between Syracuse and Lake Erie.

It was no uncommon thing, for a few days after the line was opened for business, for people to test the correctness of the new-fangled system by sending a copy of the "communication," as it was called then, by mail, for comparison at the receiving terminal.

The instruments used on that line would to-day be a rare curiosity—as much as Morse's port-rule key. The relay consisted of four pairs of magnets, arranged horizontally, on the four sides of a square, and the armature was placed on a perpendicularly arranged shaft, something as if it were a paddle-wheel standing on end. Adjusting screws regulated the movements of this, and a coiled spring was attached for adjustment. The whole was fastened in an open box, about one foot square, and weighed about eighteen pounds.

The register, too, was unique and peculiar. As there were only the two offices on the line, apparatus similar to that used on the Baltimore and Washington line was utilized. The pen lever, when working, at every down stroke released the fly-wheel, and the paper started. At the same time one of the wheels, which had three or four pins projecting from the inside, struck a spring lever and thumped a bell several times in each revolution, to call the operator's attention. Scissors grinders have much the same arrangement on their wheel-barrow mills. The operator, when he came in, found his message waiting for him, but if he came while it was coming, he could push a slide and stop the bell.

This experimental line was the nucleus of the line into Canada, crossing the river at Queenston, and progressing thence through St. Catharines and Hamilton to Toronto. The line to Buffalo from the East had now been completed, and the public had become firm believers, by that time, in the truthfulness of telegraphic despatches.

The supply of operators was far behind the demand. Thirty days' teaching was sufficient to place an intelligent boy in charge of a small office, and middle-aged men were importuned to become operators for more important places.

That portion of the line which lay in Canada was constructed toward the river, while the extension was being made from Lockport to meet it at the dividing line. They met at Queenston. The wire, a No. 9 iron, was strung over the gorge, between the heights on the American side and Queenston Heights in Canada. The span was 800 feet in length, above a boiling, seething mass of the most turbulent water.

An old-fashioned, side-wheel horse ferryboat was utilized in carrying the wire across. Fastening the wire at a high point on the one shore, the reel was carried on board the ferryboat, which then ran up stream as far as was necessary, against the rapid current. Shooting out into the stream, and headed diagonally across, the horses being cruelly lashed to keep up speed, she made the landing on the American shore, where a couple of stalwart fellows grabbed the wire, and raced up the hill with it. Twice or thrice during

the crossing the wire sagged into the water, from whence it rebounded, imperiling the safety of the line, but, aside from a general feeling of apprehension, did no harm. As it touched the rapid water and rebounded it gave out an angry twang that was heard on both shores.

The line was completed from Buffalo to Toronto. Buffalo asked Lockport to remove his ground wire, and try Queenston. He did so, and put ground on the Buffalo side. The hour for the test had been arranged by mail. He got the Canada offices, and was requested to take off his ground and let Buffalo in. He shifted his ground and told Buffalo to go ahead with Queenston, but could not understand that the ground must come off completely; and it actually became necessary for a man to go to Lockport and remove the ground before he could get it through his head that a ground was not a necessity at every office.

Almost any man or boy who desired, providing his reputation was satisfactory, was accepted as an apprentice. The ground wire having been removed at the Lockport office, the line was in working order from Buffalo to Toronto. The battery was divided, one-half at Buffalo and the remainder at Hamilton.

The operators were compelled to stand at the table. This was so for two reasons: The weight which ran the tape register required some distance to drop, and it was deemed unhealthy to sit at that kind of work. In opening an office a good carpenter was required to set the instruments and make the holes in the table for the paper to run through. A huge box, open at the top, received the paper as it ran through the table.

The key was in three pieces—the key proper, the frame and trunions, and the anvil. There was no circuit closing arrangement, except as we extemporized one—sometimes by a book or stone on the key.

In order to save the battery as much as possible, when the line was not in use, it was the duty of the last user to keep the circuit until another operator took it. That is, after receiving a message the receiver would answer O. K. and then close the line, opening it at short intervals. Another operator wishing to use the line, would simply open his key. The circuit keeper would recognize the fact when next he closed, and would then lay a weight on his key, or push his rude circuit-closer between the anvil and the frame of the key.

The operator at H office looked on this circuit keeping as a nuisance, and being of an inventive turn of mind, made an attachment to the office clock, by which the pendulum did the work for him. When the register ceased to click he would lay down his law book which he was studying and close the key permanently.

This arrangement was looked upon with envy by his brother operators, and it was considered a great success. Its life was short, however, for one day when H office was keeping circuit, a fire

broke out close by and the operator left the office. That clock faithfully kept circuit for over an hour, before the operator returned to cut out the pendulum. The clock lost its situation as circuit keeper.

Now and then, even in those days, it happened that two offices wanted the circuit at the same instant, and, of course, it was impossible to decide which had prior right. The result was a fight which sometimes lasted many minutes. Among the operators was one who had but one arm. After such a squabble with Q office one day he made the remark over the line that he would never fight with Q again, "for," said he, "he can change hands when he is tired of breaking with one hand, while I have none to change when I am tired."

In the smaller offices the operator was everything from lineman to messenger, and was compelled to abandon his office to deliver messages, to mend line, etc. On these occasions he posted a notice on the locked door which told the story of his absence. "Gone to deliver a communication." "Gone to mend line—back tomorrow," were some of these notices. Now the office at Queenston was a dull one, and the fishing in the river, in a scale of one to seven, was about six, and the Q operator was fond of the gentle sport. It came to be a standing joke when the little lad could not be raised, that he was down at the river. One day, on his return from delivering a message a couple of miles away, he found a notice on the office door which read, "Gone fishing. Back as soon as the bait is exhausted."

The office was in a corner of the Canada customs warehouse, and the surveyor of customs was a director in the telegraph company. The youth at Q, having nothing else to do during the weary hours, soon became a sound reader, and read everything that passed over the line.

Mr. McM., the customs officer, passed much of his time in the telegraph pen—it was not much better—learning to telegraph, after a fashion, and it was not infrequently that he asked if X was a fip and a stroke and two fips, or if G was a fip and two strokes or two strokes and a fip, or something similar. The answering of such a question, while sending a message, often placed a rather long space in the middle of the word, but we had plenty of time.

On one occasion, while he was in the Toronto office, the operators complained that Mr. Q., the boy at Queenston, could never be raised. Mc. looked at his watch, and knowing that the boy would be in his office at that hour, bet a bottle of champagne that he, Mc., would spell the operator's name and say "where are you?" and that the youth would answer. The bet was accepted, and Mc. won, for the boy responded, "Hullo, Mr. Mc., here I am."

The line between Queenston and Lockport ran through an Indian reservation. The line was down on one occasion, and the lad started out to mend it. The wire used was of No. 12 hard cop-

per, and was not difficult to handle, provided a ladder could be got to reach the top of the pole. Then, by loosening the wire from the insulator, the sag would allow a hook connection to be made, which would remain until a regular line-man could get round to fix it.

That day the boy met an Indian of whom he inquired if the line was broken near by. The Indian replied, in fair English: "Yes; 'um broke; Ingin make good," and, after some farther explanation, the boy gave the Indian a quarter and passed on. He found the place where the Indian had pulled the wire as tight as he could, and completed the mend by tying in a piece of rope about two feet long. With the help of some others, and a crooked barn ladder, the boy managed to make a temporary splice, and reached a stopping place before dark.

A lady stepped into one of the offices one day, and asked the cost of a message to Hamilton. The usual answer to a query of that kind was, "So much"—naming the rate—"for 10 words, exclusive of the address and signature, for which we charge nothing." She wrote a message: "To Mr. Blank, H.: Mrs. Blank." The operator, acknowledging the joke, sent it free.

In due time the boy became, as things were then reckoned, an expert operator, and was promoted to better places. On one occasion he was ordered to Lockport to take the place of the operator while the latter was off on vacation. The afternoon paper took report, and the first day the youth was reading from the tape while the reporter copied. It was in summer, and the office windows were open. Suddenly there was a commotion in the street, and the strange operator rushed to see the cause, but kept on reading. The reporter threw down his pencil, and broke out angrily at the boy, who kept on reading. Finally, taking a fresh sheet, the reporter commenced copying again. When the end of the report came, the boy went back on the tape, filled in the lost lines, and the reporter went away thunderstruck. The paper next day told the whole story and speculated on the possibility of operators in the future being able to get along without paper to read from.

An Isolated Pacific Cable Colony.

When the late John W. Mackay conceived the idea of laying an all-American cable between the United States and the Philippine Islands, he didn't know that he would have to colonize an island in the Pacific to complete the job. Such is the case, however, and here is the story as told by the New York Sun.

Mr. Mackay proposed to the United States Government to lay what should be known as an all-American cable between San Francisco and Manila, with cable stations at Honolulu and Guam. His company got the concession.

When the surveys were made, it was found that it would be too expensive and pretty hazardous to lay the cable from Honolulu clear through to Guam without a midway station. There were

plenty of islands between the Hawaiian group and Guam, owned by various foreign Governments, any one of which would have been only too glad to give the cable company the necessary concession to land the cable and erect a cable station.

The handiest of all the islands between Honolulu and Guam would have been the Marshall Islands, owned by Germany. The German Emperor was not only quite willing to let the company appropriate any one of those islands for a cable station, but let it be known to the company that it would be a very nice thing all around if one of the islands was taken.

President Roosevelt would not tolerate the idea of the cable touching any land between San Francisco and Manila, other than land owned by the United States and so an American island had to be found. The only other land in that particular part of the world owned by our Government was the Midway Islands. These islands, were they on a straight line between Honolulu and Guam, would be about equidistant between the two. The islands are, however, considerably to the north of both Honolulu and Guam. They were the only available territory, though, and so the cable station had to be put on one of those islands. One is named Green Island, the other Sand Island.

So far as the memory of man runneth the only useful purpose that Sand Island ever served has been to furnish a nesting place for certain birds of rare plumage which wing their flight from one island to another in the Southern Pacific. The plumage of the Sand Island birds has always had a market in Asiatic ports, and some of the half-civilized tribes of neighboring islands have made it their business for many years to visit the island every now and then on a bird-slaughtering expedition.

When after the death of John W. Mackay his place had been taken by his son, Clarence H. Mackay, the latter's attention was called to the Midway cable station proposition, and it was suggested to him that the company might find some difficulty in colonizing the island sufficiently for cable purposes. After young Mr. Mackay had gone over the whole Sand Island situation, he realized that the company would not only have to find men who were willing to take up their abode on a barren island in the Pacific for a reasonably long period, but that every pound of provisions consumed by the colonists would have to be carried there.

"Nice island, that," said young Mr. Mackay one day, after he had gone over the situation with Mr. Ward, the vice-president of the company. "Wouldn't it be pleasant if all our cable stations were like that? However, we have undertaken the job, and we'll have a cable between San Francisco and Manila that touches only all-American territory or we'll know the reason why."

Sand Island is about three-quarters of a mile long and half a mile wide, so that the work of

fortification will not be particularly difficult. By a recent decision of the Government at Washington the cable company will not be bothered with the fortification. The Midway Islands have been put under the jurisdiction of the Navy Department, and such fortifying as they may need will be attended to by the Secretary of the Navy.

The laying of the Honolulu-Manila section of the cable will begin early in May. The cable ship will sail from London in April, and as soon as it gets to Manila the work of laying that section of the cable will begin. The section from Manila to Guam will be put down first, thence the cable ship will proceed to Sand Island and from there to Honolulu. About the same time that the cable ship sails from London a colonizing party, so to put it, will leave San Francisco for Sand Island. The party will be made up of about fifteen men, including the superintendent of the Sand Island station, three or four telegraph operators, some electricians, a few laborers, a doctor and a small hospital staff.

The expedition of the colonists will be much more formidable in its outfit than that of the cable ship. They will carry with them a quantity of canned goods, medicines, bandages, surgical appliances and general hospital stores, together with tents for temporary use and the materials for building a permanent cable station and houses for the crew. The Government reports have it that water, character and constituency not very well established, has been found on Sand Island by digging ten or fifteen feet below the surface. It is suspected that this water is sweet water, but that is not definitely known.

The colonists will take with them a well digger and the necessary paraphernalia to equip a few driven wells.

The company has already plenty of volunteers for its first station crew for Sand Island. How long they will be willing to stay and whether there will be any great amount of difficulty in getting a relay for the first crew are problems for the future, and the company is quite willing, under the circumstances, to let the future take care of it.

It is quite within the possibilities that in a few years Sand Island may have become one of the loveliest spots in the southern Pacific. As soon as the first cable crew has established itself, the company intends to begin the importation to the island of the best soil to be found in all that region of the Pacific. If anybody out Sand Island way has three-quarters of a square mile of A No. 1 soil for sale at reasonable terms, he ought to get into communication with Mr. Mackay or Mr. Ward as soon as possible. The first dose of soil tonic will be followed by another and yet another, until the native soil has become vigorous enough to support any old kind of vegetation. The company is determined, before it gets through with Sand Island, that the desert shall blossom as the rose.

Subscribe for TELEGRAPH AGE, \$1.50 a year.

LETTERS FROM OUR AGENTS.

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

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

ST. PAUL, MINN., NOTES.

The Telegraphers' Athletic Association of this city has filed articles of incorporation, with the following officers: President, W. J. North; vice-president, William McKinnon; secretary, William Gahr; treasurer, G. T. North; board of directors, E. S. Fitch, V. L. Gibbons, L. P. Bush, George E. Humphrey, H. P. Budd, W. G. Smith, R. C. Dow, N. M. Hansen and A. F. Flood.

The charter members are: E. S. Fitch, W. J. North, G. T. North, N. M. Hansen, William C. McKinnon, R. J. Tubman, C. R. Vinson, F. L. Patterson, F. M. Biebel, A. F. Flood, G. R. Edmond, H. F. Conray, H. P. Budd, W. J. Finch, C. W. Meier, W. H. Miller, W. H. Kemper, G. Mitchell, Elmer Tessler, Leon Rudd, W. L. Kelley, E. A. McCrady, C. H. Nellins, C. C. McGrath, Amos Tessier, W. S. Branston, A. J. Bousquet, F. L. Murphy, W. F. Fichtl, W. L. Burr, A. P. Nelson, Frank Vontrat, J. Stoffel, M. May, J. May, Jean Yeager, William Banholzer, Jack McKinnon, B. S. Rounds, E. Lynn, Nicholas Gahr, R. C. Dow, L. W. Foster, A. F. Michaelson, G. E. Humphrey, W. H. Murphy, G. H. Cassen, John Burr, O. H. Tomlin, E. R. Bary, A. E. Loring, Albert Christenson, P. H. Purtell.

The association is organized for the entertainment and athletic training of its members, but there is to be a reserve fund, for assistance of telegraphers who are out of work or sick, and for funeral expenses. The initiation fee is \$2, and monthly dues \$1.

BOSTON, MASS., POSTAL.

F. C. Frazee, from the superintendent's office, has been assigned to the night force, vice T. J. Lawrence, resigned, to go with a broker.

W. Morris, of the day force, has been appointed manager at Lowell, Mass., vice A. E. Johnson, appointed chief clerk to Superintendent Pillsbury.

The rapidly increasing business at the Broad street branch has necessitated the appointment of an additional operator to the force at that office in the person of T. R. Donovan.

J. C. Smith has been appointed to the day force, vice P. J. Bell, who after some five or six years of service at this office, has been compelled by ill health to relinquish active duty for a time, and seek rest at his old home in Bangor, Maine.

W. E. Rieb has been transferred from the main office to the Court Square branch.

C. W. Proctor is a recent addition to the day force, and A. J. Dawes to a split trick.

Other arrivals: A. R. Jones, W. J. Shea, W. H. Ridge, E. K. Burnham.

Resigned: F. R. Johnson, F. H. Jennings, F. M. Smith.

Wm. H. E. Clapp, cashier of the Boston District Messenger Company, died at his home in Dorchester, Mass., March 31, of pneumonia, after but a few days' illness. The burial took place from St. Marys' Episcopal Church, Dorchester, on Sunday, April 5, with Masonic honors following the brief Episcopal service. A large representation of the telegraphic fraternity was present. Interment took place at Forest Hills Cemetery. Mr. Clapp was born at Gorham, Me., June 17, 1856, and had been identified with the district messenger service in New York, Boston and other points during nearly his entire business career.

BUFFALO, N. Y., POSTAL.

Mr. G. F. Reilly, night operator at the Palace Arcade Building, has been appointed manager at Seneca Falls, N. Y. He has the best wishes of success from his many friends.

Mr. Geo. Losier, late of the Board of Trade, has been promoted to night operator at the Palace Arcade, vice G. F. Reilly.

Fred J. Blum, of Dresser & Co., brokers, Rochester, N. Y., recently called on his old friends in this office.

Word has been received from Daniel E. Higgins, Tacoma, Wash., announcing his safe arrival at that point. Mr. Higgins is highly pleased with his new position and with the city of his adoption.

Mr. Thomas Feahry has been assigned to the New York bonus wire, days.

Mr. Charles Weydman, who recently purchased a Yetman transmitter, is making excellent headway with it.

DES MOINES, IA., WESTERN UNION.

Our manager, W. H. Dolbear, is most acceptably filling the place vacated by Mr. C. F. Ames, now superintendent at Boston, Mass. Joseph Smith, the popular chief operator, has accepted the managership of Logan's broker wire; Charles Willoughby, of Chicago, succeeds him as chief operator.

Mrs. Ida Clayton, until lately Miss Ida Sherman, and Miss Mabel Marshall, are making good records on the Chicago quadruplex.

The night force is presided over by J. L. Davis.

Arrivals: Earl Bott, H. G. Meck, C. M. Sailor, C. S. Brush and Miss Zella Martin.

Departures: Messrs. Sefrit and Nutt, for Omaha; Mr. Ainsworth, to Weare Grain Commission Co., this city, and Miss Keck, to Chicago.

William Mason has been promoted from receiving clerk to the operating department.

Miss Maud Fisher is the check grl.

Mrs. Armentrout, lately of Keokuk, and Miss Allie Hall are bookkeepers, and Miss Eva Gooder is the cashier.

H. F. Crooks is the chief of the delivery department; H. Dixon and Emmet Eckels, are American District Telegraph clerks, Irving W. Longacre being the night officer. Nellie Sweeney is the only female messenger.

This office will soon be equipped with dynamos and be refurbished.

Business is picking up slowly. Grain business is flat.

We have four brokers' wires, namely, Weare Grain Commission Co., Ware & Leland, Prince & Co. and "Red Letter" Sullivan.

PHILADELPHIA, PA.

My motto—Honorable Dealing—D. A. Mahoney, special representative, Western Union Telegraph Co., Philadelphia. Send for booklets and easy monthly terms for "club plan" now forming for purchase of latest models, Fay-Sholes, Fox, and Jewett typewriters. Old machines taken in exchange and liberal allowances made. All makes rented three dollars monthly. Remodeled Smith's and Remington's \$40 to \$50, small monthly payments. OPERATORS REMEMBER, "NO MILL NO WORK" IN EITHER THE WESTERN UNION OR POSTAL, THIS CITY.

WESTERN UNION.

A full account of the Aid Society's annual euchre, hop and banquet, which was held April 15, will be found in the next issue of the AGE.

Mr. D. J. Burns has the sympathy of many friends in the death of his mother which occurred recently.

M. C. Smith, recently transferred from the 4th and Walnut streets branch to this office, died suddenly at his home in Camden, N. J.

A daughter has been born to A. W. Rebstein.

G. T. McMahon has resigned to accept a position in the post office, this city.

Harry Givin and Elmer Beidelman have also said good bye, the former going in business at Steelton, Pa., and the latter to New York for the American Can Co.

M. J. Madden, another operator, leaves us to go with the Postal Company.

Mr. Heidenrich, of Lancaster, is a new arrival.

Miss Cullen, manager at Coatesville, Pa., is exceedingly proud of the fact that that office has been elevated to a money transfer point.

Col. Wm. B. Wilson, a well known old timer of this city, has received a long delayed recognition, which has recently been accorded him by the Legislature of this state, that of honorary colonel. The many friends of Col. Wilson express satisfaction over the event and showered congratulations upon him.

PHILADELPHIA, PA., POSTAL.

We were favored recently by a visit from our vice-president, Mr. Wm. H. Baker, who was much pleased at the manifested evidences of growth and expansion visible in the operating and other departments.

Mrs. C. W. Power and Mr. Wm. Burt, Jr., have returned after having been away some time on account of sickness.

We are pleased to learn that our friend Mr. Walter Houghtaling, a former employee, is enjoying the advantages of a more lucrative position offered him by the Rowland Multiplex Telegraph Company, of Baltimore, Md., where he has taken up his residence.

CHICAGO, ILL., WESTERN UNION.

Wm. Atherton has returned from his home in New York State, where he went to attend the funeral of his father.

Samuel Schulkins, wire chief at the west board, has recovered from a serious illness.

J. E. McDermott, formerly manager at Aurora, Ill., is now working a split trick, his successor at Aurora being W. H. Sievert, formerly of Marshalltown, Iowa, where he is succeeded by C. A. Gillette.

Miss Allie P. Knowles, manager at Benton Harbor, Mich., was a recent visitor.

Miss May Beelman, formerly of this office, has returned after a few months' absence in the South.

Miss Harriett E. Thompson, recently the manager at Dixon, Ill., is also a recent arrival.

We are anticipating a good summer's business, and the office is full of new faces.

ST. LOUIS, MO., WESTERN UNION.

Messrs. Goehringer and Weyermann have returned from Jefferson City, where they have been stationed during the Legislative session.

W. L. Rodgers, of Jefferson City, is now working in this office.

J. J. ("Dip") McCrudden has left here to accept a position in Chicago.

Michael Cassidy has been transferred to the night force.

Miss Leeper has left this office, returning to her home in Alton, Ill.

Clarence Otto has accepted a position in Jefferson City office.

Miss Mary Tynan has been absent for some time owing to the illness and death of her brother. She has the sympathy of her many friends.

MONTREAL, QUE., GREAT NORTHWESTERN.

Arrivals.—William Buckingham late of Windsor Hotel; J. B. Donovan, Charles M. Hodge, Misses Steele and A. Campbell, David Barclay, M. G. Peebles, Messrs. Bordua, Lachevrotiere and Mr. Lapum.

Resigned.—Appleton Anderson, Allan Clarke, Herbert Keating, Miss Agnes Brunet, Robert Kane, Minnie Nelson, Arthur Ross and Fred Gittus.

Theo. Lefebvre has accepted the position of operator at the Windsor Hotel.

Clifford Swinburn is stationed at the Merchants' Stock Exchange, sending the reports to the main office where Miss McNulty receives them.

Louis Goyette, J. Shepherd and John Howard went to New York to spend Easter.

A new copper wire between Montreal and Toronto has stimulated a fine quadruplex business between the Metropolis and Queen City, which has assumed such large proportions that it takes two quadruplex's and two duplex's to do it justice.

Master Bogue is a new checker and Miss Steele is a new sorter.

Mr. John Vautier is still confined to his house by illness.

Word received from Chattanooga, Tenn., announced the marriage there of Fred. Gittus, an old employee of this office, and a native of Montreal.

We are working very shorthanded, and good, steady operators could easily secure employment, by addressing their applications to Mr. Thomas Rodger, circuit manager, Great Northwestern Telegraph Company, Montreal, Que.

CHICAGO, ILL., POSTAL.

Among the new arrivals in this office are Messrs. Irwin, Wright, Scrivener and Moore. Mr. Deno has returned to the Board of Trade office from the employ of a broker.

Mr. E. A. Leekley has accepted a position with this company at Hammond. Mr. H. J. O'Donnell, manager at Harvey, Ill., has been promoted to Hammond, Ind. Miss Tullsen has been appointed manager at Harvey.

Mr. J. J. Ahern of this office is very sick at the Wesley Hospital.

Mr. John Ward is now at a broker's office.

WACO, TEX., WESTERN UNION.

Business at this point continues fairly good, although this is the dullest part of the year in this section.

There have been very few changes in the force, which now is as follows: Manager, H. L. Henderson; chief operator, S. M. Renick; day operators, W. H. Hensley and John Clement; night operators, A. G. Steele and A. B. Kelly; book-keeper, Miss Nellie Hackett; delivery clerk, Miss Birdie McCorkle; receiving clerk, L. C. Walker.

At the State House, hotel, branch, Mrs. C. Vaughan is located, and at the St. Charles Hotel, Mr. A. P. Birkhead.

Recent visitors at this office include General Superintendent T. P. Cook, Superintendent Geo. J. Frankel and Mr. R. Tessmer, of the clock department, St. Louis.

NEW YORK CITY.

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

WESTERN UNION.

Mr. C. A. Kilfoyle, the financial secretary of the Telegraphers' Aid Society, desires it to be

stated that he will be at Room M5, 195 Broadway, on Friday of each week, from 1.30 to 6.30 P. M., for the purpose of receiving dues and issuing new cards to members desiring them.

Mr. Colin S. Kirtland, of this office, has been called to Springfield, Ohio, owing to the serious illness of his daughter.

Millard Fillmore Mandeville, for many years connected with the auditor's department, died at his home in Newark, N. J., on March 17, after a lingering illness, aged fifty years.

William J. McNamara, for twenty-five years connected with the bookkeeping department, died on April 2, after undergoing an operation for appendicitis. He was a member of the Telegraphers' Aid Society.

Edward O. Alyca, an old time operator, at Newark, N. J., died on April 12.

Robert W. Bassett, superintendent of the Eye and Ear Hospital of Brooklyn, N. Y., was highly complimented by the Board of Management in its annual report, on the efficient and trustworthy manner in which he had attended to the affairs of the hospital during the past year. Mr. Bassett is well known as a first class operator in this office, and throughout the South.

Samuel S. Ferris, who was appointed to fill the vacancy of tube chief, caused by the resignation of Vincent A. Burnes, has been connected with the gallery since he was a mere lad, and well deserves the advancement.

J. H. Driscoll and Frank D. Murphy were elected auditors of the Aid Society at the last election.

W. H. Egan, formerly of this office, died recently.

Mr. R. W. Chapman, chief of the bookkeeping department, is back at his desk, after an absence of about a month, caused by rheumatism.

About the only operators in the employ of the company in this office in continuous service since 1870, are R. H. Morris, D. W. McAneeny, J. K. Calvert, Joseph Knittle, T. B. Fullom, J. L. Edwards, T. M. Brennan and John Brant.

Messrs. W. Winter, Ira Baker and P. Collins have returned from Florida, where they have been in the service of the company during the Winter season.

Appointments: R. Matherson, August Martin, James Kelly, W. A. Relf, J. Meynier, J. W. McMahon, W. Gowland, E. J. Ryan, R. J. Welsh, J. Robinson, Jr., W. A. Glenn, C. A. Smith, J. Wilson, J. D. Thomas, J. J. Harrington, R. E. Fallette, A. J. Hamm, R. H. Miller, T. C. McLoughlin, W. I. Smith and James Eagan.

Mr. Richard O'Brien, an operator at Port Chester, N. Y., has been appointed a member of the Board of Wardens of the Port of New York. His salary will be about \$3,000 per year.

Mr. Frank Kitton, assistant electrical engineer, paid a visit a few days ago to his former home at Buffalo, N. Y.

Resigned: A. J. Fagely, H. C. Hayes, A. F. Harrison, F. B. Glasser.

POSTAL.

A convention of general superintendents and superintendents of construction of the Postal Telegraph-Cable Company, took place in New York on the 14th inst. to talk over affairs pertaining to the betterment of the service. The Pacific Division was represented by L. W. Storrer, general superintendent, San Francisco; Western Division by E. J. Nally, general superintendent; C. M. Baker, assistant general superintendent, and W. I. Capen, superintendent of construction, Chicago; Southern Division, C. C. Adams, general superintendent, and B. S. Price, superintendent of construction, Atlanta, Ga.; Eastern Division, E. G. Cochrane, general superintendent, and W. H. McCullum, superintendent of construction, New York; the Postal Telegraph-Cable Company of Texas, S. M. English, general manager, Dallas, Tex.; the North American Telegraph Company, H. A. Tuttle, general manager, Minneapolis, Minn.

Mr. T. L. Cuyler, Jr., assistant treasurer, has returned from a very enjoyable trip to the West Indies.

Superintendent G. H. Usher, of this city, has had his district extended to embrace Middletown and Narrowsburg, N. Y., and Scranton, Pittston, and Carbondale, Pa., and other offices, which were formerly presided over by H. D. Reynolds, superintendent at Buffalo, N. Y.

Mr. Perry Ostrom, formerly manager at Morristown, N. J., has been transferred to this office.

J. P. Gallagher, of the first Philadelphia bonus wire, is absent on account of illness.

H. C. Bunting has returned after a short illness.

G. O. Heath, of the Pittsburg bonus wire, who has been absent on a month's vacation, spent with relatives at Columbus, Ohio, is on duty again.

Frank Reed, of the check force, has been promoted to be an operator.

J. J. Hope, who has spent two months in Washington, D. C., is back again.

A. E. Albright has resigned.

C. Koehler has been transferred to the New York Herald Postal staff.

Arrivals: R. H. Jackson, Chas. Murray, T. M. Wilson and John Rutter.

Additions to split trick: M. Hegeman and L. Z. Skadden.

M. J. Higgins, forty-five years of age, manager of the Marine service of this company, at Sandy Hook, N. J., died recently from the effects of blood poisoning, caused by vaccination. Mr. Higgins was well known in marine circles, he having spent his entire life in this service for the Western Union and Postal companies.

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

The Tournament Postponed.

Contrary to announcement the Telegraphers' Tournament, which it was expected would be held in Philadelphia some time in the early part of May, has been postponed until October next. This determination has been arrived at because of the limited time at the disposal of the committee in which to act, thus making it impossible to properly complete the necessary arrangements for an undertaking so important and in which so much detail work is demanded. While it is unfortunate that there should be further delay of an affair already too long deferred, still under the present circumstances such action cannot be regarded other than wise if a successful outcome be desired. It is to be hoped that the committee will proceed with judgment and energy in the matter of this tournament and employ their extended time during the intervening months to the best advantage in promoting the interests entrusted to their charge.

Difficulties in Alaska Telegraph Construction.

According to newspaper reports, General Greely, chief signal officer, has found himself much embarrassed in the construction of telegraph lines in Alaska by the reported recent discoveries of gold deposits in the Tanana section of the country. Almost to a man the civilian employes of the Signal Corps have deserted their work and started for the new diggings. The gold fever also infected the enlisted men of the corps, and undoubtedly there would have been many desertions could the men have made sure of getting out of the country without being arrested. As it is, applications for discharge are coming in from them in regular form, but not many of them can now be granted.

Business Notice.

Mr. John Donnelly, of Branford, Conn., manufacturer of the well known Donnelly Climber, so long familiar to linemen, advertises his product in another column coupled with the statement that while he will send his goods out C. O. D., prepaying all charges, to any address in the United States or Canada, no purchaser need pay for them if on their receipt they are not perfectly satisfactory. As this offer evinces courage to act and confidence in the good qualities of the Climbers, it would appear that linemen everywhere needing Climbers would be drawn to deal with a man who gives proof of such honesty and integrity of purpose. Write then to John Donnelly and you will be treated promptly and

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

An operator who wishes to spend the months of June and July in Europe and who is an old European traveler, desires to accompany any other member of the profession who has in mind a similar trip. Address: European Trip, TELEGRAPH AGE, New York.


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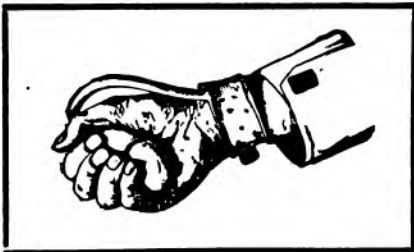
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TELEGRAPH AGE has always sought to exert a helpful influence to the fraternity collectively, and to the telegrapher as an individual. Now in turn, when it has mapped out for its future a larger, fuller and a more broadly comprehensive course, still ever keeping in view the advancement of the telegraphers' best interests, it appeals to its friends, to the members of the craft everywhere, to render the aid which they alone can give to make this subscription effort supremely successful.

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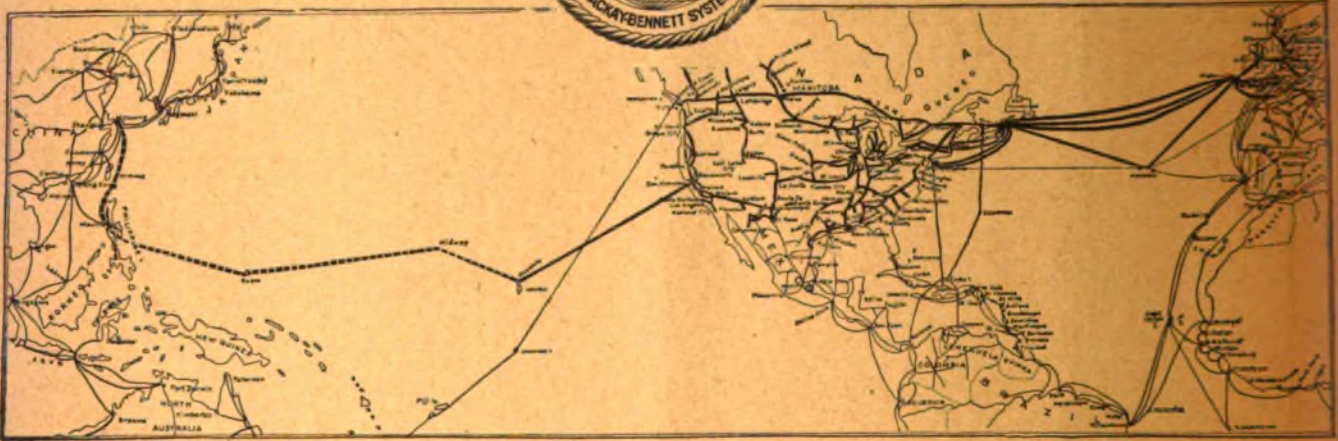
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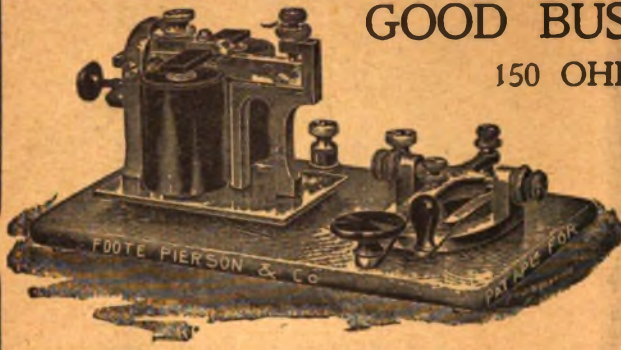
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