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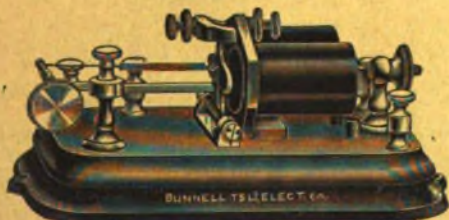
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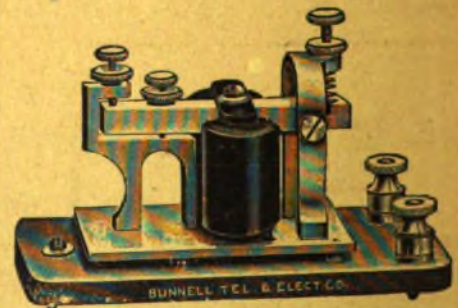


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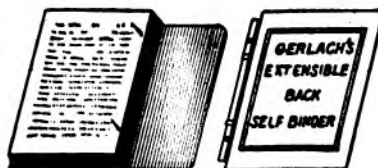
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THE TELEGRAPH AGE.

No. 19.

NEW YORK, OCTOBER 1, 1901.

Vol. XXIV.

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SOME POINTS ON ELECTRICITY.

The Equipment of a Modern Telegraph Office, Continued.

BY WILLIS H. JONES.

[In the September 1st issue of this journal Mr. Willis H. Jones began a series of articles showing the complete details of equipping a modern telegraph office. Beginning with the proper selection of the dynamo, his aim will be to carry the reader step by step from the cellar to the operating department; thence through the labyrinth of house wires underneath the floor to the various apparatus, stating the size of wires to be used for the main and sub-leads, and last but not least, to give a full and accurate reason for each move.

The series will be a complete handbook for any one contemplating the instalment of a new office or making alterations in an old one. The value of these important articles will be such as to interest a wide circle of readers, and those who desire to follow them in their consecutive order should send in their subscriptions at once.—Editor.]

The next point to be determined is that of the value of the electromotive force of the dynamo to be installed for the purpose of furnishing current to the local sounders. As heretofore stated this is very much a matter of choice, and also depends largely upon the particular type of sounders you expect to use. The choice between a high and a low voltage machine depends upon whether you prefer a given strength of current in a "long" or a

"short" local circuit; in other words, whether you will have the necessary quarter of an ampere of current in a circuit of 4 ohms resistance fed by 1 volt; a hundred ohm circuit fed by 25 volts, or some other equivalent ratio between those extremes. Some believe that a comparatively high electromotive force gives the instruments a quicker action than a low pressure, and therefore insert sufficient artificial resistance in the local circuit to reduce what would otherwise be an excessive volume of current to a proper value.

While electricians differ somewhat on this point there is this much to say in favor of a reasonably high electromotive force—it will overcome a slight addition of resistance to the circuit due to ink or dust temporarily obstructing the path, without materially decreasing the working strength of the current, whereas the same amount of resistance finding its way into the shorter circuit would alter the ratio existing between the total resistance of such circuit and the low electromotive force to such an extent that the weakening effect would be noticed at once.

Again, in medium size offices where there are a number of short grounded legs extending to branch offices (erroneously called "loops") which receive current through the local connections of duplex and quadruplex apparatus, it is advisable, for economical purposes, to employ but one machine for local apparatus and compel it to furnish the entire current for both multiplex and single line sounders. This matter is easily arranged by simply building up the resistance of the single line relay sounder circuits artificially to a value equal, at least, to that of the longest loop or leg to a branch office. Details of this arrangement will appear later.

As every single and multiplex circuit relay requires a sounder, say of the 4 ohm pattern, demanding five times as much current as the main line itself, it follows that the capacity of the machine furnishing current to the local circuits must be at least that many times greater than those feeding the main wires. In fact, it should be more than five fold, for the reason that the local coils of every polechanger, transmitter, and repeating sounder is also fed from this one supply.

For an office like that of New York, Chicago or St. Louis, where the number of branch circuits is exceedingly great, it is perhaps advisable to employ separate machines for the loop and the house local circuits respectively.

If this plan be adopted in this latter arrangement the value of the electromotive force of the dynamo feeding the house locals may be greatly reduced; in fact you may choose almost any pressure de-

sired suitable for the winding of the sounders adopted. If you do not know exactly how much current a given sounding, as indicated in ohms, requires, ask the instrument maker. Every apparatus nowadays is constructed for a prearranged volume of current and should not be worked in a circuit where the strength of current therein does not correspond with the marks of the maker.

The modern way of arranging dynamo local circuits in an office is to place them all in multiple; that is to say, place each sounder in a separate circuit which extends between two parallel leads, as the rung of a ladder connects the side supports. This plan has been found to be most economical, as less wire is required to make desk connections throughout the operating department.

Having decided upon the multiple system, before you can decide the proper electromotive force of the dynamo you must first decide upon how much artificial non-inductive resistance you wish to insert in the local circuit in series with the sounders. This point settled, the required pressure may be found by multiplying the total resistance in circuit by the necessary strength of current in milliamperes demanded by the particular winding of the sounder employed. For example: For a 4 ohm sounder circuit with 4 ohms artificial resistance inserted in series the electromotive force would be $4 + 4 \times .250 = 2$ volts; with 12 ohms artificial we would have $12 + 4 \times .250 = 4$ volts. This rule holds good for any type of sounder used, the only change in the formula being the multiplier which must be that of the value of the current required to actuate the instrument you install.

The object of inserting the non-inductive resistance is to weaken the counter effect of the self-induction in the coils by giving it extra work to perform outside of the bobbins instead of exerting its strength entirely within; and it may here be stated that the greater the ratio of such added resistance is to the value of the electromotive force employed the less harm can the counter influence do. This fact may be satisfactorily verified by comparing the signals received on the 4 ohm sounder of a duplex where the external or non-inductive resistance is probably 80 per cent. that of the loop, with those of single line relay sounders improperly arranged in multiple.

The artificial resistance may be inserted in the form of a small coil of German silver wire underneath the base of the sounder, or it can be attached to the table permanently if preferred, but the more popular plan is to follow the first suggestion and thus avoid the bother of making extra connections.

(To be continued.)

Recent Telegraph Patents.

A patent has been granted to John F. Skirrow, of New York, for a resonator.

I. Kitsee, of Philadelphia, Pa., has been granted a patent for a device for indicating leaks of insulation on electrical conductors.

Personal Mention.

Mr. John W. Mackay, president of the Commercial Cable Company, arrived from Europe September 14.

Mr. H. D. Reynolds, superintendent of the Postal Telegraph-Cable Company, Buffalo, N. Y., is confined to his home with typhoid fever.

Mr. Wm. H. Baker, general manager of the Postal Telegraph-Cable Company, New York, is spending a vacation of two weeks in Colorado.

Mr. Edward Reynolds, auditor of the Postal Telegraph-Cable Company, New York, has returned from his vacation which was spent in Minnesota.

Mr. Francis W. Jones, electrical engineer of the Postal Telegraph-Cable Company, New York, has returned to his office after a six weeks' business trip to the Pacific coast.

Ernest Van Every, son of J. B. Van Every, vice-president and auditor of the Western Union Telegraph Company, is seriously ill with typhoid fever at his home in Brooklyn, N. Y.

Lord Strathcona, of Montreal, Que., a director of the Commercial Cable Company, has presented to the Royal National Mission to Deep-sea Fishermen a beautiful hospital ship for service on the Labrador coast.

Mr. George Clapperton, traffic manager of the Commercial Cable Company, New York, sailed for Europe on the steamer Majestic on September 11. It is his purpose to remain on the other side but for a short period.

Mr. John H. Smart, superintendent of the Commercial Cable Company, New York, is acting traffic manager of the same interests in the absence of Mr. Geo. Clapperton. Mr. S. F. Austin is acting superintendent, taking Mr. Smart's place.

Mr. A. S. Brown, electrical engineer of the Western Union Telegraph Company, New York, has returned to the city. While he has not resumed the actual duties of his position, he visits his office almost daily, and he looks very much improved in health.

Mr. H. L. Shippy, New York manager of the John A. Roebling Sons' Company, had one of the "closest calls" of his life recently, when the steam yacht "Rapidan" was wrecked in a northeast gale off Cape Henlopen, Delaware. The party and crew were landed with great difficulty in surf boats, after it was found that the breeches buoy could not be used by the Life Saving Corps.

Mr. George T. Manson, of the Okonite Company, New York, who was a delegate to the convention of the International Association of Municipal Electricians, at Niagara Falls, lately, afterwards entertained a party of fourteen at a game dinner at the Pioneer Hunting and Fishing Club, Buffalo, on September 5. It was a delightful affair, and Mr. Manson fully sustained his enviable reputation as a host.

Mr. W. Y. Ellett, superintendent of fire alarm telegraph, Elmira, N. Y., reassumed the duties of his office on September 21, the Court of Appeals having sustained him in his case of unjust suspension from office by the new board of commissioners.

Miscellaneous Items.

The wife of Mr. A. W. Rossiter, an old timer of Pittsburg, Pa., died in that city September 13.

The Western Union Telegraph main office in New York is handsomely decorated, as well as many of their other offices throughout the country.

Mr. John Fothergill, of the Western Union cable force, Canso, N. S., has returned from England, accompanied by his wife. Mr. Fothergill spent three weeks in Great Britain.

Mr. Patrick B. Delany, the old time telegrapher and electrical engineer, of South Orange, N. J., in a recent letter stated that he "was glad to renew his subscription once more for the bright and truthful TELEGRAPH AGE."

Mr. George H. Albee, of Windsor, Conn., an old time telegrapher, now a justice of the peace, in renewing his subscription, writes: "I find TELEGRAPH AGE a clean, newsy, up-to-date journal, bearing evidence to the industry and intelligence necessary to make it so."

The executive offices of the Postal Telegraph-Cable Company authorized the managers throughout the country to drape their respective offices in mourning out of respect to the memory of President McKinley. The decoration of the main office in New York city is at once elaborate, artistic, and imposing.

Mr. Frank P. Foster, of Corning, N. Y., secretary of the International Association of Municipal Electricians, in a recent letter, writes:

"I wish to thank the publishers of TELEGRAPH AGE in behalf of the association for the very full account given of the late Niagara Falls, N. Y., meeting, as well as the space that you have given us during the years past in notices of the meetings and subjects presented. No one can, I believe, see the amount of good done the association by the technical press, or realize the benefits as well as the secretary, and I wish to state that our association would still be in long dresses or infants' clothes, if it had not been for the press that has given so liberally of their columns to advertise us."

New York Visitors.

Mr. W. E. Peirce, of the Western Union Telegraph Company, Washington, D. C.

Mr. George C. Maynard, of the Smithsonian Institute, Washington, D. C., an old time telegrapher.

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

Obituary.

Mrs. Frank Trickle, wife of the day Associated Press operator at Denver, Col., died suddenly in that city on September 14.

George E. Netherland, who for the past ten years has been wire chief of the Western Union Telegraph Company, at Louisville, Ky., died September 5, of peritonitis.

D. E. Martyn, night chief operator for more than twenty years of the Western Union Telegraph Company, at Kansas City, Mo., died in that city from apoplexy on September 15. He was 63 years of age.

Resignations and Appointments.

Mr. F. A. Grasty, manager of the Postal Telegraph-Cable Company, at Baltimore, Md., has resigned on account of poor health.

Mr. M. A. Beatty, of Jackson, Miss., has succeeded J. A. Caldwell as manager of the Postal Telegraph-Cable Company, at Knoxville, Tenn., the latter resigning to enter other business.

Business Notice.

An automatic circuit closer for telegraph keys is now being placed on the market by Nye & McIntosh, of Los Angeles, Cal. Mr. L. C. McIntosh is a well-known operator at that point, and understands the subject very thoroughly. The device is a very simple yet effective one, never failing to close the circuit the instant the fingers are removed from the key knob.

By Telegraph to Klondike.

The outside world is now connected with the Klondike by telegraph. The all-Canadian Government telegraph line from Vancouver to Dawson was completed on September 24. The first despatch to go through was a message of congratulation from Gov. Ross, of Klondike, now at Vancouver, to his legal representative at Dawson.

The line is 2,200 miles long and part of the route is that taken by an abandoned line originally projected for the Collins overland route in 1865. It was to connect America with Europe, when the successful laying of the Atlantic cable killed the enterprise. The line starts at Vancouver and touches Ashcroft, Quesnell, Hazelton, Telegraph Creek, White Horse and Dawson, and connects at the Alaskan boundary with the projected American Government line from St. Michaels. A branch line taps Fort Simpson for the convenience of incoming Dawson steamers.

The Academy of Sciences, Paris, has heard a report on a telegraphic invention recently made by M. Mercadier, of l'Ecole Polytechnique. It combines a multiple with the Baudot apparatus, so as to enable sixteen operators to work simultaneously on the same circuit.

Subscribe for TELEGRAPH AGE, \$1.50 per year.

Women as Telegraphers.

In England women are largely employed as telegraph operators. This is due in great part to the score of economy. On this subject Mr. C. H. Garland, an English authority in a letter originally published in the *Economic Journal* and reprinted and commented upon in *Telegraph Chronicle*, London, deals with the reasons for such employment, presenting the British service as the standard and comparing therewith the work of women operators in different European countries. The letter is as follows:

"In England the introduction of women appears to have been facilitated by another influence. When Mr. Scudamore first caught from the telegraph companies the idea of employing women, he saw, in addition to their cheapness, that the plan offered another advantage. Women simply required a nomination for admission to the postal service, and their employment on a larger scale opened up a light and relatively remunerative occupation for the female relatives of postal officials. There is little doubt that this prospect secured some support to the scheme among the colleagues of Mr. Scudamore. In Germany the first introduction of women as telegraphists, between the years 1874 and 1877, seems to have been assisted by what the administration describes as 'lack of male staff.' It is not stated what was the cause of this lack. In Sweden another motive assisted the primary attraction of cheapness. In 1863 the Swedish States-General sent a humble address to the king, drawing his attention to the fact that the number of women in the kingdom of Sweden largely exceeded the number of men, and consequently a large number of women were cut off from their natural vocation, marriage. The States-General were of opinion that the duty of the State was to find employment for these women. The Swedish Government, without admitting its responsibility, agreed that exceptional cases might arise, and directed the telegraph administration to arrange for the admission of women. Allied reasons are officially stated to have weighed with the government of South Australia."

In addition to this motive of economy, women have the valuable quality of docility.

"There seems little doubt that a still further consideration with many of the administrations has been the relative docility of the women. In England and France the women are practically unorganized, while the men have followed the general tendency to form unions for the protection of their interests and the improvement of their position. The Italian administration describes this quality of women thus: 'The women do not generally concern themselves with political questions, and are strangers to the struggles of parties and interests. This endows them with the best qualities requisite for the telegraphic service, namely, patience, discipline, and application.'"

As an evidence of the widespread employment of women it is noticeable that 35 States in the Postal Association have adopted the system of engaging females as telegraphists or telephonists. Belgium has renounced the admission of women since 1889,

and Germany has since that time discontinued the introduction of female learners.

The question of the efficiency of female telegraphists is not an easy matter to answer offhand, and Mr. Garland finds it necessary to descend into details. The first administrative statement quoted is that of England, which reported to the International Bureau in 1899 as follows:

"Generally speaking, the women are as efficient as the men, but they are more frequently absent for sickness, and their number is limited because they are not eligible for night duty; in addition, their pay is about 25 per cent. less than that of the men. In short, the employment of women offers great advantages."

Mr. Garland criticises this statement, and the conclusion which he arrives at is best expressed in the quotation from the evidence of Sir H. Fischer before the Tweedmouth Committee: "I think," he said, "an average male operator is superior to an average female operator. There is no duty which a female performs better than a male. There are duties which they perform equally well—for instance, working minor circuits. This work is now left principally to them in the Central Office." Austria, Belgium, France, and Italy all support the main contention that, while women can perform the minor manipulative duties equally as well as the men, for the work of supervision, the more important instrumental duties and the technical part of telegraphy, experience shows they do not compare advantageously with the males.

"'It is a matter of reproach,' says M. Mesurier in the report of the 1895 Budget Sub-Committee, 'that they cannot answer all the questions put to them, and it must be noted that they possess no technical knowledge, and frequently become confused in face of the innumerable details of the complex service in which they are engaged. Another objection is that the postal operations are not performed so rapidly by women as men. . . . The employment of women is perhaps advisable and useful on condition that they are chosen with discernment, according to their aptitudes, and the importance of the duties to be confided to them, but a selection is imperative.' The result of the experiments of the Austrian administration is practically the same. 'Women,' runs its report, 'have not sufficient energy to obtain authority over other persons, and the surveillance of women is always entrusted to men chosen specially for this task.'"

Mr. Garland thinks that the English female telegraphist compares very favorably in this respect with her Continental sisters, and instances one of the sections in the C. T. O. as a proof of his contention. He holds that "a number of women are capable of something more than mere routine duties, and that number is increasing, and believes that higher capacity seems to run hand in hand with a wider entry into public life."

(To be continued.)

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

Home for Incapacitated Telegraph Operators.*

BY COL. WM. B. WILSON.

There is no fact better established in principle than the one that it is the duty of society to care for such of its members who through work, disease or advanced age have become incapacitated from further contributing to the common weal and cannot provide for their own maintenance. It is also a recognized principle that such persons, when so incapacitated, should be cared for in a manner commensurate with their former social position and the value of their past service to the community. These principles being recognized, it will clearly be admitted that having done their part in advancing the interests and prosperity of society, they are entitled by right to draw upon society for the means to sustain and rationally enjoy that portion of life which may be left to them. The twentieth century, on its opening, witnesses that society has not been derelict in its duty of honoring such drafts. While perhaps they may not have been paid in full, the sum of the credits is considerable, and the balances due are growing smaller with each recurring year. A multitude of channels through which are floated society's due to its incapacitated members have been opened, and more are in process of being opened. Through the mediumship of National, State and Municipal Governments, together with fraternal, mutual aid and beneficial societies, great progress has been made in giving assistance to those who are in need and entitled to it. Old Soldiers' Homes, Naval Homes, Old Men's Homes, Old Ladies' Homes, Masonic Homes, Odd Fellow's Homes, and Homes of kindred character are numerous throughout the continent. Railroad and some of the larger manufacturing corporations have provided or are providing for the relief and pensioning of their employes, and coupling with those desirable aids insurance for the benefit of the employe's family when death calls him away. Shall an incapacitated person be provided for in class or community is a question that hardly needs argument to decide in favor of the latter, but as we are confronted with the question of class provision, let us consider it.

That incapacitated members of our craft should be well taken care of is indisputable. They have worked along the lines of greater development of the Commonwealth, for, as the railroad, with its ramification, has carried over its iron bands the car of progress with wonderful results, that progress would have been very slow but for the aid of the telegraph, its hand-maiden. The same is true of commerce, trade, diplomacy, manufactures, education and science. That the manipulators of the telegraph, whatever their condition, should share in the results of social progress, will not be denied, and that we, as representatives of their craft should esteem as a sacred duty the earnest consideration of the method or methods whereby incapacitated telegraph operators should be cared for, none will dispute.

*Read at the meeting of the Old Time Telegraphers and Historical Association, at Montreal, Que. on Sept. 11, 1901.

The duty we have to perform in this respect is a call upon us as citizens before the class call of the telegraph fraternity. However, aside from our duty as between man and man, there is an attraction in the fraternal idea. The mysterious power which pulsates the metallic threads stretched across the continent, binding community to community, and bringing those far separated from one another into close personal touch, has formed a mystic cord cementing telegrapher to telegrapher in an indissoluble brotherhood and accentuated the duty one owes to the other.

It is for this reason that prominent in the minds of all of us in the suggestion of establishing a National or Continental Home for members of craft in America; and the taking of the best actions to insure carrying the suggestion into practical effect. Without affirming or denying the wisdom of determining a social question along class lines, let us as a body of telegraphers, consider the first point, and the important one, in its practical bearings.

A single centralized Home would of necessity have to be a large one if the proportion of incapacitated telegraphers bears any important relation to the whole body and would require a considerable sum of money to establish and maintain it. Postponing for a moment the financial problem involved, it is certain that upon our agreeing that such a Home was the proper way to meet the needs of our less fortunate craftsmen, we would be confronted with the difficulties involved in transportation, location, and the almost cruel separation of the beneficiaries from the friends of a lifetime and old familiar scenes. The Northern oak would languish and die where the palmetto and mangrove would flourish. Chicago would be miserable in St. Louis; New York die of ennui in Philadelphia, and Boston grieve over its patriotism in Charleston. Successful transplanting is a rare art where healthy stocks are concerned, but it is almost impossible with the aged, weak or sickly ones. These difficulties, however, might be met to some extent by substituting several Homes for a single Home, the providing for which would be in dividing the territory to be covered into circles, and organizing the operators in each circle into an association for the purpose of establishing and maintaining a Home within the circle. Montreal, Boston, New York, Washington, Atlanta, New Orleans, St. Louis, Cincinnati, Chicago, Omaha, Denver and San Francisco, would make good and logical centers for such circles.

Granted the consensus of opinion would be favorable to either proposition, and the suggested difficulties cast aside as not formidable, then promotion and financing to advance the object would loom up as very serious points of the question. How are they to be taken care of? Sentiment, that tender susceptibility which springs from our emotions and is a prominent characteristic of telegraphers, will be very prompt in answering that there are in the United States alone 120,000 telegraph operators in active service, and that each one

contributing one cent a day would produce an annual sum of \$438,000. That is truly a sum sufficient to establish and maintain a central Home or twelve circle Homes, but can such a fund be raised and the integrity of the amount maintained, year after year? It is more than doubtful. Eliminate from the aggregate number of telegraph operators, covering the field, all those employed in the railroad service who are now contributing to relief and insurance funds and for whom pension privileges have been already provided; then that large number of commercial operators who are connected with mutual aid societies; and those who through investment of part of their wages in building and loan associations or annuities or endowment insurance policies are making provisions for themselves in anticipation of the time when the bloom of youth shall have faded from the cheek and the footsteps become enfeebled, and the sum to be raised from the fraternity annually will shrink to very small, if not fatal, proportions. These eliminations must be made in any attempt which involves spending other people's money—an attempt, by the way, which has never met with any marked success. Considering that the average salary paid the average operator is not exorbitant and will not permit him or her to go beyond the provisions they may have already made for the future of themselves and fellow craftsmen, and further strain upon their limited resources, cannot be sustained.

From the view point of experience and careful study of the subject of caring for the incapacitated, I should say that while a Home appeals very strongly to my sympathies, yet the conditions are such I am convinced of the impracticability of the project. This, however, should not cause any one to abate an iota of interest or effect in behalf of the care of incapacitated operators.

The question seems to me to be one of greater breadth than that with which it has been furnished by the confines of a brotherhood, and is one which comes within the scope of social science. Sociologically considered, telegraphers contribute to the advancement of society through the corporate bodies by which they are employed and logically should receive their returns whether in health or incapacity through the same channel. Our efforts, therefore, should be exercised in the direction of urging upon the great telegraph companies the organization of relief, insurance and pension funds for the benefit of their employes. The great railroad companies have set them the example, and it is idle to say that such organization cannot be effected. It is only a matter of more or less detail, the setting aside of so much revenue and collecting contributions from employes. The Telegraph School has given to the world statesmen, authors, scientists, professional men, publishers, financiers and men of affairs, and it would be an over-bold person who would dare assert that it was incapable of furnishing managers of the telegraph who had the high sense of duty, ability and business capacity to solve such a simple problem, fraught with so much good to the social fabric.

A New Break Key.

A "break" key has been devised by Mr. J. F. Skirrow, assistant manager of the Postal Telegraph-Cable Co., New York, for use on duplexes and quadruplexes. This key is placed alongside the sending operator's key and is arranged so that when a break is made, the sending operator depresses the break key with his thumb without removing his hand from the regular key. When so depressed, the sounder on the sending side is cut in with the sounder on the receiving side, with the result that the sender gets the break instantly on the sending sounder. On releasing the key the circuits automatically resume their normal conditions. On circuits equipped with this device the repetition of and contention over the word "break" is unknown. The stoppage of transmission is cut down to a minimum and it is unnecessary for the receiver to take any notice of the break other than to call the sender's attention to it.

British Pacific Cable.

An interesting report, showing the progress of the work on the British Transpacific cable—to be the longest cable ever laid—has been received at the State Department from Consular Agent Robinson, at Norfolk Island. The report states that on the passage across to Norfolk Island from Brisbane, Australia, soundings were taken every 10 miles by the British cable steamer "Britannia" which is being used to mark out a track for the cable. About 100 miles from the coast an obstruction was met with in the shape of a range of submarine mountains lying directly in the track, and a deviation to the south had to be made to clear it. The greatest depth obtained was 2,800 fathoms, and the most shallow 237 fathoms, the latter being the depth recorded when the ship was right above the tops of the mountains. It has been decided to land the cable at Anson Bay, on the west side of Norfolk Island, and a cable house is to be built there. Norfolk Island will be one of the most important stations of this cable route, as all messages to Australia and New Zealand will converge there to be repeated.

Telegraph Lines to Straits of Belle Isle.

The Dominion Government telegraphs have been extended to Chateau Bay in the Straits of Belle Isle, and telegraph offices have been established at Pointe du Maurier, Harington, Mutton Bay, St. Augustin, Bonne Esperance, Blanc Sablon, Red Bay, and Chateau Bay. From the latter place a cable will be laid to Belle Isle, and a signal station established. It is the intention of the Government to test the Marconi wireless system between the same points. The completion of this work will be of assistance to the shipping using the Straits route.

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

Commercial Pacific Cable Co.

Articles of incorporation of the Commercial Pacific Cable Company were filed with the Secretary of State at Albany, N. Y., on September 23.

The articles say that the general route of the lines of the company will be across the United States to California, "thence under the waters of the Pacific ocean to the Hawaiian Islands, thence under said waters to the Philippine Islands, touching other islands in the Pacific ocean on the way."

The capital stock of the company is \$100,000. The directors for the first year are John W. Mackay, of Virginia City, Nev.; George G. Ward, of New York; Clarence H. Mackay, of Roslyn, Long Island; Albert B. Chandler, Edward C. Clapp, Albert Beck, William W. Cook and George Clapperton, of New York.

Respecting the purposes and prospects of the new company Mr. Mackay said that the Commercial Pacific Cable Company had been organized for the purpose of laying a submarine cable from California to the Philippine Islands by way of Honolulu, in the Hawaiian Islands. The length of the cable will be about 8,500 miles, the part to be first laid being from California to the Hawaiian Islands. This portion, Mr. Mackay expects, will be in operation within nine months. The time required for the laying of the remainder of the cable from the Hawaiian Islands to the Philippine Islands will depend upon how quickly the cable can be manufactured, but Mr. Mackay believes the whole cable will be completed within two years from this date. On August 23 Mr. Mackay made application to the United States Government for landing rights in California and the Hawaiian Islands and the Philippine Islands.

The new company, Mr. Mackay announces, is willing to lay the cable on the same terms and conditions at San Francisco, Honolulu and Manila, so far as landing rights are concerned, as were imposed by the United States Government on the cable lines which have been landed on the Atlantic coast of the United States. The new company does not ask any subsidy or any guarantee, which is Mr. Mackay's reason for believing there will be no trouble in agreeing with the government on the terms and conditions upon which the cable will be landed.

The new cable, when it reaches the Philippines, will connect at that point with the present submarine cable running from the Philippines to Japan, and also the cable running from the Philippines to China. A direct cable route from China and Japan to the United States will thereby be established. At present cable dispatches from China to the United States have to be sent by way of Europe. Mr. Mackay said that the present cable rates from the United States to the Philippines and to China and Japan would be reduced when the new cable is laid from 30 to 60 per cent.

Officers of the Commercial Pacific Cable Company were elected on September 24 as follows: John W. Mackay, president; George G. Ward, vice-president; E. C. Clapp, treasurer, and Albert Beck, secretary.

Average Wages of Telegraph Operators.

One of the most comprehensive government reports issued in recent years is contained in two volumes, entitled "Wages in Commercial Countries," reported by Carroll D. Wright, Commissioner of Labor. Briefly the report is a compilation of the wages and hours of labor of persons engaged in all occupations all over the world, about which data have been officially published. Some of the data go as far back as 1725, as in the case of carpenters. The compilation was begun in 1894. It is a stupendous work, and nothing like it has been issued by any other government.

The following table shows the average salaries paid to and the working hours of telegraph operators in some of the states and in other countries:

	Wages a day.	Hours a week.
Montana.....	\$2.30	58
North Carolina.....	2.70	—
Canada.....	1.32 to \$3.60	56
Australia.....	.80 to 2.67	—
New York.....	1.81	70
Kansas.....	1.75	84
Great Britain.....	1.11 to 1.95	56
Mexico.....	1.92	60
Russia.....	.26 to 3.00	56 to 84
Michigan.....	1.51	84
France.....	.99	—
Belgium.....	.98	—
Germany.....	.68 to .98	63
Italy.....	.90	60
Netherlands.....	.50 to .99	56
China.....	.79	—

T. M. B. Association.—Assessment No. 384 has been levied by the Telegraphers' Mutual Benefit Association to meet the claims arising from the deaths of William Monaghan at the Philippine Islands; Clarence A. Cary at Norwich, N. Y.; and Oscar A. Brown at Brooklyn, N. Y.

Dynamotor plants will be installed by the Western Union Telegraph Company at Los Angeles and San Francisco, Cal., Milwaukee, Wis., Detroit, Mich., and storage battery plants will be installed at Savannah, Ga., and Chattanooga, Tenn.

"Electricity Made Simple" is the title of a 233 page book; paper binding, 50 cents; cloth binding, \$1. The author, Mr. Clark C. Haskins, of Chicago, is an old-time telegrapher, but has been engaged as an electrical expert for the past twenty-five years in the various branches of electricity.

This little work is not intended for the instruction of experts, nor as a guide for professors. The endeavor has been throughout the book to bring the matter down to the level of those whose opportunities for gaining information on the branches treated have been limited.

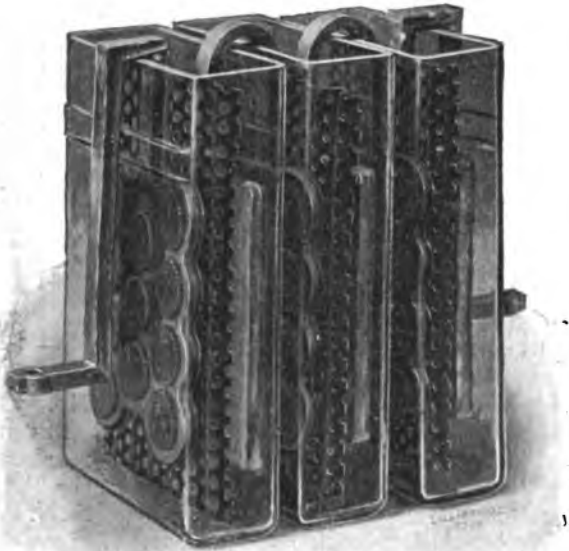
Those desiring copies of this useful work may obtain the same by remitting price to J. B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York.

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A New Storage Battery Cell.

The constantly increasing demand for a storage battery cell especially adapted to meet the requirements of telegraph, fire alarm and laboratory service, where a comparatively high voltage and a small current capacity is desired, prompted The Electric Storage Battery Company, of Philadelphia, to place on the market about a year ago the style of element known as the B. T. type.

The peculiar construction of this type lies in the manner in which the lugs of the positive and negative plates are joined together, forming couplets, thus making practically a permanent connection between the positive plate of one cell and the negative plate of the adjoining cell. The simplicity of



THE NEW STORAGE BATTERY CELL OF THE ELECTRIC STORAGE BATTERY COMPANY.

this arrangement reduces greatly the labor of installing a battery for telegraph service, as the only thing necessary to do to set up the elements is to insert the plates in the jars, the positive plate, as stated above, suspending in one cell and the negative in the next.

The illustration given conveys, perhaps, more clearly the construction of these cells than any written description could give, and the manner in which the battery is set up. The plates are of the same construction as found in all the sizes of "Chloride Accumulators," the only marked difference in this type being the method of casting in couplets the two plates, and the fact that only two plates are contained in each jar.

There are three sizes of this type now catalogued, the B. T., C. T. and P. T., having a capacity at normal rating of six, twelve and twenty-four ampere hours respectively.

It is scarcely necessary to point out the advantages which a battery of "Chloride Accumulators"

possesses over the gravity batteries formerly used for telegraph and fire alarm work—the smaller amount of floor space required by a storage battery, their reliability and cleanliness, and the minimum amount of attention required for their maintenance being potent enough factors to decide in their favor in any modern and up-to-date installation for these purposes. Thousands of "Chloride Accumulators" are now being used by the Western Union and Postal Telegraph Companies, and by the principal railways in this country and Canada.

The Electric Storage Battery Company gives dimensions, capacities and prices of these types in their new edition of Price List "A," copies of which will be forwarded upon request.

Telegraphers in the Philippines.

We take the following from the Manila correspondence of *The Railroad Telegrapher*, published in the September issue:

"Well, boys, if you want to come to the Philippine Islands, just enlist in the Signal Corps, if enlist you will. It does not make any difference if you never saw a telegraph office before, just tell them you are an operator, and they will enlist you at once. But if you are looking for promotion to some higher grade than a second-class private I would advise you to tell them you have been in "Fort Myer" for a session of Sergeant Carrigan's instructions. The Signal Corps is the only branch of Uncle Sam's army that is really working in these islands now, and our officers are the only ones who appreciate our hard and faithful service, but they are powerless when it comes to paying more money.

"Since the increase of the army there have been over 300 reductions made in our branch of the service. First-class sergeants reduced to corporals, making a difference of \$31 a month. A first-class sergeant's pay is \$55 a month; a corporal's is \$24. The sergeants were reduced to the grade of first-class private, and the first-class privates to "soldiers," second-class privates, but the second-class handles his day's business just as if he was drawing \$75 per month. Principally all the second-class privates are operators, not "Fort Myer Graduates," but men of ten to fifteen years' experience. If you want a job telegraphing for Uncle Sam, just come along. We pay you \$15.60 per month, feed you on bacon and spuds; on Sundays we have rice and salmon. You only have eight hours a day for duty if you are lucky enough to strike an office where two men are assigned for duty. If not you can consider yourself on duty at all hours, both night and day.

"There have been a great many of the boys come from Cuba to these islands recently. They say that they were treated pretty nice in Cuba, but this is something they didn't expect over here.

"Now, if any of you lightning slingers want to see the Philippine Islands, we will very readily resign. It is an impossibility for an operator to get his discharge in these islands now, simply because their services are needed badly."

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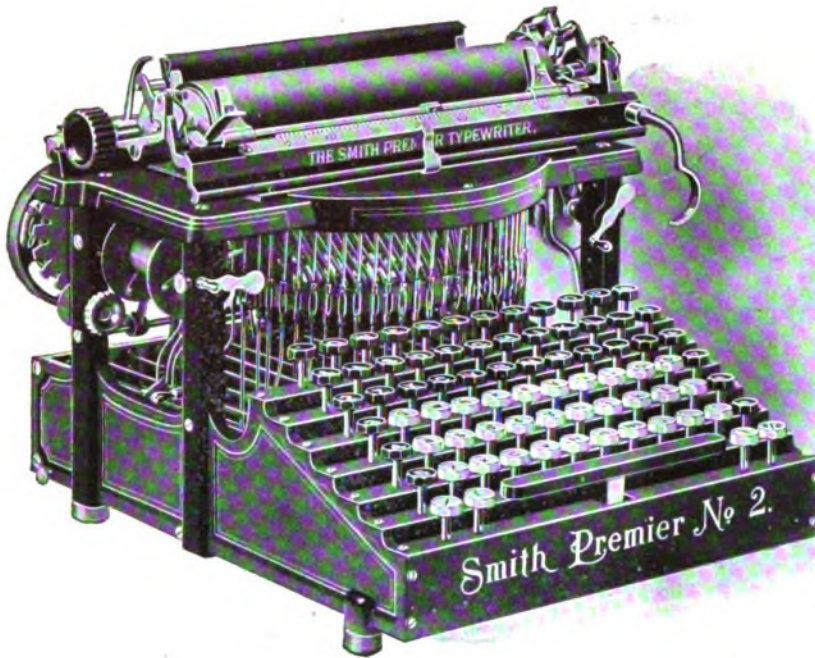
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NEW YORK, October 1, 1901.

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

THE ROBerson QUADRUPLEX.—The Roberson Quadruplex System, which has been recently adopted by the Western Union Telegraph Company, and which will be put into extensive use throughout that system, was illustrated and described in our issues of March 16 and April 1 of this year. Those who desire copies of these issues can obtain the same at 10 cents apiece. As there are only a few of these numbers left, we would urge those who wish to become posted on this new system to procure copies before they are entirely out of print.

Suggestions Wanted for Office Management,

With the desire to make TELEGRAPH AGE of even more value to the telegraph office managers of this country as a source from which they may derive practical suggestions as to the best way in which to conduct some of the details of office man-

agement, it is our purpose to invite from managers contributions to this journal covering a series of questions which shall be propounded from time to time. In this systematic way, taking up point by point, it is believed that a valuable interchange of ideas may be established that will prove to be of mutual benefit to all concerned. A number of managers with whom we have consulted relative to this proposition have enthusiastically concurred in the plan outlined.

Conditions of time and place and of environment differ so widely in different offices, frequently permitting methods to be worked out in one office that were possibly deemed impracticable, or perhaps unthought of in another, that the satisfactory results that have been achieved, if told in intelligent recital by those who have been instrumental in bringing them about, ought not simply to interest alone, but to offer the solution of many a vexed problem troubling a brother manager, and show him exactly how to overcome his difficulty.

Probably the most important department in a telegraph office is that of the delivery, followed by those of the receiving, bookkeeping and cashier's, and the manager's executive office. Selecting, therefore, these heads as the first topics for discussion, any manager or other executive officer of a local office who has anything of value to say, who has been successful in overcoming obstacles, and who has perfected any original method whereby the operation of any of these departments is on the whole made easier and better, is cordially invited to tell his fellow managers of the same through the columns of TELEGRAPH AGE.

Communications should not as a rule be over a column in length, or say composed of about 500 words, and should be signed with the full name and address of the writer.

A department of this character, if it serves to develop and bring out the best thought and experience along the lines desired, ought to become, as it grows in helpfulness, one of vital interest to managers generally, and to arouse among them a greater spirit of fraternity.

The Lesson of President McKinley's Death.

The death of President McKinley has entailed so distinct a loss and shock upon this nation, the sad event was so filled with pathetic incident, and has engrossed the thought and time of the people to such an extent as to constitute an object lesson of majestic impressiveness and beauty, far reaching in its influences and inculcating a moral lesson which has sunk deep into the American heart.

Of humble birth, not superior in kind to thousands of others in this broad land, except possibly in the inheritance of certain sturdy qualities that contain the elements of better things, Mr. McKinley simply made the most of himself, doing it thoroughly, grandly and died affording the loftiest conception of a self-made man in all the higher attributes of mind and heart and accomplished purpose. In his exalted character he may well be accepted as a standard of the type of high and noble man-

hood. As such he presents to the young men of this country a pattern to follow and an inspiration to cheer.

All cannot rise to be President, but with the talents with which we are endowed, some one, some two and others five, we owe it to ourselves as individuals, to the nation to which we belong, and to God to whom we must account, to make the best use of whatever qualifications we may possess.

This is a lesson which the death of President McKinley stamps ineffaceably upon his time and kind, and which, standing out the more clearly on account of his tragic death, appeals with greater force to the ambition, the understanding and the future of this and coming generations.

The Nation's Tribute.

The almost universal stoppage of all labor and transit in this country during the five minutes from 3.30 to 3.35 on the afternoon of September 19, the day of the funeral of President McKinley, was a most touching tribute by the activities of the United States to the man so widely beloved. At the time named a reverential hush came upon the land, and the strange and solemn spectacle was presented, not only of quietude, but also of prayerful utterance and sacred song observed in street and office, something never before witnessed. The cadences of "Nearer, My God, to Thee" and "Lead, Kindly Light," sounding in unaccustomed places of business, the refrain being caught up, echoed and repeated everywhere, gave expression to feelings tender and profound in their depth.

Probably nowhere outside the memorial meeting places were there more interesting exercises during the short calm than in many of the telegraph offices. Power was shut off, all wires were out of service and every instrument silent, conditions never before obtained. The time and occasion will never be forgotten.

President McKinley's Views on the Telegraph and Cables.

President McKinley, in his notable last speech delivered at the Pan-American Exposition, at Buffalo, made the following references to the telegraph and to the Pacific cable:

"Isolation is no longer possible or desirable. The same important news is read, though in different languages, the same day in all Christendom. The telegraph keeps us advised of what is occurring everywhere, and the press foreshadows, with more or less accuracy, the plans and purposes of the nations. Market prices of products and of securities are hourly known in every commercial mart, and the investments of the people extend beyond their own national boundaries into the remotest parts of the earth. Vast transactions are conducted and international exchanges are made by the tick of the cable. Every event of interest is immediately bulletined.

"The quick gathering and transmission of news, like rapid transit, are of recent origin, and are only made possible by the genius of the inventor and

the courage of the investor. It took a special messenger of the Government, with every facility known at the time for rapid travel, 19 days to go from the city of Washington to New Orleans with a message to General Jackson that the war with England had ceased, and a treaty of peace had been signed. How different now. We reached General Miles in Porto Rico by cable, and he was able, through the military telegraph, to stop his army on the firing line with the message that the United States and Spain had signed a protocol suspending hostilities.

We knew almost instantly of the first shots fired at Santiago, and the subsequent surrender of the Spanish forces was known at Washington within less than an hour of its consummation. The first ship of Cervera's fleet had hardly emerged from that historic harbor when the fact was flashed to our capital, and the swift destruction that followed was announced immediately through the wonderful medium of telegraphy.

"So accustomed are we to safe and easy communication with distant lands, that its temporary interruption, even in ordinary times, results in loss and inconvenience. We shall never forget the days of anxious waiting and awful suspense when no information was permitted to be sent from Peking, and the diplomatic representatives of the nations in China, cut off from all communication, inside and outside of the walled capital, were surrounded by an angry and misguided mob that threatened their lives, nor the joy that thrilled the world when a single message from the Government of the United States brought, through our Minister, the first news of the safety of the besieged diplomats.

"At the beginning of the nineteenth century there was not a mile of steam railroad on the globe. Now there are enough miles to make its circuit many times. Then there was not a line of electric telegraph, now we have a vast mileage traversing all lands and all seas. God and man have linked the nations together. No nation can longer be indifferent to any other. And as we are brought more and more in touch with each other the less occasion is there for misunderstandings, and the stronger the disposition when we have differences to adjust them in the court of arbitration, which is the noblest forum for the settlement of international disputes.

"We must build the Isthmian canal, which will unite the two oceans and give a straight line of water communication with the western coasts of Central and South America and Mexico. The construction of a Pacific cable cannot be longer postponed."

Operators interested in the method of treatment of writers' cramp will find very complete information in the little booklet entitled "The Cure of Telegraphers' Paralysis," published by TELEGRAPH AGE, New York. Price 50 cents.

Send for a sample copy of the next issue of TELEGRAPH AGE.

Lateral Induction and the Telegraph.

BY FRANK P. MEDINA.

The most striking characteristic in the growth of telegraph plants in recent years is, perhaps, the tendency to work direct circuits between points more and more distant from each other. The attempt to work such circuits as those between Chicago and San Francisco, which are now worked every day, was, a few years ago, looked upon as useless. But to-day New York and San Francisco are directly connected with each other by duplex systems, which yield very good results.

Of course these long circuits are compound in their nature; that is, they consist of component circuits added together through repeaters. Where the parallel wires are few, and far apart on the cross-arms, the compound circuits work well with few repeaters. Under these slined working conditions the component circuits can themselves be of goodly length. One of them that make up the New York-San Francisco circuit of the Postal Telegraph-Cable Company, is 1,200 miles long, running direct from San Francisco to Albuquerque, New Mexico. Now, while fairly good results are attainable from long wires with few repeaters, notwithstanding the growth of parallel lines on the same poles, still there is a source of trouble that continues growing as new wires are added that causes the working to become more and more difficult. The cause of this trouble is the mutual action between the wires during the signaling process, and the effect is to shatter the signals by causing the relay levers to flutter, or by holding them back from responding to the signal-elements transmitted to them. The greater nearness of the wires to one another throughout their length is, of course, the reason for this increased interference between them.

Induction is the name given to the phenomenon that causes the trouble; mutual induction between wires. I am not able to get much satisfaction out of this name, for it appears to me to include phenomena so varied in character as to belong in different classes. But this is another story. Let us now distinguish between the mutual action which takes place between the primary and secondary coils of a transformer, and that which occurs between the two plates of a plane condenser. The former, or electro-magnetic induction, and the latter, or electro-static induction, both occur in the working of telegraph lines. Which of them is the more prominent in its effect? Do the inductive troubles between wires belong to the class of phenomena distinguished as electro-static, or are they properly included under the head of electro-magnetic? Is the induction coil effect between these long wires the source of the shattered signals or are they due to the electro-static strain that manifests itself in a condenser? Notwithstanding the prevalence of the contrary view I believe the answer is that the electro-magnetic effect is usually negligible compared with the electro-static effect. Here is the fact pointing to that conclusion:

When an induction coil is operating, if the primary current is broken, the current in the secondary moves from end to end in the same direction, and a wire outside would carry the momentary impulse current throughout its length all in the same direction around the circuit. But there is no such effect manifested between long telegraph lines 16 or 18 inches apart. Substitute a condenser for the induction coil, but join it up so as to simulate the conditions obtaining between long parallel telegraph wires. This can be done in the case of a two-plate condenser, by attaching one of the plates to the middle of, say, a thousand-foot length of wire, and the other plate to another thousand-foot piece of wire. What happens when one of these wires is charged by a battery? The other wire is subjected to an inductive influence, but the current is no longer continuous around the circuit. In fact two currents flow away from the condenser in opposite directions along the second wire and tend to neutralize each other. Earthing the wires will make these two currents manifest.

Now this is exactly the effect that shows itself between two adjacent telegraph wires, and this is why I think our troubles come, not from the transformer effect between the wires, but from the condenser effect. A transformer effect would, on closing circuit A, produce a current in the same direction all along the line B. A condenser effect would produce a current that was moving, say, toward the distant station away from the point of maximum influence, and also a current toward the home station, away from the point of maximum influence, and this latter current, from the shorter route, would be very many times the stronger. This is because the point of maximum influence is close to the ends of the line, and the induced currents are strong in proportion to the shortness of their paths to earth.

Being static in its nature this induction effect is a function of the electromotive force, and not a function of the current; so when it becomes necessary to decrease it, it has to be done by decreasing the electromotive force. This proposition, of course, implies that the placing of the wires farther apart is impracticable, for that is the real remedy indicated. There are two ways of accomplishing the design of reducing the electromotive force where a current of given maximum strength is used for signaling: using bigger wires or shorter wires. The former plan means the practical rebuilding of a plant, but the latter can be accomplished, still maintaining the total length of the compound circuit, by introducing more repeaters.

There are many strong reasons why these repeating stations should be as few as possible. Besides the extra running expense, there is always additional danger of apparatus trouble, and inattention of the attendant at any one of these points might destroy the usefulness of the whole line. Still there are reasons of greater moment which call for their establishment. Besides allowing a decreased electromotive force to supply component circuits, and thus diminishing the mutual static induction, the shorter circuit introduces a feature

very valuable to clearness in signaling. To illustrate this let us examine the process of receiving a signal on a relay, by positive and negative currents.

Let us call the positive the marking current, and the negative the spacing current. With the spacing current flowing the relay lever rests on its back contact and the circuit of the local sounder is open. Now comes in the marking current, throws the relay lever over and closes the local circuit of the sounder. But just here is where the valuable feature of short circuit signaling comes in, where currents of a given strength are adopted for signaling purposes. In moving from the back to the front contact the lever is subjected to an interval of no pull either way—a moment when there is neither marking current nor spacing current, but a state of vague neutrality. What a figure is cut by this interval of time that it takes the lever to pass from one contact to the other may be appreciated when it is stated that it is only during this interval that inductive interferences are usually felt. When the lever is under the influence of the marking current, or when spacing current is flowing, the induction is seldom strong enough to affect it. But the interval of lever movement from one contact to the other: this is the precious time; this is when the signals are mutilated by the action of adjacent wires. Now, by shortening the circuit, the time-constant is diminished and this interval of lever movement is cut down. The lever moves with greater rapidity and leaves less time for foreign influences to do their deadly work. It is obvious that if the lever could be made to move with infinite speed, mutual induction such as disturbs us now would not be felt at all. I do not think that this element of signaling the time of lever movement is sufficiently considered in telegraph practice. It explains why it is necessary to use greater current strength to work the same instruments on long circuits than on short ones which would appear to be unnecessary at first glance. Being an interval of lost time, it is always to be subtracted from the length of the marking current interval, or from the length of the spacing current interval, and, therefore, shows why, with the standard current for shorter circuits, signals on longer circuits will drop out some of their elements and cause others to stick together. If this movement-time of the relay lever were more intently regarded, there would cease to be used in certain classes of multiple telegraphs, relays with extra heavy levers and armatures, which can only increase this movement-time to the detriment of the signals.

Recent devices for transmitting double current signals depend on this principle of lever speed for their efficiency. The currents that operate them are large, the local circuit in which they are operated contains a very large proportion of non-inductive resistance to make its time-constant small, and the levers are very, very light in weight. By this means, non-continuity preserving pole changers are made to simulate the effect of those that keep the points closed in reversing, thus obviating in dynamo quads and duplexes the necessity of

using extra condensers and other cumbersome apparatus.—The Journal of Electricity, Power and Gas, San Francisco, Cal.

The Young Man's Chances.

President James J. Hill, the railroad magnate, has contributed an interesting article to the Saturday Evening Post on "Young Men and Speculation." He points out the danger to young men from the speculative craze, comments the Express Gazette, which is now sweeping over the country. He believes that there are a vast number of "wind and water" combinations being formed of the get-rich-quick kind, for fleecing a gullible public. He warns young men against mixing either with the fleecers or the fleeced; and says that there is no substitute for hard work in winning success. He is inclined to think a college education is a benefit to a young man, provided it does not make him priggish and breed distaste for practical work. He believes in work for everybody; and emphasizes hard work as the road to success instead of speculation. The demand for good men, he believes, is increasing rather than diminishing. "Capital is looking everywhere for the right man to direct it."

J. Sterling Morton's Conservative, speaking of the same theme, has an interesting symposium in reply to the question, "What are the young man's chances?" The conclusion of the contributors, in which the editor joins, is that "a young man's opportunities in the business world were never more numerous, attractive, or conspicuous."

The Conservative, however, warns young men against the false notion that success can be attained without hard work, and especially does it warn them against speculation, in which where few succeed, thousands fail. The successes are blazoned to the world, the failures are seldom heard of; they are the wrecks that strew the wayside to which small heed is paid in the fierce competition of life.

There is a great deal of healthy doctrine in this advice. It will fall upon all kinds of ground; and in the right soil will bring forth good fruit.

How the News of the President's Condition Was Furnished Canadians.

Every church in every city of the Dominion, from the Atlantic to the Pacific, was kept posted on Sunday, September 8, regarding the condition of President McKinley, at the instance of Mr. James Kent, the manager of telegraphs of the Canadian Pacific Railway Company, who gave instructions that this service should be furnished the Canadian public in this way. In many churches throughout the Dominion this means of conveying the news of such intense interest was highly commended.

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

A Terrible Reminiscence.

A crowd of drummers were sitting in the lobby of the Louisville Hotel the other night telling of their miraculous experiences, says the Louisville Despatch. All had told their stories but one little man with a short, chubby beard, and when he was called on he said that he had passed through but one thrilling experience and that was too dreadful to review. But the crowd insisted. The little man shrugged his shoulders, looked about him and began:

"I had been away from Louisville about three weeks and I was anxious to get home. I was twelve miles from the nearest station at sunset, and as I was not familiar with the roads in that section of the State I began to feel uneasy. But I was determined to make that station at any cost and I started, notwithstanding that I had been warned by some of the old men in the little town that there would be a storm before an hour. Well, the way I put that horse through was something to be marveled at, but I argued that it was either myself or the horse and I gave him another crack with the whip. I suppose I had made half the distance when it grew very dark and every moment the darkness was increasing. The men at the little town had not been mistaken, for the storm was on me and that with a vim. I shall never forget how the rain poured, but I would not have minded that much had the lightning not blinded my eyes and frightened my horse so he jumped to the side of the road at every flash. One time the horse pulled the buggy against a rail fence and shortly afterward he jumped into a ditch, which was no less than two feet deep. It took me some time to extricate the animal and the buggy from the gully and then I made another start. I was about as wet as I could get and I began to fear that I had lost my way and would have to be out in that condition all night.

"But the horse continued to splash through the mud and I thought it best to let him take his own course. The lightning grew more vivid every moment and the thunder was deafening. I could not see a foot ahead of me, and when we suddenly splashed into a creek I thought my time had come. At any other time I might have enjoyed the electrical display, but then I would have given a large sum to be at home peeling apples before the fire. Well, the trip was bad enough to unstring any man's nerves, but this is not my story.

"I imagined that I was several miles from the station, but suddenly my horse came to a standstill and I heard him rubbing his nose against the side of a house. Jumping from my buggy I ran close to the structure and began feeling around in the darkness. I suppose I had walked around the shanty three or four times when there was a vivid flash of lightning and saw to my surprise and satisfaction that I was at the station I had been seeking.

"'But why was it dark?' I said to myself, when there was a train due in about two hours, as far as I could judge. This mystified me and as a strange thought ran through my mind I shuddered.

After feeling around the station for some time I found the door.

"Never in my life had I experienced such a strange feeling, and I was trembling from head to foot. I don't know exactly what caused it, but I suppose it was a premonition that something was wrong inside the station.

"Once on the inside I stood still trying to peer through the darkness, but the effort was in vain. A faint flash of lightning partly lightened up the room for an instant and I was sure I saw the figure of a man. The lightning flashed again and I was willing to swear that I had seen a human being. He was sitting at a table with his hand on the key, which was clicking at a terrible rate. I began to grow dizzy and for a time I thought I would fall to the floor. Several times I spoke, but there was no answer. My voice sounded harsh and discordant and a dreadful sensation passed over me. I was about to flee from the room when there was a prolonged flash of lightning, followed by a heavy clap of thunder. This time I saw the man distinctly and I concluded that he was sleeping as he sat in his chair. I walked up to where he sat and spoke to him again and again, but still there was no answer. I had become desperate and I placed my hand on his shoulder with a terrible grip.

"'Wake up,' I said, but the body remained rigid. A vivid flash of lightning told me that I had been mistaken; the man's hand was on the key. I shook him again and this time the body lost its balance and fell heavily on the floor. I started for the door, but reeled and fell in the middle of the floor.

"I don't know how long I lay there, but when I regained consciousness three or four men stood about me. The lamp was lighted and lying stretched at full length on the table under a piece of cloth that had served the purpose of a curtain was the operator—dead.

"I was told several days later that the coroner had returned a verdict of 'death from an electrical shock.'"

Odds and Ends.

Stranger: "Is this building an academy of learning?"

Telegraph operator standing in front of the Main Office when the day force is coming on duty: "Gracious, no! What put that idea into your head?"

Stranger: "I've been watching the young men and women going in. One had a music roll, another had a camera, still another had a mariner's compass; then they come in herds with field glasses, medical books, law books, and the Lord knows what else."

Telegraph operator: "Why, stranger, all these people are telegraph operators on their way to work, but between times are studying other arts and professions. The things they are carrying are dummies and contain a noonday lunch, each. This is a telegraph omce."

You can't afford to be without TELEGRAPH AGE.

Echoes of the Recent Old Time Telegraphers' Convention.

The selection of Salt Lake City and Ogden, Utah, as the next place of meeting of The Old Time Telegraphers' and Historical Association gives general satisfaction among the members residing in the far western and Pacific Coast States, and they feel that the selection of these places for the next meeting is a proper recognition of a large membership residing within the territory named.

Mr. George H. Corse, the president-elect of The Old Time Telegraphers' and Historical Association, is the joint freight and passenger agent of the Union Pacific and Oregon Short Line railroads, at Ogden, Utah. He is an old time telegrapher and one of the most popular men in Utah, and a prince of entertainers. The following telegram was received from Mr. Corse in response to a telegraphic notification of his election as president and read at the banquet: "I desire to thank members for honor conferred upon me. Sorry I am not with you. I hope to be able to give members a good time in 1902."

Mr. Belvidere Brooks, the vice-president-elect, assistant superintendent of the Western Union Telegraph Company, at Denver, Col., is so well known to all the old timers, that it hardly seems necessary to assure the members that the welcome to his territory will be a hearty one.

His telegram of acceptance is characteristic of the man when he wrote: "Extend my thanks and appreciation to members. We will make the Rockies ring with our welcome to you at Zion, Salt Lake City."

President L. B. McFarlane in his efforts to entertain and make comfortable and happy the three hundred visitors at Montreal was indefatigable, and the success in the carrying out of every detail was manifest on every hand. Mr. McFarlane was very ably assisted in his work by James Kent, J. E. Hutcheson, Charles Noble, W. B. Powell, W. J. Camp, F. H. Waycott, J. J. Graham, John Horn, Wm. Mackenzie, James Poustie, D. C. Dewar, A. Walsh, W. G. Slack, H. Bott, W. P. Martin, W. B. Rivet, W. D. Scott, T. Rodger, James Cochrane, S. P. Martin, F. L. Jennings, R. F. Jones, J. F. N. Caisse, J. F. Richardson, James Bayles, and Mayor Prefontaine.

Mr. James Kent, who is the general manager of the Canadian Pacific Railway Telegraph Company, was the recipient of many votes of thanks from those who were fortunate in having the necessary time at their disposal to enable them to accept his courtesies and visit Quebec. Fully one hundred of the delegates visited that ancient capital, many of them remaining over to assist their Canadian brethren in extending a hearty welcome to the Duke and Duchess of York, who reached that city on September 16.

The Montreal meeting of the association will pass into history as the best attended of the entire series of such gatherings, and was a fit recognition of the celebration of its twenty-first birthday. On Friday, September 13, when the news reached

Montreal that the condition of President McKinley had become alarming, many of the delegates hastily left the city for their home, the programme for the day as arranged, therefore, was not fully carried out. Only a few of those present visited the power plant of the Lachine Rapids Hydraulic and Land Company, while the theater party in the evening was not as large as expected.

The remarks of Mr. H. P. Dwight, president and general manager of the Great Northwestern Telegraph Company, of Canada, delivered at the banquet, on September 12, have been given much prominence in the Canadian newspapers. They were no doubt due to the high standing of that official. They were as follows:

"I have never until now found it convenient to attend any of the meetings of The Old Time Telegraphers' Association. As it was arranged that the meeting this year should be held in this grand old historic city of Montreal, and as it was here that I begun my career as a telegraph operator 54 years ago, and as the time has arrived when I presume there can be no doubt as to my qualifications as an old timer, I thought it a duty as well as a pleasure to be present on this occasion.

"Looking around the table reminds me of what I have sometimes noticed in connection with some 'young men's' associations, the members of which are often old and gray-headed and sometimes bald-headed men. Our 'old timers,' I should judge by those I see around the table, are some of them what might be called comparatively young men. That, however, depends altogether upon the point of view. When I was 20 or 25 years of age or thereabouts I thought a man of 40 or 45 was a pretty old man, but as I grew older myself I gradually changed my mind as to the old age date until I have now come to think that a man of even 70 or 75 years of age is not a very old man, after all, and a man of 40 or thereabouts a mere boy. The younger men present, however, who may be disturbed as to their qualification for membership in The Old Time Telegraphers' Association on the score of age, need not worry about the matter. You will wake up some morning before long, my young friends, and be surprised to find that you are 70 years of age, and you will begin to think that there must be some mistake about the matter, and you will hunt up the old family Bible to see about it, and you will find the 'Gospel truth.'

"The newspapers are beginning to refer to me as 'the father of Canadian telegraphy,' and I do not hesitate to say that I am very proud to be so called. I confess that I am, in fact, vain of the title. But if I am in any sense 'the father of Canadian telegraphy' the 'grandfather' is Mr. O. S. Wood, who was Professor Morse's first pupil and was the first superintendent of the Montreal Telegraph Co. and who is still living in retirement, a useful and honorable life—85 years of age—one of the truest and best men living, honored and beloved by all who know him, and has been my steadfast friend from the day I first met him 54 years ago until the present time.

"I said that I was glad to be called 'the father of Canadian telegraphy.' Every man is proud to be the father of a numerous and respectable family; and I can point with pride to the numerous progeny in the business which have grown up under me occupying respectable and prominent positions not only on the lines under my charge throughout the Dominion but on other lines in Canada and in the United States—to say nothing of others who have left the service and are filling honorable positions in other walks of life. It has been a great pleasure and I have been very proud to hear, as I have done from time to time, favorable reports from telegraphic superintendents in the United States of our Canadian operators in their service.

"This is not the time or the place, however, for long speeches, and I have little more to say. I don't know how my brother old timers feel, but for my part I feel a very great pride and satisfaction in having been connected with a service which we may proudly claim to have done more than any other to facilitate the business and promote the comfort and happiness and peace of the world, and I take this occasion to congratulate every old timer present who is still or has ever been connected with the business on such an honorable and useful service as it has been our good fortune to be engaged in.

"I hope our brother 'old timers' from the other side of the line have been pleased with their visit to the Dominion and to Montreal. We think we have one of the best countries on the face of the earth, and I will not say the best, because I would not like to be lacking in politeness to our friends by saying that we have a country better than their own. These international gatherings serve a much wider purpose than merely social intercourse in promoting the friendly relations between Canada and the United States. We are proud to know that a Canadian physician and a Canadian nurse are at the bedside of President McKinley. It is pleasant to know there is such a friendliness and that it is constantly increasing. In fact, 'Uncle Sam' and our 'Lady of the Snows' are getting to be very intimate, and, judging from all that we see, the more they see of each other the better they like each other.

"What the ultimate result may be, it is hard to say, but it would not be at all surprising if, sooner or later, 'Uncle Sam' might be found to have very serious intentions—probably a proposal may be made. If matters ever reach such a point I think I can tell pretty well what the reply of our 'Lady of the Snows' is likely to be. I fancy it would be something to this effect: 'Uncle Samuel, you the very good-looking and are very smart and you are prosperous and all that, and I feel greatly flattered, and I have no hesitation in consenting to be your sister.' The fact is that 'Uncle Sam' and our 'Lady of the Snows' are getting to be about as familiar and friendly as they can be, without occupying the same apartment, but I am afraid that 'Our Lady of the Snows' will draw the line there.

"Thanking you for listening so patiently to these disjointed remarks and wishing you all a safe journey home, with pleasant recollections of this morning, I will take up no more of your time."

Mr. H. P. Dwight was heard to remark that he was delighted with meeting so many of the fraternity and that the banquet was one of the most enjoyable he had ever attended. He was about the corridors of the Windsor Hotel until nearly three o'clock in the morning following the banquet, shaking hands and having cordial chats with delegates.

Mr. A. Pope, superintendent of the Great Northwestern Telegraph Company, and Mr. T. J. Mahon, manager of the Canadian Pacific Telegraph Company, of Quebec, devoted considerable time in showing the visiting members of The Old Time Telegraphers' Association the interesting places in that quaint old city.

It would be amiss not to mention the valuable services rendered by L. J. McMahon, President McFarlane's stenographer, who had charge of the information bureau. He was always affable and courteous, even under the most trying circumstances. The New York delegation presented him with a handsome umbrella to commemorate the event.

Mrs. McFarlane, the wife of the president, and chairman of the Ladies' Reception Committee, was on hand during the three days of the convention, and was not behind the president in her endeavors to make it pleasant for the visiting ladies in every possible way. Mrs. James Kent, Mrs. W. B. Powell, Mrs. W. J. Camp, Mrs. W. D. Scott, Mrs. H. Bott, and others, all assisted Mrs. McFarlane in her arduous yet pleasant duties.

At Mount Royal in reply to Mayor Prefontaine's welcoming address, Mr. Walter C. Burton, of New York, responded in a manner that made the strangers ask, "Who is Burton?" Mr. Burton's speech on this occasion was in excellent taste and won for him many plaudits, as also was his concluding speech as toastmaster at the banquet. He was at all times and places ready with remarks that made the New York delegation proud of having him as a member. His efforts added much to the dignity and pleasure of the occasion.

Mayor Prefontaine presented handsome bouquets of flowers after refreshments were served on Mount Royal, to Mrs. McFarlane, of Montreal, Mrs. S. A. D. Forristall, of Boston, Miss Fanny Meyer, of St. Louis, and Mrs. John Brant, of New York.

While Mr. Wm. Maver, Jr., was visiting the Great Northwestern telegraph office, he was shown by Manager W. B. Powell a messenger boy's book that Mr. Maver had used over thirty years before while a messenger in that office. Mr. R. C. McDonald, of New York, another former Montreal messenger boy and operator, was warmly greeted by many who had served with him as messengers and operators in the long ago.

There was probably not a more delightful person in attendance than Mr. A. M. Mackay, super-

intendent of the Anglo-American Cable Company, at St. Johns, N. F. Though he has seen fifty-one years of active service he is as sprightly as a man in his forties. Mr. Mackay claims to be one of the first, if not the first, sound reader.

A delightful little poem paraphrasing Hiawatha was received by Secretary Brant from Mrs. H. A. Tuttle, Minneapolis, Minn., by wire. It is unique in its way and notably characteristic of that charming lady's versatility.

Mr. M. J. O'Leary and wife, of New York, after attending the reunion, took a trip to Halifax, N. S., where Mr. O'Leary formerly served as a soldier in the British Army.

Mr. Sam'l R. Crowder, of Richmond, Va., with his guitar and his gift of song, was an especially welcome guest, contributing much on many occasions to the pleasure of the company. He accompanied the New York party in its special car, and his efforts to please were fully appreciated.

The New England contingent of twenty-five traveled in a special car from Boston over the Boston and Maine and Central Vermont railroads. A special car containing the Chicago members, thirty in number, went over the Grand Trunk to Kingston, and then journeyed by boat down the St. Lawrence to Montreal.

Had not the shooting of President McKinley prevented many from going to Montreal, from distant places, this would have been the banner meeting in point of numbers. While it rained all day Wednesday and Thursday, September 11 and 12, the bad weather did not materially interfere with the carrying out of the prearranged programme. The serious condition of President McKinley dampened the spirits more than the inclemency of the weather.

Mr. C. P. Bruch, assistant general manager, and Mr. Thomas E. Fleming, special agent of the Postal Telegraph-Cable Company, New York, were warmly welcomed by their many friends in Montreal. It was greatly regretted that they could not remain to attend the banquet.

Mr. Thomas Ahearn, of Ottawa, member of the Executive Committee, was about the Windsor Hotel all day Thursday greeting his many acquaintances from the States. Mr. Ahearn was one of the galaxy of star operators, so noted, at 145 Broadway, New York, in 1874.

Vice-President Hutcheson, of Ottawa, Ont., one of the leading members of the celebrated Canadian Rifle Team, which carried off the laurels at the Seagirt, N. J., contest, early in September, cancelled his engagement with the team in order to enable him to be present at the reunion, and so to contribute his share in entertaining the visitors.

To Mr. S. A. D. Forristall, superintendent of telegraph of the Boston and Maine Railroad, and Mr. M. Magiff, superintendent of telegraph of the Central Vermont Railroad, the thanks of New England members are due for courtesies extended.

W. H. Harper, Chatham, Ont.; H. B. Spencer, Ottawa, Ont.; W. F. Hitchings and wife, Boston,

Mass., were present at the reunion, but their names were omitted from the printed list.

Members should feel grateful for the many courtesies granted by the following-named railroads: New York Central, Pennsylvania, Southern, Grand Trunk, Canadian Pacific, Boston and Maine, Central Vermont, Buffalo, Rochester, and Pittsburg. The railroad companies on these occasions have always been liberal in extending favors to members, and a full recognition of such courtesies should be given when opportunity offers.

CORRESPONDENCE.

Why Not Ethergraphy.

Editor TELEGRAPH AGE:

On page 380, TELEGRAPH AGE, September 16th issue, I find an article taken from the New York Times, which is at war with the term "Wireless Telegraphy." I quite agree with the writer that the term "Wireless Telegraphy" is illogical and distinctly a "misnomer." Now then, if "Ether" is supposed to fill all space, and "Graphy" means to write, why wouldn't "Ethergraphy" be a proper term for Marconi's great discovery, as it is believed by a great many, if not all electricians, that the ether is the conductor of electrical waves, or that the electrical current follows the etheric waves. If the ether theory be true, and we know of no reason to doubt it, then in using Marconi's system of Morse signals without a main line conductor, certainly the dots and dashes are carried along by the "etherical" conductor, which constitutes writing with the aid of the ether; hence the deduction, "Ethergraphy."

Yours very truly,

JAMES B. DILLON.

Louisville, Ky., September 23.

Balancing Quadruplexes and Duplexes.

Editor TELEGRAPH AGE:

Referring to my article in the AGE of August 1, on "Balancing Quadruplexes and Duplexes," and the observations under the same heading in the issue of September 15, permit me to say that in the early history of polar working, probably about 1883, this office experienced considerable annoyance in having to reverse relays and polechangers daily, to work North and South during the day and Western circuits at night, which I made the subject of a complaint, with the suggestion that all polar duplex and quadruplex instruments be required to be set up so that when at rest, with keys open, they would send copper battery to the line.

This suggestion passed through the "Circumlocution Office," was approved, and we were informed that instructions had been issued that all sets should be made to conform to this regulation.

If a set should be connected up the reverse of this regulation, the directions given in my article would, of course, work backwards, as Mr. Grandy says; but I assume that the rule is being followed.

Respectfully,

E. L. EUGBEE.

Washington, D. C., September 19.

LETTERS FROM OUR AGENTS.

[Advertising will be accepted to appear in this department at the rate of three 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.]

CINCINNATI, O., POSTAL.

S. W. Bitler has been appointed manager at Findlay, O., vice E. A. Meyer, who has been transferred to Cleveland Postal operating room.

E. G. Bronson, formerly of Paris, Ky., has been appointed manager at Georgetown, Ky.

F. B. Barnard has succeeded W. M. Maffet as manager of Cynthiana, Ky., office.

J. E. Fulton, who has been employed in Cincinnati, has been promoted to the managership at Steubenville, O., vice E. P. Ohmer, resigned.

Superintendent E. W. Collins has spent most of his time lately in Canton on account of the President's funeral.

Audit Clerk C. D. Ely, of the superintendent's office, has returned from a week's vacation on the lakes. •

Recent Visitors: Messrs. E. W. Blakeley, manager at Columbus, O.; S. G. Bentley, manager at Lexington, Ky.; E. R. Collins, manager at Zanesville, O., and G. A. Schwenke, manager at Richmond, Ind.

J. Dolin, manager at Wellington, O., was struck and killed by a Big Four passenger train on September 16. The Postal Company loses a faithful employe.

E. E. Dougherty is the manager of the new Sellersburg, Ind., Postal office, and is working up quite a business with Cincinnati.

K. C. Bedford was acting manager at Lexington, Ky., during Manager S. G. Bentley's two weeks business trip.

Manager C. E. Sawtelle, accompanied by his wife, left September 16 for a two week's trip in the East. He first went to Philadelphia, thence to Boston, and afterward to New York, returning home by way of Buffalo, taking in the Exposition and Niagara Falls.

Fenton T. Bott, Mr. Sawtelle's assistant, acted as manager during his chief's absence.

SAN FRANCISCO, CAL., WESTERN UNION.

Very few offices in the United States can boast of the rapid growth, increased facilities, and large development in business that this office has experienced in the past few years.

The opening of the Klondike a few years ago was the starter, followed by the Spanish war, the Philippine war, the Chinese war, all directly affecting this part of the country, has almost doubled the business at this point.

The late arrival of J. C. Barclay, of Chicago, electrical engineer of the company, to superintend the installing of an extensive dynamo plant, necessary

for the increased number of overland wires lately added to the already large system, more than ever demonstrated the growth of the office, and when it is completed we will have the latest and largest up-to-date plant in the country. The office has been enlarged until it is almost twice its original size.

Mr. C. F. Mauntler, dynamo expert of Chicago, assisted by Messrs. Pittinger and Coop, of San Francisco, are doing a very fine piece of work in installing the plant, which will be in full operation by the time this article is published.

Arrivals: Messrs. Decatur, Mellen, Cronan, Thompson, Fogarty, Pedley, McKay, Bibb, Corcoran, Berg, Andrews, Hunt, Bell, Miss Donnelly, Miss Kottinger, Miss Connelly, Mrs. Saxton.

Departures: Messrs. Stevenson, Dogge, Hanson, Brooks, Simon, Tompkins, Brophy.

On Vacations: Miss Foster, Miss Samud, Miss Sanquist, Miss Rood, Messrs. Moore and Crow.

Returned from Vacations: Messrs. Mobley, Fisher and Weiler, Miss Yoakum and Miss Cummings.

On Sick List: Mr. Luithle and Miss Wexall.

Mr. Dorgan has been at Hotel Del Monte during the rush occasioned by the meeting of the Country Club.

Mr. Horsman has been helping out at the Southern Pacific office the past month.

The San Francisco Western Union boys have a crack base ball nine, which promises to make a clean sweep of everything in that line. A match game with the messengers was won by the operators, and a match with the Southern Pacific operators is the talk of the future.

Receiving jobs for some of the boys who have game fingers from contact with the ball is in order.

ATLANTIC CITY, N. J., POSTAL.

The season just closing has been the most prosperous ever experienced in the history of the company in this place. The increase has been marked in every department.

Seven regular men were required at the main office alone to handle the business during the busiest months, while on the outside, a total of 23 branch offices were operated.

A new departure of the District Department is the operation of a Watchman's Clock Circuit, connecting all the beach-front hotels.

As a climax to wind up the season, a great scoop was made at the Northfield Golf Links, where the largest amount of press matter ever handled at Atlantic City by this company was accomplished under the able management of Mr. Geo. W. Phillips, assisted by Messrs. Chas. P. Appel and Thos. F. Carroll. A daily total of from sixty-five thousand to seventy-five thousand words was the average during the week of the golf meet.

The opening of the season found the Postal headquarters most advantageously situated. The new location being directly opposite the City Hall and the Pennsylvania Railroad depot. The office is fitted in the most modern style in every department. Beside the single sets, three quad sets, one repeater and a phonoplex are installed. A com-

plete dynamo plant has been added, furnishing all the necessary battery required for the local and through circuits.

A neatly encased switchboard supplied with all up-to-date features, occupies a conspicuous place in the center of the office.

The massive oak counter, operating tables and other office furniture present a harmonious appearance, which, together with the wall and ceiling and window decorations present a decidedly attractive and inviting aspect.

Manager Phillips is desirous that too much credit for the season's fine result should not be placed entirely on him, as the co-operation of a faithful force was a great factor in the accomplishment of the work.

MONTREAL, QUE., GREAT NORTHWESTERN.

Miss Ada Beck has returned from her vacation at Cape Cove, and Chief Operator Walter Graham is back again after an absence of two weeks passed at Prescott, Ont. Frank Hall has been promoted to day operator on the Canadian press wire. John Baker has resigned and accepted a position in the delivery department. Miss Malvina St. Pierre, from New York, is back again on our staff. Arthur Ross is another addition to the force. James Grace has become the father of a boy. Night Chief Noble is on his vacation, his place being filled by Wire Chief R. E. McCord.

PHILADELPHIA, PA., WESTERN UNION.

From 3.30 to 3.35 on the afternoon of September 19, the day of the President's funeral, the click of the sounder was not heard in this office. The silence was very impressive, every head was bowed reverently and many tears were dropped to the memory of the late President. Every one wore a badge of mourning, the ladies especially, each one wearing a white waist adorned with black.

Messrs. Durnin, Daily, McGroarty and Stoddard wish to return thanks through the AGE to the Buffalo Western Union officials for the kind and courteous treatment received while with them.

Mr. John P. Welsh, for many years chief clerk at the Western Union office, 307 Walnut street, was married September 18 to Miss Louise Borneman, a Kensington belle. A silver dinner set from his fellow employees was one of the many handsome presents received.

Resignations: Messrs. Shuster, Hockery, Beasley and McIntyre.

Arrivals: Messrs. Morris and Bleakney.

PHILADELPHIA, PA., POSTAL.

What turned out to be a most impressively solemn although entirely informal Memorial Service took place in the large operating room, in honor of our martyred President William McKinley, on the afternoon of September 19, during the five minutes from 3.30 to 3.35 P. M. when, at the instant the circuits were cut out and a most awful stillness pervaded the place, Chief Operator Stimpson requested that everybody should rise; all heads were then bowed a moment in silent prayer, a quartette of operators standing on the chief's platform

most beautifully sang two stanzas of the President's favorite hymn "Lead, Kindly Light," after which the assemblage, which included representatives from every department, unitedly sang two verses of "Nearer, My God, to Thee," at the termination of which the instruments resumed their noisy clatter.

"Break! Break!" will soon be eliminated from the vocabulary of receiving operators in this office. The newest wrinkle which makes it unnecessary for the receiver to call out these harsh (?) words for the benefit of the sender is the installation of a button switch on his side of the table, which, by simply pressing, cuts the sending operator's sounder in on the receiving local, thus enabling him to read the distant receiver's breaks with ease and promptness.

The most important change recently effected was that of Mr. Richard Ziegler to be manager at 49 South Third street, vice Mr. O. H. Phillips, appointed manager at the North American office. Mr. James F. Haughton succeeds Mr. Ziegler on the Delawares.

Among the latest arrivals are Messrs. C. E. Cox, from the Blue Grass Country; Fred. E. Brown, Geo. Carroll, E. Frazer, W. J. McIntyre, Joseph Hockery, W. J. Murray, Chas. A. Greene, A. B. Jester, and E. W. Miller.

Mr. J. J. Toole, of the South Front street office, has resigned to accept a better position with a wool broker. Miss Morris, of the same office, temporarily succeeds Mr. Toole, her regular place being filled by extra men from the main office.

Chief Clerk Shin had a rather unsatisfactory experience on his vacation trip to Buffalo and the Falls. Nearly the entire time was marred by stormy weather.

Mr. Robert Robinson, manager at Lancaster, Pa., accompanied by Mrs. Robinson, were among the Pan-American-Niagara visitors from this vicinity.

The sincere sympathy of this entire office is extended to our friend Mr. Elmer Locke, whose wife died on the 20th.

Manager C. E. Sawtelle, of Cincinnati, Ohio, was a recent visitor.

Mr. Bud. Gagen has our renewed sympathy; this time on account of the death of his mother.

Plenty of hope for the man that's losing his grip. The 20-h Century Key is a friend indeed. Terms and particulars cheerfully furnished. Leo Miller.

KANSAS CITY, MO., POSTAL.

Night Chief Charles Falk has returned to duty after an absence of two weeks caused by sickness. Traffic Chief Thomas Ingram is confined to his home by sickness. Manager A. B. Richards was called to Bowling Green by the sickness of his mother.

L. B. Tobin is away on his vacation. He was the recipient of a silver match case recently, presented by Kansas City and St. Louis newspaper men who were sent to Holden, Mo., to write up the

capture and probable burning of a negro. Mr. Tobin went with the party, cutting in and sending their stuff from points where clues had been found. The newspaper men appreciated the up-to-date way in which the situation was met, because they were enabled to get their matter in hours before they could have done so had they depended on the railroad operators at wayside stations. Newspaper men in this section usually take little heed of such conveniences as the Postal afforded them, as they take everything for granted, hence their gift to Mr. Tobin is all the more an indication that they were especially well pleased with the service.

Mr. Clyde Edwards is visiting his old home in Bowling Green, Mo.

Manager E. M. Cross, of Reading, Kan., was a recent visitor to the operating room.

CHICAGO, ILL.

Typewriters bought, sold, rented and repaired. Renting a specialty. Also Agency for "Telegraph Age." Telegraphers' Typewriter Co., Room 5, 122 La Salle St., Chicago, Ill.

WESTERN UNION.

James Cummins, of the St. Paul division, who has been in the service here for many years, most of the time in the capacity of division chief, has resigned to accept a position with the Long Distance Telephone Company. His leavetaking was made the occasion of the presentation, on behalf of the force, of a diamond ring, by Mr. Johnson, his successor.

Edward Brandon has resigned to enter other business.

The marriage of Dennis O'Connell to Miss Toomey occurred lately. The pair were the recipients of many beautiful presents from telegraph friends.

Messrs. Byrd and Whalen, two of our finest operators, were detailed for service at the golf tournament grounds at Blue Island, Ill.

E. B. Thompson is seriously ill with appendicitis and is receiving treatment at the hospital. The doctors, however, hope for his recovery.

Mrs. Asmussen has the sympathy of all in the illness of her young daughter.

Assistant Division Chief Frank Richardson has returned from a two week's vacation.

BUFFALO, N. Y., WESTERN UNION.

The eyes of the world were centered on this city during the week beginning September 6. It was on Friday that our beloved President of the United States, William McKinley, was stricken down by the bullet from a pistol in the hands of a cowardly assassin while the President was holding a public reception in the Temple of Music at the Pan-American Exposition grounds, from the wounds of which he succumbed just one week later. The intervening days, from the 6th to the 16th, when the President's remains were removed from this city, will go down in history as the busiest in the annals of the telegraph in Buffalo. On the night of the day of the assassination when the President was removed to Mr. John G. Milburn's home, where Mr. and

Mrs. McKinley were the honored guests, this company erected two wires to the Milburn house stables, and established direct communication with the White House in Washington, D. C., the construction work being accomplished in fifty-five minutes. The wires were immediately turned over to bulletin and United States Government service and Secretary Cortelyou, and were thereafter in constant use, being handled by Thomas E. Elder and M. Williams. At daylight the United States Government troops erected a tent at the southwest corner of Delaware avenue and Ferry street, into which the White House wire was moved. Manager J. W. Tillinghast then ordered six more wires, which were erected and connected up in a large hospital tent in a vacant lot opposite the Milburn house. This was called the press tent and where much press matter was ably handled in charge of Manager C. C. Osterhout and Operators W. E. Durnin, J. H. McGrorty, R. P. Stoddard, of Philadelphia, and James Regan and W. Pryor of Buffalo, all of whom handled press matter in direct communication with the newspaper offices of other cities, there being seventy-nine out of town newspaper representatives, several metropolitan journals having as many as six men writing report. Manager Tillinghast, foreseeing the great amount of work, called for operators from some of the larger cities, and during the next day the following reported to Chief Operator Frank Kitton:

From Washington, Mr. P. E. Brown, Mrs. M. D. Brown, W. E. Pierce; Boston, R. A. Boyle, J. J. Hannon; Baltimore, C. E. Clagett, J. R. Topp, F. Louck, A. Gentry, J. P. Croghan, A. J. Clark; Philadelphia, W. E. Durnin, R. P. Stoddard, J. H. McGrorty, J. H. Dailey; Syracuse, F. J. Stafford, J. B. Wooster, C. J. Turcott; Columbus, O., C. H. Nowell; Cincinnati, L. S. Miller, V. W. Miller, J. N. Jacobs, J. H. Hohnstadt; Chicago, W. B. Paddock; St. Louis, J. L. Rapp, B. F. Lamar, H. A. Mansfield, A. Brooks, W. A. Boyer, C. A. Willis.

It was without doubt the most trying situation in which telegraph employees in Buffalo had ever been placed. It was seriously felt by those on duty at

There is More Catarrh

in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven catarrh to be a constitutional disease, and therefore requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from 10 drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials.

Address, F. J. CHENEY & CO., Toledo, O.
Sold by Druggists, 75c.
Hall's Family Pills are the best.

the Milburn camps. They worked eighteen to twenty hours out of the twenty-four each day, and under conditions that were extremely trying. They were continually surrounded by newspaper men clamoring to have their press matter rushed first. The weather was of the worst sort, windy, rainy, and cold, making it necessary to resort to oil stoves and feet warmers. Those of the out-of-town operators who were detailed to the camp suffered considerably. After the work was finished the newspaper representatives extended a hearty vote of thanks for the able way and promptness in which their matter was handled.

Owing to the Pan-American Exposition, new copper wires had been connected up to New York, Chicago and Pittsburg, more operating tables installed and operating force doubled. Notwithstanding all this the night force worked extra day service, and when the report of the assassination of the President was flashed and with great influx of messages and press matter the offices were nearly swamped. Great credit is due and has been given to Chief Operator Kitton, who worked day and night, ably assisted by Traffic Chief Charles W. Sears.

All the force, and more especially the out-of-town operators, have freely expressed their sentiments of gratitude and appreciation of the kind words and politeness given them by Mr. Kitton, and for his thoughtfulness in caring for their every want and comfort during this trying ordeal. Mr. James Corcoran, the night manager, with his able assistants, C. M. Frost at the board, and Peter J. Haley at Wheatstone and repeater department; Joe Anderson, all night chief, assisted by Harry Williamson, come in for a large share of the great credit given the record breaking week.

There were over one million words of press matter handled, and a corresponding increase in messages, or an exact increase of fifty-two per cent. in one week's time.

Six loops were connected up from Ellicott Square main office to Court House, reporting the trial and sentencing of President McKinley's assassin. The office was in charge of Chas. C. Osterhout, with Operators Thos. Elden, Wm. Evans, Thomas Davidson, and U. Gessim.

Edward H. Wade has returned from St. Louis.

BOSTON, MASS.

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

WESTERN UNION.

Geo. S. Hearon and Charles L. Mooney have returned from Woods Hole Junction, where they have been working all summer, Mr. Hearon going on night force and Mr. Mooney to the extra list.

James O'Neil, a well known operator, for many

years with the Postal Company, and during the last two years with the Western Union, died at his home in Dorchester, Mass., recently.

William Carrigan, chief error clerk of this office, died of consumption recently at his home in Chelsea, Mass. He was connected with the Western Union for over ten years.

James West has been appointed chief error clerk vice William Carrigan, deceased; David Horan, vice West.

Mr. Jas. Collins is the happy father of a daughter. Traffic Chief Jas. A. Dougher has left on his vacation.

Mr. J. C. Smith is off on two weeks' leave.

Returned from vacations: Miss Sadie McCarthy, stenographer of the superintendent's office, from an outing of two weeks passed in Maine; Geo. W. Tracy, from a two week's trip in the Canadian Provinces, and Mr. W. F. Knowlton, assistant traffic chief. During the absence of the latter, Mr. A. D. Brewer filled his place.

NEW YORK CITY.

All popular music at less than half price. "Utopian Waltzes," "Whirlwind March," "Ben Hur Chariot Race," "Belle of Manhattan" March and Two-Step, "When You Were Sweet Sixteen," "My Old Virginia Home," "Left on the Battlefield," "Dolly Gray," "The Sweetheart That I Loved In Boyhood Days," "Spider and Fly," 18 cents each. "Palms," "Popular Gems," "Lang's Flower Song," "Calvary," "Rusticana," 10 cents each. Pianos—all makes—sold, \$1.00 per week. B. L. Brannan, 195 Broadway, New York.

Desirable Real Estate.

Ozone Park, New York, Brooklyn Borough: Washington avenue, 2½-story, frame dwelling, all improvements; 8 rooms and bath. Lot, 50 x 100 feet. Price, \$3,200.

East Orange, N. J., 181 North Nineteenth street: 2½-story, frame dwelling, all improvements; 8 rooms and bath. Lot, 25 x 125 feet. Price, \$3,700.

Cranford, N. J.: Three 2-story flats, 5 rooms on each floor. Lot, 60 x 100 feet. Price, \$6,000. Pays 8 per cent. as an investment.

Address Theodore L. Cuyler, Jr., 253 Broadway, New York.

WESTERN UNION.

One of the notable incidents on the day of President McKinley's burial was the wearing of black and white only, by nearly every one of the lady operators and clerks. From 3.30 to 3.35 P. M. not a message was received or sent from this office.

On account of the shooting of President McKinley and the great pressure of business, only Senator Ives and John Brant could be spared from this office to attend the reunion of old timers at Montreal.

Recent visitors: F. P. Ainsworth, River Falls.

Wis.; W. I. McQuown, of the vice-president's office, Pennsylvania Railroad, Pittsburg, Pa., and P. J. Feeney, of the Vacuum Oil Company, Bangor, Me.

Mr. E. P. Griffith, general wire chief, has returned from a trip through Canada, where he visited Montreal, St. John, Canso, Quebec, and North Sydney.

Mr. W. A. Van Orden, assistant general wire chief, has also returned from his vacation.

Over 180,000 messages were handled in this office in one day recently.

Mr. W. F. Traphagan has resigned to go to Oregon, where he has mining interests.

Superintendent M. W. Ravens wishes to thank his many friends for their kind expressions of sympathy in the death of his sister, who died suddenly on September 7.

Miss Ella Wilson has been appointed traffic chief, city line, in place of Miss Nellie Flynn, who has resigned on account of illness.

"Senator" Wm. L. Ives has been elected a delegate from the 16th Assembly District, Borough of Brooklyn, to the Assembly Convention to be held October 3, next.

Mr. C. J. Lawson has been ill with inflammatory rheumatism.

All vacations were cancelled until after the yacht races.

Particularly noticeable among those for their beautiful tan on return from summer office and vacations are Miss Jennie Powell, Miss Emma Ganong, and Miss Gertie McMullin.

On sick list: Miss M. Brown, C. E. Fredking, H. W. Sauer, Mrs. C. A. H. Mauer, Miss Nellie T. Calver, W. H. Gunning.

Chief Operator M. J. McGannon has returned after an illness of a week.

Returned from summer offices: J. J. Phelan, Thomas Nolan, E. J. Oakley, H. Smith, H. B. Rogers.

F. D. Stevenson has been appointed traffic chief on city line, nights.

R. C. Edwards resumes work on regular day force.

E. G. Hahenstein appointed junior operator.

The father of Miss Mamie McGoldrick, who has charge of the error correction slip book, died suddenly September 25. The sympathy of all is extended.

Appointed to waiting list: J. D. Daggett, A. V. Winbourne, J. A. Melody, J. G. Hoffman, D. J. Condon, J. Smith, O. Gedney, E. C. Chamberlain, R. M. Telschow, W. A. Young, T. F. Carroll, M. Connolly.

Resignations from regular day force: A. Nornington, H. Kleinman; from split trick, J. F. Fitzpatrick; from regular night force, Harry P. Cunningham, who has been on the night force uninterruptedly for nearly thirty years.

POSTAL.

The following letter was written by Miss Emma Heckel, of this office: "For several months my arm has caused me much pain when sending. A few weeks ago I tried the 20th Century Key, and

after using a few days, I experienced no difficulty in sending, and my arm has not troubled me in the least. On the contrary, my grip has greatly improved. Believing that many operators are seeking relief from loss of grip, I strongly advise the use of the 20th Century Key."

Born--To J. F. Skirrow, assistant manager of this office, on September 22, a son.

Mr. J. F. Skirrow has been a very busy man of late arranging the necessary electrical details for the transmission of a complete and prompt report of the yacht races. He has devised an ingenious system of portable quadruplex sets, dynamos and engines, which will greatly facilitate matters in many ways.

Since the burial of President McKinley business has resumed its usual normal state, but still continues very heavy, and there is no lack of "extra" for those who are looking for it and for some who are not. The yacht races added greatly to the already heavy volume.

Returned from vacations: Manager Charles Shirley; Wire Chief F. E. McKiernan; City Chief S. B. Haig; Leased Wire Chief G. F. Randolph; Operators S. J. Naftal, Robert Perrin, R. F. McKune, Jas. L. Mingle, Mrs. A. C. Eckman, V. A. Eagan, Miss E. A. Tyrell, Geo. McGill, and S. Fitzgerald.

Arrivals: J. T. Kelley, T. L. Flynn, W. C. Fenslon, W. G. Metzler, G. J. Bruhns, T. Tarangiali, Mrs. Stetson, D. McKee, A. A. Topping, C. P. Mooney, Miss H. S. Ford, and Mr. J. A. Garland.

BALTIMORE, MD., WESTERN UNION.

Messrs. Charles E. Clagett, Alfred S. Gentry, John P. Croghan, James R. Topp, A. J. Clarke and Fred. Louck were sent to Buffalo on hurry orders on September 7. They remained there until the 16th, and then went direct to Washington to help out for two days. They all made great records.

Mr. W. C. Hurlock is a recent arrival.

Mr. Morris Fox has resigned to go with a broker.

Mr. Otto E. Scherf, formerly of this city, but recently of New York, has returned here to accept a position with a broker.

Mr. Charles E. Sawtelle, manager of the Postal at Cincinnati, O., was a recent visitor.

Associated Press Annual Meeting.

The annual meeting of The Associated Press took place in New York on Wednesday, September 18, President Frank B. Noyes presiding. Aside from some discussions of a routine character, there was an election of five directors and the passing of resolutions with regard to the assassination of President McKinley. Clark Howell, of the Atlanta Constitution, was unanimously elected to fill the vacancy caused by the resignation of Don C. Seitz, of New York.

The other four members of the board whose terms had expired, Frank B. Noyes, Washington Star; Albert J. Barr, Pittsburg Post; Charles W. Knapp, St. Louis Republic, and M. H. DeYoung, San Francisco Chronicle, were unanimously chosen to succeed themselves.

The hold-over directors are: Stephen O'Meara,

Boston Journal; Victor F. Lawson, Chicago News; Harvey W. Scott, Portland Oregonian; Thomas G. Rapier, New Orleans Picayune; Herman Rider, New York Staats Zeitung; Whitelaw Reid, New York Tribune; W. L. McLean, Philadelphia Bulletin; George Thompson, St. Paul Dispatch; Charles P. Taft, Cincinnati Times-Star, and C. H. Grasty, Baltimore Evening News.

The following advisory boards were elected:

Western Division.—General Harrison Gray Otis, Los Angeles Times, chairman; secretary, S. A. Perkins, Tacoma News; J. J. Lambert, Pueblo Chieftain; P. H. Lannan, Salt Lake Tribune; A. J. Blethen, Seattle Times; W. M. Miller, Butte Miner.

Central Division.—Thomas, Rees, Springfield, Ill., State Register, chairman; Lafayette Young, Des Moines, Ia., Capital, secretary; D. R. Anthony, Leavenworth, Kas., Times; Edgar W. Coleman, Milwaukee, Wis., Herald; W. D. Brickell, Columbus, O., Dispatch.

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

Eastern Division.—W. C. Reick, New York Herald, chairman; J. W. Bailey, Philadelphia, Pa., Record; W. H. Mathews, Rochester, N. Y., Democrat and Chronicle; Charles H. Taylor, Jr., Boston, Mass., Globe; P. C. Boyle, Oil City, Pa., Derrick.

A meeting of the new board of directors was held on September 19 in the general offices of the association, No. 195 Broadway, New York. The session was devoted to the election of officers for the ensuing year, including an executive committee, and the usual examination and discussion of the affairs of the association.

The officers elected are: Frank B. Noyes, Washington Star and Chicago Record-Herald, president; Horace White, New York Evening Post, first vice-president, succeeding Clark Howell; William R. Nelson, Kansas City Star, second vice-president, succeeding Thomas M. Patterson; Melville E. Stone, secretary; Charles S. Diehl, assistant secretary, and V. P. Snyder, treasurer.

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

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Some Back Dates.

BY WUNUVUM.

Tennyson must have had a vision of wireless telegraphy when he wrote "Break, break, break" to the waves.

May be that one reason the "average slips" so seldom agree with the number sheets is, that a good operator doesn't want to be mistaken for an expert accountant and get relegated to a book-keeping department.

Some of the difficulties, perhaps, of comprehending the intricacies of wire testing are that when a wire "goes down" we are told that it has "gone up," and when it "goes up" a test usually reveals that it has "gone down."

"How is it," said Stoops, "that cigarette users never attain high positions in the telegraph business?"

"I suppose," said Loops, "that their 'pipes go out' too early in life."

This was his explanation of a positive unsteadiness in his gait when he came on duty: To be on time, he had asked an Italian barber to shave him in ten minutes. Six minutes and he was out of the chair, he said, but so dizzy over the lightning-like performance on his face that when the office was reached he still staggered and was sent home.

"I am too tired to sit up," said the weary man as he applied to get off. "Too tired to sit up?" repeated the sympathetic chief, "then sit down awhile!"

The "check boy" is most interesting when he is new—before he knows "all about it." The latest arrival wanted to route Two-mile Bay to Three-mile Creek, because, he said, from the names he thought they were only a mile apart.

"Can't that guy count dots?" asked the lunch relief of the man beside him regarding a western sender.

"Oh, yes," said the other, "but he's got the ague, and this is his day for chills, so, when he comes to a letter P or a figure 6 he just grips the key and lets things shake to a finish!"

TELEGRAPH AGE should go regularly to every one interested in the telegraph. Write for a sample copy of the Convention number, September 1.

J. R. Baskerville is desired as witness to give evidence. His present address will be gratefully received. Eaton & Lewis, 44 Broad street, New York city. (Adv.)

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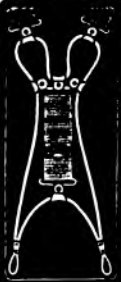
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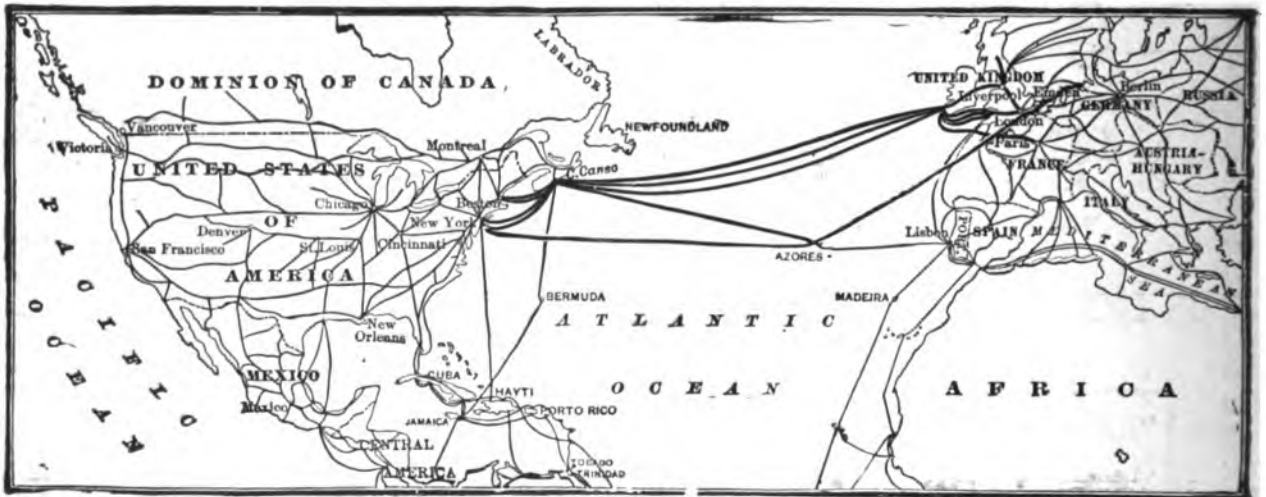


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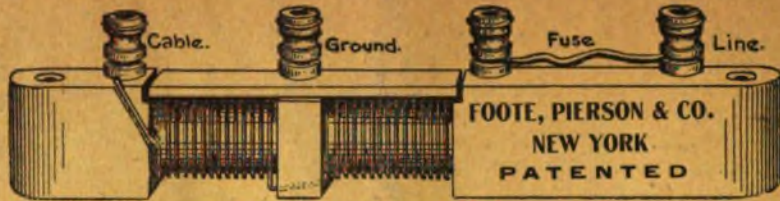
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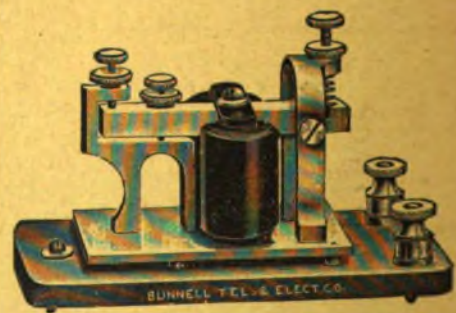
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No. 20.

NEW YORK, OCTOBER 16, 1901.

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SOME POINTS ON ELECTRICITY.

The Equipment of a Modern Telegraph Office, Continued.

BY WILLIS H. JONES.

[In the September 1st issue of this journal Mr. Willis H. Jones began a series of articles showing

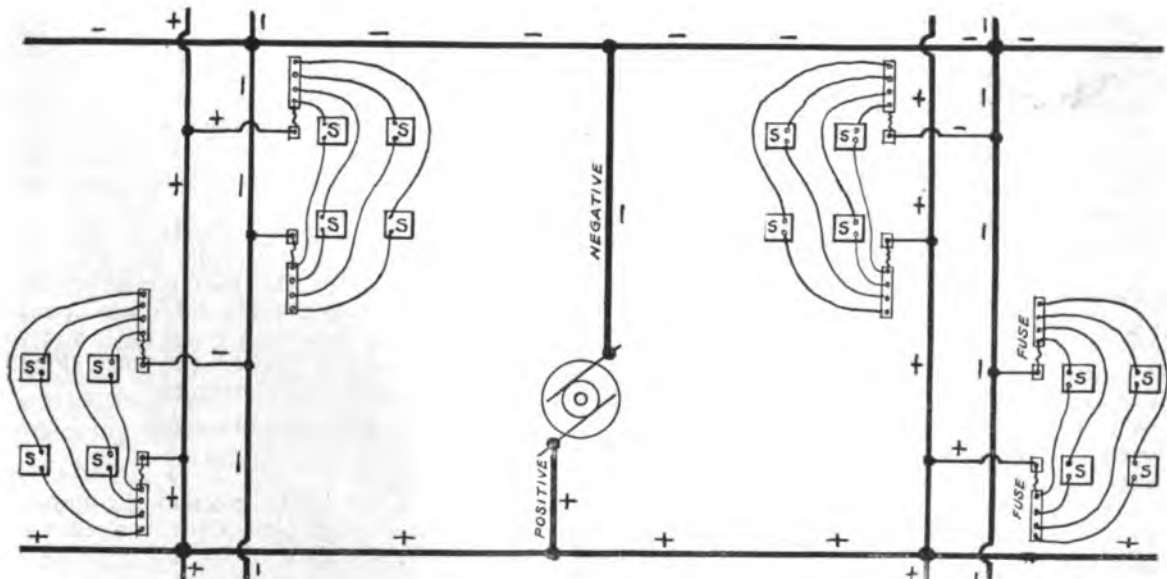
of the dynamos, his aim will be to carry the reader step by step from the cellar to the operating department; thence through the labyrinth of house wires underneath the floor to the various apparatus, stating the size of wires to be used for the main and sub-leads, and last but not least, to give a full and accurate reason for each move.

The series will be a complete handbook for any one contemplating the instalment of a new office or making alterations in an old one. The value of these important articles will be such as to interest a wide circle of readers, and those who desire to follow them in their consecutive order should send in their subscriptions at once.—Editor.]

Having settled the question of electromotive force, noninductive artificial resistance, pattern of sounders to be installed, and other preliminary matters, after the manner suggested in the preceding instalments of this series, let us descend to the cellar, where the dynamotors, for the purpose of illustrating this article, are supposed to be located. Now trace the wires and connections for a multiple arranged local sounder system from the cellar through their various routes to the instruments around the room up stairs. It may be remarked, however, that many modern plants of this character are now found occupying convenient floor space in the operating room.

The accompanying diagram shows a plan of house-wiring quite closely followed by our best electrical engineers of to-day.

In order to cover nearly every problem which



the complete details of equipping a modern telegraph office. Beginning with the proper selection

may come up and show the principal features of house-wiring, let us assume that the operating

room is a very large one, say 100 x 50 feet, and situated on the top floor of a very high building, a hundred or more feet from the dynamos in the cellar.

For so great a distance you should attach to each brush of the dynamo, or rather to each "bus" bar, a conductor consisting of a dozen or more strands of No. 18 gage bare copper wire twisted or braided together and well protected by tape or other insulating material. These wires stream from the dynamo to the operating room as the reins of a horse's bridle do from the bit to the hands of the driver. In the operating department these main leads are connected to two separate systems of wire net work laid in trenches in the floor, each set of which represents sub-feeders for opposite polarities of current. In reality they are merely extensions of the two conductors from the dynamo spread out in grid fashion all over the room, in order to be easily accessible for retapping to the desk apparatus.

This network should also be composed of the same gage and number of strands of copper wire as the leads from below; in fact they would serve better if the number of strands was increased, owing to their greater distance from the brushes of the machine. While the latter suggestion is not absolutely necessary, the point is stated in order to constantly remind the reader that the farther we recede from the brushes of a dynamo the more imperative it is that the current shall have as little work to do as possible before reaching its useful sphere of operation within the coils of the instruments. This precaution can only be attained by enlarging the conductors.

The manner in which the said network is constructed is as follows: Run two parallel feeders in separate trenches in the floor the full length of the room. They should each be situated at a distance from the side wall equal to about one-quarter the width of the room. Now connect one of the dynamo leads from the cellar to the conductor in one trench, and the other to its side partner across the way, as shown in the accompanying diagram. This will carry a positive current along one side of the room and a negative on the other.

As the trenches are obviously too far apart to be conveniently retapped for connection with the various sounders, additional trenches should be laid under each row of desks at right angles to the first pair, which should carry in parallel a tap from each polarity of current. The manner in which this convenience is arranged may be seen by a glance at the cut, which, by the way, shows but two such cross trenches in order to simplify the illustration as much as possible.

The cross trenches should contain a small round opening directly underneath the center of each quartet table, through which the desk wires lead down to the two feeders and are connected thereto. (See diagram.) After the connections have all been made the desk wires should be encased in an iron tube or other suitable casing for protection against the feet of the operators, as well as for the sake of appearance.

In addition to the openings mentioned for desk tapping, trap lids or other removable coverings should be inserted in the trenches, at a distance apart of about eight or ten feet, in order to provide facilities for drawing new conductors from one point of the room to another.

As the local connections of every duplex and quadruplex apparatus in the room are extended to the loop switch, usually centrally located, it will be seen that the process of getting the conductors through the trenches is not an easy one; but the work may be greatly lessened by running a cable between any given set and the loop switch, which former should contain as many strands, or single conductors, as may be required to make all connections. While we are on the subject we will say that one of the best ways to draw the cables through the trenches is to procure a number of extension rods about four or five feet in length provided with what are called male and female screw fittings at opposite extremities, and after inserting the first rod in the opening keep adding others to it until the first can be reached by hand at the next removable cover in the trench. Then add one more rod to the chain at the first opening, which latter should be equipped with a hook or ring to which the cable may then be attached and drawn forward from the next opening. By the time the cable has been drawn to the second opening the rods will have reached the third lid, where the process may be repeated. By this means the cable may be drawn to any part of the room desired.

To avoid confusion in locating the various conductors which lie side by side in the trenches, it would be well, when possible, to use different colors of braiding or insulation for each class of conductors. In a large office where alterations are continually being made—frequently by strange linemen—such an arrangement would not only be a great help to them, but should reduce the chances of making a serious mistake to a minimum.

The desk wires, that is to say, the simple conductors in cables just described as having been drawn through the trenches should be at least of No. 14 gage insulated copper wire for medium lengths, and where the distance is considerable, an 11- or 12-gage conductor would probably be better.

Again, we must qualify the latter part of this statement by stating that while the slight difference in the sizes of the two gages mentioned might not make a noticeable difference in value of the current, the rule is a good one, and where greatest efficiency is desired the plan should be strictly followed in every instance.

(To be continued.)

MAGNETIC CLUB.—The governing committee of the Magnetic Club, of New York, has selected November 20 as the date of its fall meeting. The delegates from out of town to the annual meeting of the Telegraphers' Mutual Benefit Association, which meets on the same day, will be guests of the club.

Business Notices.

TO THE TELEGRAPH FRATERNITY:—Having resigned my position with The Associated Press, I have connected myself with L. E. Niles & Co., who are financing the stock of the Cherry Hill Gold Mining Company. This company is a working proposition, taking gold out of their mine every day, and is paying 12 per cent. per annum dividends on the amount invested. The dividends are positively not paid from stock sales, but they, as well as the running expenses of the mine, are paid from the gold taken therefrom in its development, and there is enough ore now blocked out to not only continue the present rate of dividends for years to come, but to increase the rate of dividends in the near future. The amount realized from sales of stock is used solely for the running of the tunnel and increasing the stamp capacity of the mill and, under our contract, cannot be used for any other purpose.

The property of the Cherry Hill Gold Mining Company consists of 280 acres of land in Siskiyou county, California, on which there are fourteen mining claims. They are working one claim only, in which they have developed four veins of gold bearing quartz, averaging \$10.00 per ton in value. They are now running a tunnel 1,500 feet to intersect these four veins, and, although in only 100 feet, they have already uncovered indications of rich ore and expect to find, before they get much farther in, the mother lode supplying these four veins, as well as others which will be uncovered. The following is an extract from a letter, received on October 5, from Mr. E. D. Baker, president of the Mining Company, who is at the mine personally superintending the work on the tunnel:

"The work at the mine is in fine shape, and is looking better every day, and I shall be very much surprised if we don't find a ledge sooner than I anticipated in the tunnel, for, although we are now in only a little over 100 feet many stringers of good quartz have commenced to show, which is indicative of an ore body. The more I see of the developments in this mine as they progress, the more sanguine I am of the great possibilities that will ensue, and I know that everybody interested will have the biggest kind of returns for their investments. Everybody in this country predicts great results, and as soon as we strike the mother lode or source of that hill, look out for startling news. I have mined for 30 years, and owned many properties, but this one gives promise of the best and greatest I have known for years."

The names of the gentlemen financing this stock as well as the North American Trust Company, are sufficient guarantee of the stability of the company. They include L. E. Niles, president of the Magneto Electric Company; J. M. Bromley and C. W. Dickerson, of the American Bicycle Company; F. L. Brown, of the Shelby Steel Tube Company, and Wm. Van Brocklin, of the Amsterdam (N.Y.) Knitting Mills. The North American Trust Company of New York is the registrar of this stock, and countersigns every certificate of stock issued.

Being connected myself with the Company financing this proposition, I expect to reap large benefits therefrom, and nothing would please me better than to benefit my old friends in the telegraph service. I certainly can't afford to associate myself with anything that is not legitimate and honest, and I would not ask any of you to invest your money where I felt you would not get a substantial return. Candidly, we expect this stock to be listed in the near future at par value, and if our expectations are realized, the price of the stock will be not par, but should advance to from \$3.00 to \$5.00 per share in less than one year. I would be pleased to have your orders for stock in amounts not less than 100 shares, the price of stock at present being 50 cents per share. Can you not take at least 100 shares yourself, or get up a little syndicate in your town to take from 1,000 to 5,000 shares? Should you be able to do so, I will pay you 5 per cent. commission on all cash that you turn in to me or L. E. Niles & Co. Remember, boys, you are not only working for yourself, but for one of the fraternity, who has been pleasantly associated with you for many years. Let me hear from you soon, and I hope in a substantial way.

Yours truly and fraternally,

E. W. H. COGLEY.

Room 607, Park Row Building, New York.
New York, Oct. 10, 1901.

Our readers will notice the advertisement appearing elsewhere in this issue, among the "Letters from Our Agents," and under the Chicago head, announcing that typewriters are bought, sold, rented and repaired by the Telegraphers' Typewriter Company, of that city. Operators and others in the western metropolis should make a memorandum of the fact to guide future action.

A Twentieth Century Story: Lost grip; lost job. Twentieth Century Telegraph Key: New grip; new job. You can't send light signals on a Twentieth Century Telegraph Key.

Send for circulars, addressing Foote, Pierson & Co., 82-84 Fulton street, New York.

Right to Land Cables.

Attorney-General Knox made an oral report to the President and Cabinet on October 11 regarding the result of his investigations into the Pacific cable question. His conclusion was that under the law of 1866 any domestic company could land a cable on the shores of the United States or of its possessions. President Roosevelt and his Cabinet were convinced that no executive action is called for at this time. The President will go over the subject more in detail with the Attorney-General and will review the whole question in his message to Congress.

Wireless telegraphy seems to have a great future in the Sahara Desert, as communication can be readily set up between the oases—and there are no wires to steal.

George H. Corse.

George Henry Corse, who was elected president of the Old Time Telegraphers' and Historical Association, at the September meeting held at Montreal, Que., is a telegrapher well known throughout the West. He was born in Berlin, Germany, and came to this country at an early age. His inclinations led him into the field of telegraphy, and his first entry therein was on April 14, 1865, at Fort Madison, Iowa. He served successively as operator, occasionally both as operator and agent, at Summit, Eddyville, Woodville, Danville, Melrose and Burlington, in Iowa; at Earl, Naperville and Carthage, Ill.; at Farmington and Hector, Minn., and at Davis Junction, Ill., going from the latter place to accept the position, now held since October 13, 1900, of freight and passenger agent of the Union Pacific and Oregon Short Line railroads, at Ogden, Utah. Mr. Corse is a man of



GEORGE H. CORSE, OF OGDEN, UTAH.

President elect of the Old Time Telegraphers' and Historical Association.

sterling character, an excellent executive officer, and because of his wide acquaintance and genial temperament, is likely to prove a popular head of the organization which has honored him with the presidency. Under such leadership the interests of the Old Timers' Association should be materially advanced in the great central West.

Telegraph Company Elects Officers.

The annual election of the Philadelphia, Reading and Pottsville Telegraph Company was held in the office of Superintendent C. M. Lewis, Reading, Pa., October 6. These officers were chosen: President, George F. Baer; treasurer, W. A. Church; secretary, W. R. Taylor; directors, Joseph S. Haris, John Lowber Welsh, Theodore Voorhees, C. E. Henderson. The judges were C. M. Lewis and L. D. Shearer.

Belvidere Brooks.

Belvidere Brooks, the vice-president-elect of the Old Time Telegraphers' and Historical Association, is assistant superintendent of the Western Union Telegraph Company, at Denver, Col. He is a native of Texas, having been born at Wheelock, that State, July 6, 1859. He entered the telegraph service as messenger at Navasota, Tex., in July, 1871. During the years 1877 and 1878 he was employed as an operator and in other positions of trust at various places on the Houston and Texas Central Railroad. In 1879 he first became identified with the Western Union Telegraph Company, and in the following year was advanced to the managership of the office at Navasota. After a few months' service at this point he became a clerk in the superintendent's office at Dallas, subsequently serving successfully as manager of the Waco, El Paso and Galveston offices. At the latter place he remained until November 1, 1890,



BELVIDERE BROOKS, OF DENVER, COL.

Vice-President elect of the Old Time Telegraphers' and Historical Association.

when he was appointed manager at Denver, Col. On January 1, 1893, he received his promotion to his present position of assistant superintendent of the third district.

Mr. Brooks is a capable official, is popular with his men, and enjoys the entire confidence of his company.

British Pacific Cable.

James Wilson, superintendent of the Canadian Pacific, states that Mr. Lockwood, who has charge of the work of preparing the landing of the British Pacific cable, and two engineers, have gone to Banfield Creek, on the west coast of Vancouver Island, 104 miles from Victoria, to make arrangements for the site for the landing place. Wharves will be built and houses to accommodate the staff, which will consist of about forty men.

The Telephone in Railroad Service.*

BY F. P. VALENTINE.

The growth of railroad telephony in the last few years shows a gradual evolution from a public telephone on a party line with old-fashioned equipment, located in the general office or freight office of a railroad, to complete exchange systems with long distance lines, handling a business that compares favorably in volume with that of many corporations furnishing public telephone service.

It is estimated that to-day in the United States there are some 200 private branch exchanges operated by the various railroad companies, connecting over 5,000 stations, a large proportion of these having been installed within the last three or four years.

That this development has been so long delayed in comparison with the rapid growth of the public telephone service is largely due to the fact that the possibilities of economy and expedition of business have not been appreciated by either the telephone or railroad companies. The development which has taken place in the time named has been such as to arouse an interest that would indicate unlimited possibilities in the way of further development within the next few years.

The conditions surrounding the telephone service some ten or fifteen years ago were such that one telephone in the office brought most in contact with the public served to furnish such information as was desired by the comparatively small number of shippers and patrons who were able to afford, what was then considered, the luxury of a telephone. With the rapid increase in the number of the latter, with the improvement in equipment and service, and the gradual reduction in rates, the demand for communication with railroad and transportation companies increased rapidly. This naturally led to more telephone connections with the public and later to the establishment of private circuits between the various offices in order that detailed information to be given to the calling telephone subscribers might be better handled. This still increasing use led to further additions to these private circuits until the lines were burdened with a large number of instruments, causing vexatious delays in obtaining the use of the line, lack of privacy, and dissatisfaction on the part of the users. This finally resulted in the establishment of private exchanges operated by the railroad companies, with a switchboard at some central point, and having telephones located in the various departments.

These exchanges, in many instances, as first installed, were for purely domestic use and had no connection with the public, but with the rapid increase in the use of the telephone on the part of the public, it was soon found that by connecting these exchanges by trunk lines with the public exchanges and allowing calls from the public to be switched on to the telephones of the particular departments with which it was desired to transact

business, a great saving in time was effected and better satisfaction given the public.

At first, only offices having business to do with the public were connected, allowing, perhaps, one telephone in each department. But the results quickly led to a rapid extension of this class of service to freight yards, towers, switch cabins, etc.

The saving in time and messenger service effected by the connecting of the various departments in large railroad offices produced economies so apparent that to-day there are few large railroad companies not equipped with this class of service. The public has grown to expect that information shall be furnished by telephone rather than by letter or telegrams.

It may be interesting to note a few of the many uses to which the telephone is now put. Starting with the ticket offices, it is astonishing how many calls there are for reservations, information as to the time of arrival and departure of trains, and the multitude of questions which may be asked by the public. These are all handled quickly and to the satisfaction of all concerned. In many cases, ticket offices at large terminals need to have special equipment to handle the immense volume of business which pours in from the thousands of telephones connected with the public service. In large cities one telephone in the ticket offices will hardly suffice. Persons anxious to secure reservations will call time after time, only to be given the much detested answer "busy." It is stated that the ticket office of the Fall River Line in New York is one of the busiest in the country from a telephone point of view. As an illustration of what the public has to suffer from insufficient telephone facilities, it is interesting to note that here even with a branch exchange having five trunk lines to the public, with a telephone in the ticket office, with one man giving his entire time to the reservation of staterooms and with the switchboard operators relieving him of many calls by giving general information when reservations were needed, the lines were still reported busy 1,600 times in one day. As may be imagined, such a state of affairs brought serious criticism from the public, and it was necessary in this case, in order to relieve the congestion on the wires, to double the number of trunk lines, holding them exclusively for incoming business while other lines were installed for the outgoing traffic. A small turret switchboard was installed in the ticket office, having several lines to the main branch exchange switchboard. This enabled the clerk in the ticket office to handle several lines at once and in an emergency two clerks could be taking the calls and giving out the reservations. When the number of calls for the ticket office was greater than could be handled on the lines between the switchboards, the operators were instructed to take the numbers of the subscribers and call them up in rotation as they were able to handle them.

The conditions in this case were almost the reverse of the usual use of a branch exchange, for ordinarily calls coming in over the trunk lines are switched to many different points, while here the bulk of the business was for one office.

The utility of the telephone in freight offices is

*Read before the Convention of the Association of Railroad Telegraph Superintendents, at Buffalo, N. Y. June 19, 20, 21.

also very apparent, as calls for rates and information as to shipment or delivery can be quickly furnished.

At one of the largest freight yards in this country, having a completely equipped branch exchange connecting all points throughout its various houses and yard points, a person expecting incoming freight, upon obtaining connection with the switchboard and stating what is desired, is promptly connected with one of three clerks whose duty it is to furnish such information. These clerks, by the use of various direct lines to the offices concerned, are able, within a minute or two, to give the calling subscriber definite information as to arrival or non-arrival of the desired freight, and, if it has arrived, to inform him at what door of a certain freight house his teamster should go to find it.

Many receivers of freight are notified at once by telephone of the arrival of freight instead of waiting for the usual written notice, thus securing a prompt removal of the goods and relieving congestion in the freight houses.

As telephone users increase in number, it will undoubtedly be found more satisfactory to all concerned to notify by telephone rather than by mail and, with proper precautions, a record and check of the receipt of the notice may be kept. While many question the advisability of giving rates over the telephone the cases of dispute in regard to the rate quoted form a small percentage of the whole, and, in important cases, the rates quoted may easily be confirmed in writing.

Where freight is transferred from one road to another, cars not accompanied by way bills may be saved needless switching by prompt communication by telephone and, in many instances, it will mean a saving of twenty-four hours' delay in forwarding a car to its destination, which, in case of perishable freight, may save heavy claims for damages. Way bill corrections may be made in this manner without delay and with no more liability to error than in the case of telegrams.

The telegraph lines of a railroad company at points but a short distance apart about the yards are often burdened with much business that could be transacted far more quickly by telephone. There are many instances where yard offices within half a mile of the main office, equipped with telegraph, are handling messages on through wires, delaying other business, when a few dollars expended on telephone circuits would relieve the situation and give better satisfaction.

Where there is much competition for business between different roads, it is often necessary for a traveling agent to get into immediate touch with his superior. If he can step to the nearest pay station and call up the local switchboard of his company and through them be connected with headquarters of his company, in two or three minutes the matter may be settled, perhaps resulting in the securing of business that otherwise would go to a competitor.

Insufficient telephone equipment, resulting in the constant inability of prospective shippers to

get into communication with railroad offices will often lose a large amount of business when an immediate decision must be made, and it is found that the offices of a competing road are, through adequate telephone facilities, easily reached.

A certain telephone company, noticing such a situation, took pains to have the lines of the two competing railroads monitored, and the result showed that the road whose telephone was constantly reported "busy" lost enough business to its competitor in one day to pay the rental of a complete branch exchange equipment for a year.

In one case at a large terminal, embracing six large freight yards within a distance of nine miles, through all of which runs a double track main line averaging several hundred trains per day, every tower and switch cabin is connected to a switchboard in the passenger station, keeping dispatchers, yardmasters, towermen, and switchmen in close touch with one another. Many switching movements have to be made on and across the main line tracks, it being necessary, of course, to keep the line clear when trains are due. Now that all concerned are kept posted on the situation by telephone it is possible, in case the main line trains are delayed, to continue switching movements to a safe time limit, whereas, before, delays were inevitable. The yardmaster is enabled to follow movements so closely by being kept informed from the various points, that a saving of two switch engines has been effected over the number in use before the telephone service was installed.

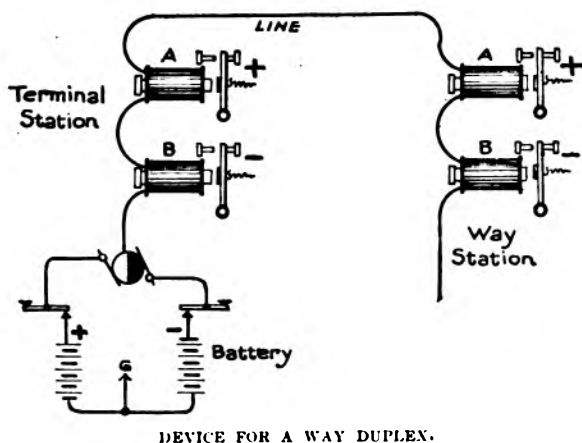
One of the largest passenger terminals in the country has a very complete telephone service, the main exchange being located in the office building. Every official has direct connection from his desk to the exchange. The general yardmaster, the trainmasters, towers and cabins are all connected to the switchboard, besides having direct lines to the points with which they have most business. The main interlocking tower, which controls all the yard movements incidental to handling 750 odd trains per day, has a special switchboard, to which are connected the outlying towers, switchcabins, yardmasters, signal bridges, etc., with trunk lines to the main exchange. Incoming trains are reported to the operator by telephone and he is constantly in touch with every movement being made. Not a telegraph instrument is in use at any of the yard points, the telephone being the only means of communication. The yardmaster also has a small switchboard, giving him direct connection with the various points he has to reach. In case of a bad fog, when the signals cannot be readily seen, men are stationed at the signal bridges on which are placed telephones in boxes connecting with the switchboard in the interlocking tower, and the trains are handled without delay and with safety. There is hardly a place in the immense plant where any man is stationed, having special duties, that cannot be reached at once by telephone. All wires are underground—not an overhead wire in the yard—and there has yet to be an instance of any failure in the service night or day.

(To be continued.)

The Roberson Quadruplex.

BY D. B. GRANDY.

As an illustration showing how near one may be to a good thing, and yet fail to grasp the possibilities lying in it, I enclose herewith a sketch of a device on lines since successfully worked out in the Roberson quadruplex. The device shown is for a way duplex, and was filed by me in the Patent Office in 1880. The idea was suggested by Gray's Harmonic System, which was then being experimented with between New York and Boston. The working parts were, at the terminal station, two batteries of equal voltage, an alternating device by which impulses of alternate polarity were sent to line; keys in each battery circuit, having rear contact points, by the closing of which the current from their respective batteries was interrupted; two relays having polarized armatures, arranged to vibrate, one on + and the other on - impulses. While so vibrating, their local circuits remained open, but on the current of either polarity being cut off at the terminal station, all relays affected



DEVICE FOR A WAY DUPLEX.

by that polarity ceased vibrating, and their local circuits closed.

The signaling from way stations was done by an intermediate battery of the same strength as the terminal batteries, so connected to two transmitters, that the closing of one inserted the battery with its + pole toward the terminal battery, thereby neutralizing the + impulses from that battery; the closing of the second transmitter inserted the way battery with its - pole toward the terminal, neutralizing the - impulses, and when both way transmitters closed simultaneously, the main line circuit was opened, thereby stopping both sets of impulses. There were other devices for equalizing the current strength, steadying the relays, etc. I first used the vibrating tuning fork of Gray as an alternator, but afterward substituted a commutator driven by a small battery motor.

This system worked well on an artificial line, and when shown to F. L. Pope, then assistant electrician of the Western Union Telegraph Company, he gave it unqualified approval, and permission was granted for experiments on the lines of that

company. But the very first experiment on a real telegraph wire developed an unforeseen "bug" of the largest and most venomous species. I found that when the way station closed both transmitters and thereby opened the main line, the static capacity of the line was sufficient to keep both the home relays vibrating. And this effect was produced, even when the way station was but twenty miles distant!

This discovery put a damper on further experiments in that direction. The possibilities which lay in the device if applied to a quadruplex did not occur to me, and the application for a patent was abandoned.

The experiments above referred to were made by permission of General Eckert on the lines of the American Union Company, with the assistance of Mr. J. W. Wilson, then chief operator for that company at Boston.

Automatic Train Signaling.

It is reported that the Pennsylvania Railroad Company is considering the adoption of an automatic electric-signal system on its locomotives, says the Western Electrician. The system was recently tested by the Chicago and Eastern Illinois Railroad, between Dolton and Mokenca, Ill., a distance of sixty-three miles. The result of the experiment was very satisfactory and seemed to show that the electric signals were far better than the ordinary block system.

In the experiments conducted by the Chicago and Eastern Illinois, the line was divided into block sections of suitable length, and adjacent block sections were separated by an insulated track section one rail in length. The track batteries were placed at these points, the positive wire leading to the insulated rail and the negative wire to the block section in the rear. The rails in each block were bonded in the usual way. In the engine cab were located two incandescent signal lamps, one white and the other red. One or the other of these is always burning. Current was supplied by battery on the engine or tender, and was switched from one lamp to the other by an instrument operated by the track circuit. Each locomotive axle had electrical connection with a conductor leading to the instrument on the engine. When the wheels entered the insulated section (if the stop signal was to be given) the current passed from the rail through the wheel conductor and cab instrument, switching the lighting circuit to the red lamp.

In this system the signal is always given two blocks back from the obstructed block, or the train-order signal, so that when the red lamp burns the engineer knows that he has one clear block in which to stop his train. The red lamp burns when a switch is open, a block section occupied or a train-order signal displayed.

Electrical appliances in use in the United States to-day are estimated to be worth \$3,975,000,000. The capital of the Magnetic Telegraph Company, the first to introduce the use of electricity for industrial purposes (in 1846), was \$15,000.

Crude Attempts at Telegraphy.

About seventy years ago, perhaps before the present mode of telegraphy had been thought of, an attempt in that direction was made by a Mr. Porter, a man of inventive faculties, who afterward became originator, proprietor and conductor of *The American Mechanic*, the pioneer publication in that direction, and the predecessor of the present *Scientific American*.

The southern and ocean terminus was on Rhode Island, on Rocky Farm, and the place of its location has since been known as Telegraph Hill. It was constructed wholly of wood, was in part a species of wireless telegraphy. It consisted of a series of upright posts, with a number of arms secured to the post at one end by pivots, permitting the arm to be moved in any direction desired, at the liberated part, or up and down, and the information was derived from the relative position of these arms. The signals were placed on the summits of the highest hills, at desired intervals, an operator being required at each signal post to convey the signals to the next station.

To reach Boston, as was intended, would require a large number of signal stations and operators, and the execution would have been necessarily slow and expensive. Of course, no approach could have been made toward the present manner and matter of telegraphy, at best being confined to the briefest expression of important information, to carry which to Boston, for instance, would have required a comparatively long time. It was put in operation, if the writer mistakes not, and for a sufficient length of time to test its availability, but not its practical value, and it was early abandoned. It is only within a few years that the southernmost signal post disappeared from Telegraph Hill.—Newport (R. I.) News.

Philippine Archipelago Cables Complete.

Gen. Chaffee has cabled to the War Department from Manila, reporting that cable communication has been established between Palanog and Legaspi in the Philippine Islands. This completes the last link of cable and land line communication in the Philippines and gives an uninterrupted service from Bongao in the Tawi-Tawi group, in the extreme southern part of the archipelago, to Aparan, in Luzon, the extreme northern point. The last cable to complete this communication has just been laid from Legaspi to Bacon, north of Sorsogon, making connection with Palanog on Masbate Island.

One feature of importance in the completion of this work is that the Government will now be able to control its own lines and will not be compelled to use the English cable line for any inter-island or land communications, as connection is now established with all the islands of the archipelago.

It has been found that the life of a telegraph pole in the Philippines is very short, being little more than a year, it is said. The white ants, which are to be found on the islands, aid the climate very materially in the work of destruction.

The Action of Zinc in Sal Ammoniac Cells.

The American Electrician, in answer to the question, Why do the zincs in sal ammoniac cells usually eat through at the top faster than at the bottom? prints the following:

"There is generally more or less of the double chloride of zinc and ammonium present in every sal ammoniac cell. As this is heavier than the mixed solution of zinc chloride and of ammonium chloride, it settles toward the bottom of the cell. There is then a local action which tends to dissolve the zinc at the top and to deposit it at the bottom, for zinc in a solution of zinc chloride is positive to zinc in a solution of the double salt; the zinc and the liquid thus become a short-circuited cell."

Gold and Stock Life Insurance Association.

The report of the auditing committee of the Gold and Stock Life Insurance Association for the quarter ended September 30 shows the condition of this company to be as follows:

Balance on hand, last report.....	\$16,197.69
Receipts	1,890.01
	Total, \$18,087.70
Disbursements	\$1,409.75

Balance on hand.....	\$16,677.95
F. H. Nicholls, Wm. Shone, M. J. O'Leary, auditing committee.	

Telegraphers' Mutual Benefit Association.

The annual meeting of the Telegraphers' Mutual Benefit Association will be held in the Western Union Building, 195 Broadway, New York, at 4 o'clock, on Wednesday, November 20.

As the by-laws require that at all meetings of the association thirty members present in person, representing one-third of the entire membership, shall constitute a quorum, members who cannot attend are requested to sign proxies and return to the agent or forward to the secretary's office, New York, at the earliest date convenient, in order that there may be time for checking and listing the same.

Wireless Telegraphy in Mid-Ocean.

When the steamers *Campania* and *Lucania*, both of which are equipped with the Marconi wireless telegraph system, passed each other in mid-ocean recently, although 65 miles apart, messages were successfully exchanged with one another. This is no doubt the first time telegraphic communication has been maintained between steamers in mid-ocean. At no time were the vessels within sight of each other. Communication was maintained for a period of two hours.

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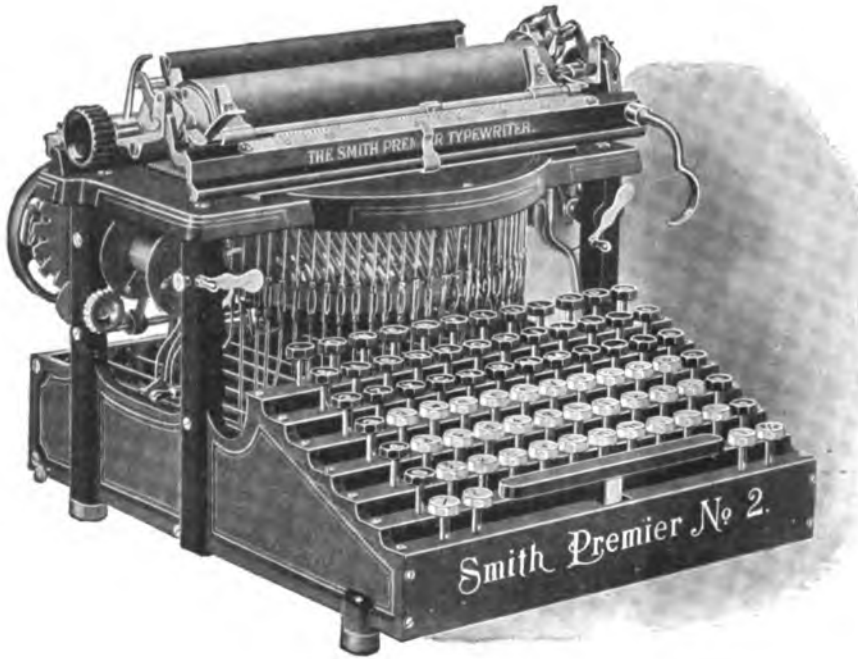
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NEW YORK, October 16, 1901.

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

THE ROBERSON QUADRUPLEX.—The Roberson Quadruplex System, which has been recently adopted by the Western Union Telegraph Company, and which will be put into extensive use throughout that system, was illustrated and described in our issues of March 16 and April 1 of this year. Those who desire copies of these issues can obtain the same at 10 cents apiece. As there are only a few of these numbers left, we would urge those who wish to become posted on this new system to procure copies before they are entirely out of print.

The Value of Telegraph Age's Technical Articles.

No stronger proof of the great value to students of the technical articles contained in TELEGRAPH AGE can be found anywhere than may be inferred from the fact that the International Correspondence Schools of Scranton, Pa., which claims to have

enrolled over 300,000 members since its incorporation, have, by permission of this journal, embodied in their newly revised and handsomely bound text books, nearly twenty-five pages made up of the articles contributed by Willis H. Jones, under the caption of "Some Points on Electricity," appertaining to the care and handling of multiplex apparatus.

The popularity of Mr. Jones' writings is due, not only to the accuracy of his statements, but to his aim to cover the small side features of each subject, a matter too frequently overlooked by authors, but one which, if belittled, leaves a perplexing remnant to the student's education.

It will thus be seen that the marked appreciation evinced for this journal by a great institution of learning should justly find its counterpart among the numerous body of telegraphers themselves, the best interests of whom TELEGRAPH AGE has ever sought to promote. For no telegrapher, official or operator, who places a proper value upon his opportunities, and who accordingly would keep himself thoroughly informed regarding all that is passing in the telegraphic world, and who would take advantage of important technical knowledge constantly presented for his instruction in these columns, obviously cannot do so without recourse to this paper. TELEGRAPH AGE, then, should be indispensable to every telegrapher.

The Government and the Telegraphs.

It has recently been reported, we do not know on how good authority, says the New York Times, that the United States Industrial Commission is likely to recommend legislation looking to the operation of the telegraph lines in this country under Government ownership. The commission went pretty fully into the question last spring, and from the facts that were then brought out we should say that it would approach any suggestion of government control and management with the utmost caution. That there are defects in the present system will hardly be denied by its own advocates, but that they are of such a nature that they can be remedied by government operation, without incurring difficulties of much more serious kind, is a proposition which, to say the least, remains to be proved.

The natural analogy of government telegraph ownership is with the Postal Service. In this country that service is carried on at a considerable loss, and though it has been shown plainly that the loss could be avoided by the introduction of the simplest business principles and the abolition of special favors to particular classes, it has so far been found entirely impracticable to secure Congressional action in that direction. The difficulty in telegraph management would certainly be as great. Again, the management of the Postal Service is seriously handicapped by the political changes in the postmasters at every change of party, and even a change of Administration without a change of party. Such instability in the employees of the telegraph service would be much more injurious than in the Postal Service.

On the other hand, it has been demonstrated

that the operation and maintenance of the telegraph system is radically a different problem from that presented by the Postal Service. The latter is practically a hired service. It requires no plant, no construction, no extension, no important introduction of new appliances or inventions. The plant and property employed are those of the transportation companies, and any increase in the volume of business can be met by an added expense less in proportion than the added income. The reduction of postage, therefore, naturally and easily involves an increase of business that may bring no decrease in the net revenue. That clearly would not be the case if the Government, in order to meet added business, had to build new lines and add to the terminal and other appliances for handling it. Not that a progressive reduction of telegraph tolls is not practicable with the increase of business. It is, and it has taken place. But it is limited by conditions that do not exist in the case of the Postal Service. It can be secured only by large expenditure, which should be and must be made with more care and skill and accountability than are ordinarily to be had in Government operations.

The usual example that is held out as sustaining the plea for Government telegraph ownership is that of Great Britain. But the telegraph department of the Post Office of the United Kingdom, with important conditions far more favorable than they can be in this country, is carried on at a considerable and progressive loss. In that country the distances over which lines have to be maintained and operated are very much less than in this, the amount of business per mile of line is greater, the necessary expense is proportionately smaller, and the civil service, from which the employees are taken, is far more stable and conducted more on business principles and with business methods. Yet with all these advantages the total loss of the Government on its telegraph business since its assumption in 1870 has been \$40,000,000. Even with this large contribution to the expenses by the taxpayers, the rates are not materially lower than those charged in this country for short distances, and are decidedly higher for the longer distances. How far the telegraph under Government management in England fails to supply as complete service as is afforded in the United States is shown by the fact that in that country there are only one-fourth as many telegraph offices as post offices, and in this there are more than half as many. Despite the short distances and the density of the population, only one-half as much accommodation is given in England as in the United States.

If the same scale of accommodation were supplied in England the loss on the business would be larger. If the Government in the United States undertook to keep up the large measure of accommodation now given, the loss would necessarily be larger here than it is in England. We have already 927,071 miles of wire in use. England has but 308,436 miles. In Great Britain the population is about 333 to the square mile. In the United States it is only 24. But in the United Kingdom there is only a mile of wire to every 130 people.

In the United States there is a mile of wire to every 76 people. We have 70 per cent. of accommodation more than they. If we paid for it at the rate that they pay for theirs the tolls would be much higher and there would still remain a heavier tax to be levied on the people. In the light of these facts it is not easy to see what advantage the United States could gain from the assumption of the telegraph business by the Government. If, however, any such extreme and hazardous experiment is to be tried, there is one condition precedent that must absolutely be insisted on—the complete banishment of all politics from it. As that, at present, would be simply a miracle, the proposition ought not seriously to be considered.

“Up to” The Telegraph Company.

“It puzzled me for some time,” said the portly party in the Detroit Free Press, “but the explanation was simple enough from the standpoint of my wife. During the trying-hot spell that we had in July she visited a sister who lives in the central part of the State. When she left I told her to wire me when she got to her destination so that I would know that she had arrived safely. I said that the word ‘arrived’ would be all that was necessary, and I would know from that that all was well. In due time I received a telegram from her which read: ‘Arrived, the big black bug and the big black bear.’

“I sat and looked at the telegram in blank amazement, trying to figure out what she meant. I concluded at last that the message had been mixed up in sending, so I went to the telegraph office and had it repeated. The answer came back that it was correct and according to the copy that had been filed. Fearing the heat had affected my wife’s head I boarded the first train and imagined all sorts of dire things that might have happened to her.

“‘Goodness,’ she gasped when I appeared on the scene, ‘What has brought you here?’

“‘This telegram,’ said I, breathing a sigh of relief. ‘Perhaps you will be kind enough to explain what you meant by such a fool jumble of words.’

“‘Why,’ said she, ‘the clerk said it would cost no more to send ten words than it would to send one, so I decided to have my money’s worth.’

“‘Well,’ said I, ‘It seems to me that you might have picked out a less idiotic combination.’

“‘Why, you see,’ she answered, ‘that was what the car wheels said all the way out here, so I just put it in to fill out!’”

Abandoning Copper Wires.

It is stated on good authority that the work of thieves is compelling the telegraph companies to take down their copper wires between Philadelphia and Chester, Pa., and substituting iron wires therefor. Many thousand dollars’ worth of copper wire has been stolen at various times during the past three years, and the police authorities have been baffled in their attempts to arrest the thieves. The annoyance has become so great that the companies have decided on the change for their own preservation.

Women as Telegraphers.

(Concluded from page 402.)

Passing from the subject of efficiency the question of economy is discussed, and the statement that in England female telegraphists are 25 per cent. cheaper than the males is grappled with. Mr. Havelock Ellis is quoted as having stated that "when women are substituted for men, an office worked by three or four men will require four or five women," and the French administration admitted that in place of 262 male appointments 325 females were required in one place, and in another for 61 males 128 females were introduced into the service. If the experience of the French Government is of universal application it will be evident that the less pay received by the individual woman is compared with the male, is equalized by the increase of staff. But the subject of sick leave must also be considered, and here the figures are very striking.

"Every State which has expressed an opinion on the point complains that the women's sick-absence is greatly in excess of the men's. The English experience is typical of the whole. In the Central Telegraph Office of London the average sick-absence for the men during 1895 was eight days, that for the women being 14.3 days. To take a wider field, the annual report of the Postmaster-General for 1900 shows the averages for the whole postal staff in London as follows:

Average per sick officer.		Average per officer employed.	
Men.	Women.	Men.	Women.
12.9	14.2	8.1	11.4

"It is noteworthy that some 80 per cent. of the women share in this sick-absence, as against 62 per cent. of men, and it is made up largely of short periods."*

Then came the consideration of the relative power of endurance as between male and female. The Dutch Government, speaking of women, says: "They tire sooner than men." Denmark, Roumania, Sweden, and France support this view, and England works upon a recognition of this principle in relegating the press work, etc., to a male staff. The result of the reports from all the countries enables Mr. Garland to sum up as follows:

"Steady work at low pressure, and more or less mechanical in character, necessitating little or no judgment, seems to be admirably performed by women, but where those conditions are lacking they are generally found inferior to men. The lack of judgment may be due, as I have hinted, in part at least, to educational disability, but there seems to

*The Dutch figures are sufficiently striking to merit quotation. During the year 1897, for sick-absences of from 1 to 30 days' duration, the ratio between the male and female staffs was as 1 to 2; for sick absences of from 1 to 3 days' duration the ratio was 1 to 3.

Sir H. C. Fischer, examined by the Tweedmouth Committee, said: "The women come to us young; their mothers have charge of them, and ask them to stay at home if they have any little ailment—and they do." It is necessary to add that the regulation age of entry is the same for men and women, viz. 14 years, and the average age of entry is also the same, viz., about 16 years.

be something more fundamental in the inability to work at high pressure."

Reading the reports of the hours of duty of female telegraphists, it is apparent that the practice varies greatly in the different countries. In England 6 A. M. and 10 P. M. mark the limits of the hours of the women. In Paris the times are 7 A. M. and 9 P. M. In Berlin the ordinary duties of women extend to 10 P. M. In Holland the female operators perform night duty; and while the Swiss Government considers "good morals forbid" female telegraphists from performing night duty, it makes its female telephonists take charge of switch-rooms during these hours. But hours of duty are simply the result of convention, and as women journalists have overcome the difficulty, so women telegraphists will doubtless do the same if the present restrictions be found to hinder their opportunities for work.

Marriage is also a great factor in determining the value of women's work. Year after year large numbers of the better skilled of the women leave the service for this purpose, 196 resigned in England during 1899, with an average age of 27 years, under this heading, and even where married women are retained, as in France, it is reported that "marriage detracts from the value and trustworthiness of the women."

The result of the author's survey of the evidence which he has accumulated leads him to the following conclusions:

"To sum up: We have seen that women possess the ability to perform the routine duties of telegraphy, when carried on at low even pressure, as efficiently as men. We have seen that a broader worldly education gives them the judgment and ability necessary to perform duties of a higher character. In addition, they are attractive to employers because they can be obtained considerably cheaper than men. They possess, too, the sovereign advantage of docility. There are not lacking signs, however, that this docility will decrease as women become more conscious of their economic value and responsibilities.

"As a set-off to their attractive qualities, they suffer from certain disabilities and disadvantages which detract from their value and tend to neutralize the economy in money wages. They would appear to have a lower individual output than men, and as a consequence it is necessary to employ a larger staff of women than of men for the same work. They suffer much more from sickness than men, which reduces their trustworthiness and value. The sickness is largely due to causes that are natural and inherent, and therefore ineradicable. Their average service is considerably shorter than men's and they are thus lost at the period of their higher efficiency. They possess less powers of endurance, and are, therefore, of much less value in sudden emergencies, such as frequently arise in telegraph work. A social prejudice prevents the performance of night duty by women, although there seems reason to believe this can, and will be, overcome."

Adding one more excerpt, we may say, in Mr.

Garland's words: "There is undoubtedly an excellent field for observation in the English post office, and many good results could be looked for if information were carefully collected, intelligently classified, and frankly published. In view of the importance of the subject it is due to the public that some such work should be entered upon. Meanwhile, our investigation of the material at hand, while bringing out many important facts, still leaves the main question of the relative value of male and female labor in the present day to a large extent unsettled. But one result seems quite certain: Were it not for the docility of women, there is no sufficient reason apparent to justify the favor with which they are viewed by administrative officers and others responsible for their employment."—London (Eng.) Telegraph Chronicle.

Why Not Ethergraphy?

From the New York Times.

A correspondent of TELEGRAPH AGE, James B. Dillon, of Louisville, Ky., has been moved by our recent adverse comments on all the names yet suggested for what is commonly called, or miscalled, "wireless telegraphy," to build one which he considers an improvement on them all. It is "ethergraphy," and he defends it thus: "If 'ether' is supposed to fill all space, and 'graphy' means to write, why wouldn't 'ethergraphy' be a proper term for Marconi's great discovery, as it is believed by a great many if not all electricians that the ether is the conductor of electrical waves, or that the electrical current follows the etheric waves? If the ether theory be true, and we know of no reason to doubt it, then in using Marconi's system of Morse signals without a main line conductor, certainly the dots and dashes are carried along by the 'etherical' conductor, which constitutes writing with the aid of the ether; hence the deduction, 'ethergraphy.'" There are several serious objections to the same. In the first place, the two parts of the word are clumsily put together, the lack of an intermediate vowel rendering it unpleasant to hear and difficult to speak, and, in the second place, the old theories in regard to "ether" are just now in a rather toppy condition, and, however it may be with electricians, scientists are getting discontented with the assumptions that have served them so long and well as a working hypothesis, and would not be either surprised or troubled if the necessity for making a new set of assumptions about atoms and molecules as well as ether should soon be manifest. Then what would become of "ethergraphy"?

Charles W. Morse, of New York, has exercised the option he held on more than two-thirds of the capital stock of the Telephone, Telegraph and Cable Company of America at 50 per cent. of the amount paid in and has thereby obtained control of the company.

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Threepenny Telegrams.

The following article, evidently written by "one who knows," appeared lately in the London Daily Chronicle:

The Postmaster-General's annual report for this year discloses the fact that for the first time in the history of postal telegraph service the number of messages despatched over the wires shows a decrease from the preceding year.

The official optimist may make the best of the figures, but with the increased telephone facilities, it may be predicted with confidence that the telegraph work will still further diminish unless drastic alterations are made in the present service. The post office official has no love of progress, and his chief delight is to point to the telegraph system as a failure from a financial point of view, and publish with unwearied iteration the cost of purchase and the other items of expenditure which have absorbed so much of the taxpayers' money.

The story of the transfer of the telegraphs from company to State control is, in truth, a sad one, and should be a lesson in the art of "How not to do it" when other branches of industry are absorbed for the common good. And yet the post office has made several blunders with reference to its telephone business, and if the nation ever possesses an efficient telephone service, it will be due to pressure from without rather than initiative within the walls of St. Martin's-le-Grand. The telegraph system is burdened with an inflated purchase price, and a number of other matters have conspired to press hardly upon it, and, above all, its income has always been reduced by the fact that all improvements have been paid out of revenue.

The truth, however, is palatable. The number of messages have declined, and all progressives interested in the development of State enterprise should be interested in discovering the reason. It is obvious that the test of the value of the telegraph is the amount of work done, rather than the financial result, as, if the people of England use it freely, the reason of existence is manifested.

The two essentials of an efficient service are:

- (a) A quick and accurate delivery of messages.
- (b) A cheap tariff.

With regard to the first requisite, it may be said that the telegraph service shows a distinct falling off from what it was a few years back. Delays, especially upon commercial work, are frequent. It will be remembered by our readers that only last year we called attention to the private instructions issued by the postal officials to telegraph superintendents—in which they were enjoined to delay press messages rather than put the department to expense by increasing the staff. Fortunately, the deputation of newspaper proprietors to Lord Londonderry had a good effect, and the Postmaster-General has made considerable improvements during the past twelve months.

But business men complain bitterly of the length of time taken before the delivery of messages. Especially is this the case in the local London service, and the new telephone service will form a formid-

able competitor unless the post office can be awakened. The question of errors in telegrams is an old one. Mr. Henniker-Heaton suggests that the post office should compensate for the loss incurred, and this is possibly the best way to compel reform.

Nearly the whole of the mistakes are due to the employment of unskilled operators, chiefly composed of boy and girl labor. It is now usual in all telegraph offices to employ "learners," some paid, others unpaid, upon important circuits, and the stock brokers and business men are the chief sufferers.

These points may be enlarged upon, but accuracy can be obtained only by employing competent telegraphists. Understaffing leads to long hours, and a tired operator becomes negligent. In the Central Office, London, last year nearly 750,000 hours of overtime was performed, and these figures speak eloquently as to the undermanning.

The need for tariff reform is becoming felt. An American writer has called attention recently to the small proportion of social telegrams sent in England as compared with America. Democracy still fights shy of the wire, and the working man, as particularly as his wife, is adverse to spending the "full round orb" of the sixpenny piece. On many occasions a telegram would allay anxiety or give information quickly, but the poorer man hesitates.

No national service can live without the democratic copper. The railways find that the third class passenger provides the dividends, and the London County Council has learned that the cheap tram fares spell financial security.

The post office could well afford to make the experiment of introducing threepenny telegrams. It is idle to argue that because the reduction from one shilling to sixpence has not produced a working balance that the still further reduction would fail. Threepenny messages would appeal to a wider suffrage, and a different class of work would be created. There would be little outlay in the direction of new lines. High speed instruments now in existence are rarely used except for press messages, and many of the circuits are never worked to their fullest capacity. Hitherto the telegraph service has been the monopoly of the business and middle classes. The time is ripe for a widening movement. The postal officials may not be able to comprehend the value of anything beyond the penny post, but the telegraph service belongs to the nation, and should be utilized for the humblest of its citizens. In an age like the present, it is evident that reform is imperative when the telegraphs have a retrograde tendency and we suggest the real remedy lies in extending its usefulness by diminishing the cost of transmission.—London Telegraph Chronicle.

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

New Dawson Telegraph Line Revolutionizes Alaska News Gathering.

From the Seattle (Wash.) Times.

The completion of the through government telegraph line from Vancouver, B. C., to Dawson, Alaska, on September 23, marked the close of an interesting era in the lives of Seattle newspaper men. These newsgatherers, since the first wild rush to the Klondike in 1897, have vied with each other to secure "scoops" from the great new North. In some instances sums of money, out of all proportion to the worth of the purchase, have been paid for a small provincial paper containing an account of some murder, suicide, a story of starvation, siege or sensational happening. The people went wild over the discovery of the Klondike and have ever since had an insatiable appetite for stories of Alaska. Numerous individuals of the great Alaskan expanse, having been introduced to Seattle people through the newspapers, the latter now demand news concerning them. Seattle has not only been a mart for the products of the Seattle water front reporter's pencil; nearly all of the newspapers of San Francisco, St. Louis, Minneapolis, Cincinnati, Chicago and New York have had their correspondents here, besides any number of other large newspapers throughout the land. The "yellow journals" have been especially well represented with Alaskan correspondents, who have plied them with thrilling, adventurous, romantic and tragic stories for the past four years—and the best part of it was that all bore a semblance of the truth.

The method of obtaining the news from the distant land of gold was as interesting as it was uncertain. The reporter lived in his work and was always familiar with the contemporary happenings. He knew the geography, the physical construction of the country, its dangers and its legends.

On the local newspaper the opening of the Klondike was the signal for a radical change in the work of the water front reporter, for naturally the Northland news fell to his lot by reason of its first arrival on his "beat." All Alaskan vessels, steam and sail, were covered with an assiduity that oft kept the ambitious newsgatherer on the docks until the small hours of the morning. The pursers of the steamships were at once pressed into the news service and persuaded, bribed and almost blackmailed into bringing all the late newspapers down. They became so familiar with the points of a good news story that a number of them would have drawn good salaries as newspaper men. Later the water front man's work was considerably lightened by special correspondents who took every precaution to get their "copy" down from the North with celerity and certainty. But Alaska is an immense stretch of country and a complete news service throughout the country would have cost fortunes annually to support. For that reason the local man had plenty of work left.

The special correspondence, however, was looked after carefully by some of the papers. No more striking example of this can be given than the details of the fatal Dyea snowslide in the spring of

1898. The Hearst papers, the San Francisco Chronicle and numerous others were well represented at Skagway and in that vicinity on account of the great surge of people over Chilkoot for the interior. Where there is a crowd, the newspaper man always calculates there is the best chance of a great accident. The detail of the terrible loss of lives is too well known for recapitulation. The newspaper men were on the spot directly after it happened. After obtaining full accounts with the large list of lives lost, the first thought was to get the news down the hundreds of miles of coast to a telegraph line. By charter of an ocean liner and like methods the trick was done; the news poured into the Hearst telegraph operator for hours after the line had been reached and one of the greatest coups ever accomplished was made for the San Francisco Examiner and New York Journal. And the cost of that story was slightly over \$7,000. But Hearst considered that he had made his purchase at a fair price.

News from the interior was one of the greatest problems to the local newspapers. Dawson papers were hard to get. This was true on account of there being so many connecting points to be made before the parcel ever reached its destination. Fourteen days was about the shortest time in which Seattle people could read of Dawson happenings. This time was cut down to three days though by the establishment of the Dawson-Skagway telegraph line. The uncertain schedule on which Alaskan boats have run, however, often extended this time to over a week. An instance of this was the hanging of George O'Brien.

The final success in stringing wires over the Naas Mountains lately opens up wonderful possibilities. The value to commerce is readily seen. The end of provision "corners" at Dawson has come. Both Skagway and Dawson can be communicated with by the wonderful Morse telegraph. The connection of the outer world with Dawson has even a greater significance. It leaves only one gap of 700 miles to string before Nome will be in a position to talk with the outside world. The line from Dawson to Eagle is already in operation and now the wires reach out from Nome as far as Tanana. Work is being pushed rapidly to connect the latter place with Eagle. With that one gap closed, London capitalists will be able to confer with their Nome representatives; moneys due on a certain date to close a contract for some mining property can be sent to Nome in a few hours instead of a few weeks as formerly; transportation companies can explode rumors of lost vessels; in fact, the possibilities are unlimited.

The news service of the far North, for so great a time almost a novelty and surely an uncertainty, will slowly drop into the smooth grooves of newspaper grind. The days of trials, hardships and even privations in the rush for exclusive accounts will last only as fond memories in the minds of old newspaper men and as good material for the "old man of the staff" to beguile the cub at the press-house.

Arthur Hale.

Mr. Arthur Hale, whose portrait appears on this page, recently resigned his position as superintendent of telegraph of the Pennsylvania Railroad Company, held by him since January 1, 1898, to become the assistant general manager of the Baltimore and Ohio Railroad Company, with headquarters at Baltimore, Md. Mr. Hale was born in Boston, Mass., on August 22, 1859, and comes of distinguished ancestry, his father being the Rev. Edward Everett Hale of that city, and his grandfather, Hon. Nathan Hale, a nephew of Captain Nathan Hale, of Revolutionary War fame. His father's uncle was the Hon. Edward Everett, United States Senator from Massachusetts. His mother is the daughter of the Hon. Thomas C. Perkins, of Hartford, Conn., a niece of the late Henry Ward Beecher.

Mr. Hale graduated at Harvard College in 1880, with honors in mathematics. He worked for a



ARTHUR HALE.

short time with the Merrimac Manufacturing Company, of Lowell, Mass., and in the locomotive department of the Mason Machine Works, of Taunton, Mass., and entered the service of the Pennsylvania Railroad, October 16, 1882, as an apprentice in the Altoona shops. After service in the shops, the draughting room, and in the department of tests, he was made chief clerk of the car record office, shortly thereafter succeeding to the position of special agent of the general superintendent of transportation.

On the first of January, 1898, he was appointed on the staff of the general manager as superintendent of telegraph, in which position he had charge of the construction and maintenance of all telegraph lines owned or operated by the company, the distribution and economic use of repair supplies, and in general responsible for the efficiency of the telegraph service.

Mr. Hale has a mind well stored with knowledge

and adapted to the requirements of his present position, and an invaluable railroad experience, and his telegraph friends extend congratulations on his promotion.

Some "Back Dates."

BY WUNUVUM.

Wire testing is a pretty ragged business, judging from the number of "patches" that are required.

The drought out West this summer must have been just suitable to telegraphers, as so few of them are ever prepared for a "rainy day!"

"If you have any chewing tobacco," said the side-partner on a duplex, "remember that I am here to receive!"

"'No more' here," said the sender.

"Is there a place in Ireland called 'McTavishers Bog'?" asked a customer.

"I don't know," said the counter clerk, "but I think that that policeman out there could tell you!"

If, as per the latest scientific authority, tuberculosis germs cannot be contracted from cows, where does the "official cough" come from that the new appointee catches so readily? Let somebody "hurry answer."

"Do you never read newspapers?" complained a man to a receiver of a special who showed dense ignorance of common events.

"Oh, yes," answered the receiver, "I always read the 'Help Wanted' column!"

"Will you take code?" queried an up-State man with a hundred word special.

"No," replied the newspaper operator, "I promised my wife never to take anything hot again unless prescribed by a doctor!"

"Have you anything likely to bring about your early demise?" was a question to be answered on a telegraphers' aid society's application for membership blank.

"Nothing," he wrote, "except a tip on the Saratoga races that's said to be a 'killer'!"

"Just make a note for me," said a chief to an operator, referring to some delayed business.

"No, I won't," exclaimed the man, "I made a note for a fellow out in Missouri eleven years ago, and I've been changing my name four times a year ever since! No, sir; I'll make no more notes for anybody!"

"Oh, get the operator!" was the old, frayed sarcasm a city man vented on a Kansas crossroads fellow.

"I am the operator," retorted his indignant vis-a-vis; "also station agent, town marshal, coroner and undertaker. For anything in my line send me your address!" The entente cordiale was not resumed.

"For promoting harmony in the operating room," remarked the chief operator, "there's nothing like the lunch counter annex!"

"Why!" said the manager, "I thought they were growling about the lunch counter all the time!"

"So they are," replied the chief, "with one accord, but they ain't kicking on another thing!"

Wireless Telegraphy at the Yacht Races.

The Associated Press reported the yacht races, recently off New York Harbor, by wireless telegraph. The steam yacht "Mindora" followed the yachts over the course and reporters aboard reported the principal events of the contest to a shore station at Long Beach, L. I., whence the bulletins were forwarded to headquarters by telegraph. Barring some slight interference by another enterprise of the same character, the system worked very successfully. The Associated Press used the Marconi system pure and simple, an entire equipment and staff of operators having been sent over to this country by the Marconi Wireless Telegraph Company, of London, England, expressly to report the races.

Telegraph Communication with Lower California.

Lower California, although a short distance from Southern California, has hitherto been cut off from direct telegraph communication with that section of the country, and with other parts of the world, but the deficiency is shortly to be supplied. The Mexican government has ordered the installation of a telegraph cable from the city of Guaymas, the terminus of the Sonora railway, across the Gulf of California, to Santa Rosalia, in lower California, from which point lines are to be immediately constructed to all the principal cities and towns on the peninsula.

"The Crisis," the most popular book of recent years, being read everywhere, the demand for it frequently exceeding the supply, not only presents a magnificently written story of absorbing interest, but at the same time, and delightfully interwoven with it, gives one of the most truthful, because unprejudiced, dramatic and fascinating histories of the Civil War yet produced.

Orders for this famous work, accompanied by express or money order for \$1.50, will be filled, express charges prepaid, on the day of receipt, by addressing John B. Taltavall, TELEGRAPH AGE, 253 Broadway, New York.

Operators interested in the method of treatment of writers' cramp will find very complete information in the little booklet entitled "The Cure of Telegraphers' Paralysis," published by TELEGRAPH AGE, New York. Price 50 cents.

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

LETTERS FROM OUR AGENTS.

[Advertising will be accepted to appear in this department at the rate of three 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.]

BUFFALO, N. Y., WESTERN UNION.

Mr. J. F. Burgdorf is delighted with his bookkeeping department, it having been moved from the operating room to a large separate office. Among his new clerks are Mrs. Cuyler C. Smith, Miss Grace Milson and Miss Clinton.

Mr. George R. Benjamin, of New York, has completed installing a plant of the Buckingham Automatic Printing Telegraph system in the operating room, where the bookkeeping department was formerly located. It is working very satisfactorily, handling 100 messages each way, per hour, over one wire. Mr. W. J. Higgins is in charge. His assistants are W. C. Putnam, Phillip Repscher, Miss O. Blow, Miss L. Anderson and Miss E. V. Jarvis.

Miss N. R. Till has accepted a position with a private firm.

The enormous business being done at the Pan-American Exposition is being speedily and competently handled by the following: Bazaar Building main office, Mr. B. J. Eitelman, manager; Miss S. Brain, J. J. Birmingham and W. A. McCrae; Statler's Hotel office, Miss R. M. Purcell and C. J. Shear; Manufacturers' Building, Miss B. Hall; Horticulture Building, Miss H. B. Fischer; East Gate office, Mr. M. A. Collins; West Gate office, Mr. H. A. Coyle.

Cashier and Transfer Agent J. A. Pferd is an unusually busy man, the transfer service being the heaviest in the history of the Buffalo office. He is assisted by Frank J. Hickler, recently appointed transfer clerk. Mr. Hickler has been in the company's service a number of years, and has worked up from the bottom. Miss Margaret Smith has recently been appointed stenographer to Mr. Pferd, and Miss Lillian Hagle, telephone clerk.

Night Traffic Chief W. H. Stevens, recently returned to duty after an absence of six weeks through illness. Mr. George Sallaway acted in his place.

Mr. A. H. Labar has been assisting Chief C. H. Carter in the repeater department.

Mr. C. L. Guernsey has resigned, and is now receiving Associated Press at Jamestown, N. Y.

NEW ORLEANS, LA., WESTERN UNION.

Latest arrivals: J. N. Perry, Geo. Johnston.

C. A. Posey has resigned to accept a position in a broker's office in Jackson, Miss.

Miss A. G. Wedin, daughter of E. V. Wedin, of New York, paid us a visit shortly before leaving for home, and met a number of her father's friends.

A. Vinton, of Vinton, La., an ex-telegrapher

who had charge of the Sassafras Island office in 1868, called to see his old friends Messrs. West and Wark. Mr. Vinton represents his parish in the State Legislature and succeeds himself at every election. He is rated as one of the wealthiest planters of that section. He is also extensively interested in oil; is a prominent Elk and numbers his friends by the score. Says he is as good at the key now as he was in 1868, and likes to drop around and see the boys when in the city.

Assistant Superintendent of Telegraph C. F. Annette, of the Illinois Central Railroad, was a recent visitor.

E. T. Smith, after a two months' stay in Port Gibson, Miss., has returned to this city.

Promising young telegraphers Matt Flippen and A. M. Carroll are among the hustling men in the way room.

In Private Secretary H. V. Mielley, the manager has one of the finest shorthand and typewriter men that can be found in the city.

LOS ANGELES, CAL., POSTAL.

This office has been moved to a much more desirable location. One more table has been added to the operating department and the switchboard enlarged to over twice its former proportions.



VIEW OF THE OPERATING ROOM, POSTAL TELEGRAPH-CABLE CO., LOS ANGELES, CAL.

A heavy business is expected during the coming winter.

The orange crop will be large, and will ripen early.

The personnel of the main office is as follows: Manager, R. R. Haines; bookkeepers, F. Wilson and I. J. Whitney; delivery clerk, Edward Eubenhagen, days, Mr. Flood, nights; operating department, W. J. Wallis, chief operator, days; C. L. Lewis, night chief; Hattie Hall, E. F. Kubal, Karl Wiegand, F. H. Merrill, L. C. McIntosh; day check, Edward Penders; night check, E. R. Barnett; Temple street branch, Miss Allen; Hollenbeck Hotel branch, Mrs. Hawkins.

Harry Long handles the Broadway branch, Logan leased wire.

C. L. Lewis has returned from San Francisco, where he has been enjoying a vacation.

MEMPHIS, TENN., WESTERN UNION.

This office has recently undergone extensive improvement in the operating-room, a large room and hallway being added by the removal of partitions, thus giving an increased floor space of double the former capacity. A number of new quartette tables and several quad sets have been added. Chief Operator Ross and Wire Chief Johnson have just finished the installation of a number of Tole and Atkinson repeater sets, made necessary by the largely increased number of leased wires.

John H. Kelly, an operator well known to the fraternity, died in this city recently, of consumption.

Ralph Vestal, night traffic, has the sympathy of the office in the recent death of his little daughter.

Mr. E. E. Cord has just returned from a trip to New York and Canada. His improved looks would indicate much benefit derived from the outing.

Traffic Chief, Victor Crooker, and Miss Mary Byrnes, of the operating force, were recently married. They were recipients of many beautiful presents from the office.

On September 10 the marriage of W. D. Allen to Miss Myrtle F. Laws was celebrated. The office force handsomely remembered them.

Phillip M. Byrne has been appointed quad chief, vice A. V. Johnson, transferred to the manager-ship of the Akron, Ohio, office.

E. F. Walker is very sick at his summer home. His position of manager at the Cotton Exchange is being looked after by Edward Roper, who, in turn, is succeeded at the Produce District by R. E. Griffey.

Recent arrivals: Messrs. T. J. and W. E. Richmond, R. I. Lane, J. T. Jenkins, G. B. Lumpkin, J. A. Latture, C. E. Mix, T. G. Gooch and G. A. Bischoff.

Departures: W. J. Kirkland and S. A. McGuire, who is now a broker at Helena, Ark.; J. Reilly, John Stewart, C. A. Willis, W. M. White, the latter of whom to accept a position as traffic chief of the Postal, this city.

Miss Nora Burke is visiting friends in Chicago.

QUEBEC, QUE., GREAT NORTH WESTERN.

A quad has been constructed by Chief Operator J. Barclay and Assistant Chief M. O'Reilly to River-du-Loup, Que., and a third quadruplex to Montreal, Que.

George Matthews and James Dunn have performed excellent work during this busy season on the first quad, Hector Cyr and J. Sheridan, of Montreal, doing likewise at night.

Michael Sweeney is the father of a boy. Our congratulations are extended.

Joseph Breen has accepted a position with Neville Belleau & Co., brokers; Oliver Young, from Montreal, has gone with Nap Kirouac & Co., and Thomas Murphy, formerly with the Great North Western Telegraph Company, Quebec, and Operator Caron are both with A. R. McDonald & Co., brokers.

Fred Prevost, who has been here for the past

two months, has accepted a position with the Canadian Pacific Railroad in the North West.

A new wire was strung this summer from Quebec to Hawkesbury on the Great Northern. The wire erected the previous summer from Montreal to Grand-Mere and Shawenegan Falls, has been extended to Quebec. A wire has also been constructed from Quebec to Murray Bay.

The new wire to Belle-Isle, via Chateau Bay, covers over 725 miles.

An operator rendering the name in a message addressed to the "Duke of York," "Duke of Corks," caused great amusement.

BOSTON, MASS.

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

ST. LOUIS, MO., WESTERN UNION.

Mr. David S. Ryan, manager of the Western Union, Hot Springs, Ark., one of the large offices of the South, visited us September 12.

Mr. J. Newton Harpe, of New Holland, Ill., and Miss Lottie L. Link, of this office, were married September 18. They will make their home in St. Louis.

Mr. A. J. Merklin, a brother of Miss Anna Merklin, and Miss Anna Reuter, of Holden, Mo., were married September 18, at Holden. They will reside in this city.

Miss Viola Hart, one of our bright young operators, is quite an amateur writer, and is a frequent contributor to the local press.

The Hon. "Dip" McCruden returned recently from a vacation of several weeks spent on his farm.

Said Mike O'Neill to Billy Offer:

"Why would the average division chief be a success as an entomologist?"

"Dunno, give it up."

"Because he knows all about bugs!"

MONTREAL, QUE., GREAT NORTH WESTERN TELEGRAPH COMPANY.

It is with pleasure that we announce the return of John Moore to the office, after a lingering illness.

Herbert Keating is ill with typhoid fever.

Traffic Chief Rivet has returned after a two weeks' vacation.

Frank Cochrane and Herbert Baker paid a visit recently to old Quebec.

Superintendent Edwin Pope and Chief Operator J. Barclay, of Quebec, together with Thomas Murphy, operator for Broker McDonald, also of that city, were late visitors to this office.

Business is keeping up. The royal visit and the death of the President of the United States made things lively here. It was observed that most of the members of our staff wore black ties on the day of the funeral.

NEW BEDFORD, MASS., WESTERN UNION.

Miss Frances P. Cornish, formerly assistant clerk with the Western Union at New Bedford, has gone with the New England Telephone and Telegraph Company as operator and clerk to the general manager of the South Eastern Massachusetts division.

"Jim" Marvel, for years with the consolidated road at Tremont, Mass., has entered the electric railway field, having accepted a position with the New Bedford and Onset Street Railway Company as assistant superintendent, with headquarters at Wareham, Mass. G. W. Broderick, formerly with the Consolidated at Abington, succeeds Mr. Marvel at Tremont.

A. H. Mansfield, for fifteen years with the Canadian Pacific Railway, and late of Atlin, B. C., is now agent and operator for the Consolidated road at Marion, Mass. Mr. Mansfield assisted in the construction of the Government line to Dawson City, Klondike.

PHILADELPHIA, PA.

My Motto—Honorable Dealing. D. A. Mahoney, Special Representative, the Philadelphia Typewriter Ex. Typewriters sold or rented. Small monthly payments. **Specialties:** \$40 and \$50 rebuilt Remingtons, Smiths and Jewetts. Address, care W. U. T. Co., cor. 10th and Chestnut Sts.

WESTERN UNION.

Owing to illness of the manager at Freehold, N. J., A. R. Barlieb, of this office, has been detailed for duty at that place as manager pro tem.

S. S. Peck, Albert Bigler and A. W. Rebstein have left us to resume their respective studies at dental and medical colleges. These embryo doctors deserve a great deal of praise for striving to advance themselves in other professions.

Among those who have visited the Pan-American at Buffalo are Miss Sachs, Miss Bullen, C. B. Wood and A. K. Hunsberger.

J. B. Hiestand has resigned to accept a more lucrative position with Armour & Co., this city.

E. J. Hennessey and E. J. Mullen enjoyed a week's vacation visiting different points of interest through this State.

Southern Wire Chief I. N. Barto, visited friends in Scranton, Pittston and Wilkesbarre while on a week's vacation.

Manager Hudgins, of the 307 Walnut street office, spent a week at the Pan-American, E. R. Beidelman, of this office, looking after Mr. Hudgins' duties.

Manager Fuss, of the Delaware Breakwater office, was a recent visitor.

POSTAL.

A statement was made in our last letter announcing the appointment of Mr. O. H. Phillips to the North American staff. Subsequent arrangements, however, were made and Mr. Phillips was attached to the main office night force.

The vacation season is about ended. Manager Frank Burns, of the 8th and Wood streets office, enjoyed a delightful trip to the Pan-American Exposition and elsewhere.

Mr. J. H. Nauer, with a broker, also enjoyed a couple of weeks visiting numerous friends in Canadian towns.

Mrs. E. J. Matthews has returned after five weeks' absence.

'Tis indeed an ill wind that doesn't blow somebody good. While the whole nation was cast into gloom and sorrow at the death of President McKinley, the bunting market experienced such a decided boom that Manager Wright, of the dry-goods district office, was able to report a two hundred dollar increase in receipts for the month of September.

Mr. J. A. McKain has resigned to go with the Chester Iron and Steel Co., at Chester, Pa., his home.

Other departures and resignations are: Messrs. Heeps, Jester, Schwinger and Lemisch.

Arrivals: Messrs. L. S. Miller from Reading, Pa., Frank Farley, Western Union, city, and Philip Behan.

Traffic-chief Geo. W. Dunn, was at Scranton, Pa., as a delegate to a political convention.

Mr. W. T. McCorkle is now with a broker.

Night Traffic-chief Walton Smith is justly proud of his son, who has won a scholarship on his own merits and entered the State College at Bellefonte, Pa.

Messrs. Horace Holtzinger and Jay A. Thomas were assigned duty at the cricket grounds during the recent international games played there.

Mr. J. H. Gingrich, at Harrisburg, Pa., is doing some clever photographic work with the X-rays.

An objection overcome! A portable base attachment with Twentieth Century Key permits its use on any desk without permanent fastenings. No operator needs to remain handicapped by a lost grip. Use the Twentieth Century Key. Information cheerfully furnished. Leo Miller. (Adv)

OMAHA, NEB., NOTES.

Will H. De Pue is working the day wire for The Associated Press.

W. H. Hooper, assistant night chief operator at the Western Union, and Miss Mary E. Carmack, of Plattsmouth, Neb., were married quietly September 28. Mr. Hooper is one of the popular men at the Western Union, where he has been for fifteen years.

"Hank" Johnson, recently with a commission firm in Sioux City, has accepted a similar position with Boyd & Co., in this city.

Elmer C. Huntley is working for Boyd & Co., on the stock board.

Harry Lee, for some time cashier for Boyd & Co., has gone to Sioux City for a commission house.

O. A. Morris has been permanently assigned to the second wire at The Associated Press office. He came from Evansville and was formerly employed at Cincinnati and Indianapolis.

CHICAGO, ILL.

Typewriters bought, sold, rented and repaired. Renting a specialty. Also Agency for "Telegraph Age." Telegraphers' Typewriter Co., Room 5, 122 La Salle St., Chicago, Ill.

POSTAL.

W. G. Phillips has resigned to go to New Orleans. Mr. Phillips was well liked by the entire office, and we are sorry to have him go. Mr. David Duff, of the Pittsburg bonus wire resigned to accept a position at Montreal, Que.

Business is now in its normal condition.

C. Rollins, David Duff, Wm. Roberston and S. Simpson were sent to Buffalo to help out during Mr. McKinley's illness, while L. T. Townsend and John Biggins went to Canton, Ohio, one week later.

John Brosnan, who was ill for two weeks recently, is now at work.

Henry Heisler recently passed a pleasant vacation of two weeks in the north.

Martin Adams, Thomas Powers and Arthur Lassman were recently married. The force gave each of them a suitable token of esteem.

Messrs. W. H. Conklin, F. Flint, F. W. Froehle, John Wondra and D. N. Williams were appointed to the 11:30 split trick.

S. J. Thomas and David Hamilton are on vacation; O. T. Anderson is on sick leave.

W. I. Williams is the happy father of a son.

Mr. Beans Hensler is again with the Western Union Telegraph Company at 11 Wabash avenue.

WESTERN UNION.

Our estimable Assistant Chief Operator C. H. Finley, has started upon a much earned vacation, after the trials and tribulations of an unusually heavy summer's business. We presume Mr. Finley has taken his dog and gun, and will enjoy some good hunting, as only he can.

Traffic Chief F. Richardson reports a fine time among the old timers at the reunion at Montreal; he also visited Boston and other places.

Monday, October 1, the entire Illinois division was moved to the 10th floor, leaving the Wisconsin wires in charge of the St. Paul division. This move was made in order to overcome the congestion on the 9th floor due to increasing business, and to make room for some spare quad sets. The 10th floor now looks like a full fledged operating room with full equipment of everything necessary. The Illinois division is in full charge of Mr. Otto Enking.

A son was born to Division Chief Enking on October 2.

Mr. Paul Stillman, formerly assistant to Judge Laidlaw, has been appointed night division chief of the Illinois division, on the 10th floor; he has congratulations of all, and we know he will prove an efficient executive. He has celebrated the event by subscribing for THE AGE for one year.

Mr. Harry Austin has the congratulations of all

in his marriage to Mrs. Mate Russell Austin, of California.

Geo. Porter, who some time since suffered a shock of paralysis, affecting his entire left side, returned to the office October 7, wholly recovered.

Former Manager Scoville, of Cedar Rapids, Iowa, has been assigned to the night force.

Miss Alma Hahn was married to Fred T. Proctor, of The Associated Press, September 18.

Mr. and Mrs. Lewis Benson, who have been sojourning in Michigan, returned greatly benefited by their trip.

Mrs. Mark Smith met with a painful accident October 3 while coming to work. She fell and broke her arm in two places, but pluckily continued on, and reported for duty, but was of course immediately sent home to have her injuries attended to.

MONTREAL, QUE., CANADIAN PACIFIC.

The death is announced of Mr. George Ivory, a well known telegrapher, who died at his home, Mountain Grove, Ontario, on September 11, after a lingering illness.

Mr. W. F. Gainfort, of the Sherbrook circuit, who is one of the returned Canadian scouts from the South African war, has received the South African medal presented by His Royal Highness, the Duke of York. Mr. Gainfort received many congratulations from his confrères of the office.

Among the lucky ones who had the honor of accompanying the royal train were Messrs. J. F. Richardson, electrician; W. G. Medley, W. G. Bancroft, G. H. Ferguson, and Mathew Fanning.

A very large amount of business was handled in this office while the royal party was journeying from Quebec to the Pacific Coast.

During the past month a large number of ladies and gentlemen have visited the new operating room, which is becoming very attractive on account of the beautiful scenery surrounding the new building. Among the recent callers were Mr. and Mrs. W. T. Robinson and C. Hubbard, of Ottawa; C. McLea, Winnipeg; P. W. Snider, St.

\$100 Reward, \$100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

Address, F. J. CHENEY & CO., Toledo, O.

Sold by druggists, 75c.

Hall's Family Pills are the best.

John, N. B.; S. S. Dickenson, Canso, N. S.; John Currie, and W. H. Gomery, of The Associated Press, Buffalo, N. Y.

NEW YORK CITY.

All popular music at less than half price. "Utopian Waltzes," "Whirlwind March," "Ben Hur Chariot Race," "Belle of Manhattan" March and Two-Step, "When You Were Sweet Sixteen," "My Old Virginia Home," "Left on the Battlefield," "Dolly Gray," "The Sweetheart That I Loved In Boyhood Days," "Spider and Fly," 18 cents each. "Palms," "Popular Gems," "Lang's Flower Song," "Calvary," "Rusticana," 10 cents each. Pianos—all makes—sold, \$1.00 per week. B. L. Brannan, 195 Broadway, New York.

WESTERN UNION.

Mr. George Cole, former manager of the Western Union, at Columbus, O., and now interested in telephone and district companies in that city, was a recent visitor.

Miss Kate E. Donovan, for many years wire chief of the Long Island division, and recently transferred to the city line switch, has resigned. Mr. Muddell fills the vacancy in the Long Island division.

Many who had been held back on their vacations incidental to the increase of business occasioned by the death of President McKinley and the yacht races, are taking them now. John B. Hurd is on a trip to Washington, D. C., W. T. Rogers and C. A. Kilfoyle are in the Catskills, and John Brant is in Connecticut.

J. G. Kelly, who has been sick for some time and yet who has kept at his work until recently, has been taken to the Home for Consumptives, Brooklyn.

Dr. George Ryder, son of E. Ryder, manager at Hartford, Conn., paid us a visit recently, while on his way to Worcester, Mass., where he will locate permanently. He carries the good wishes of many Hartford and New York friends.

Martin Durivan has returned from Long Branch, N. J., where he acted as chief operator during the summer season, and has resumed his duties as a traffic chief in this office.

Willis H. Jones, of this office, is away on a well earned vacation of two weeks.

Returned from vacations: W. W. Scott, B. J. McLoughlin.

Resignations: F. A. Post, R. Templeton, to join Batchelors' Honeymoon Co.; J. H. Ryan.

Appointments: T. J. Donohue, Whitestone department; D. F. Baker and A. C. Barnhardt, day waiting list; H. Gersch, night waiting list.

Michael F. O'Brien died on October 10, the result of a fall from his window to which he went some nights ago to secure a broken blind. Mr. O'Brien, who was born in New Haven, Conn., on May 1, 1851, had his first telegraph experience in the Western Union office in his native city, came

to New York in 1877. From 1881 to 1884 he was night manager of the American Rapid Telegraph Company, re-entering the Western Union service when that company absorbed the former concern. Mr. O'Brien was one of the best known operators in New York city, and was for the past ten years connected with the Commercial News Department. Memorial services were held Sunday evening, October 13, and were largely attended.

POSTAL.

Vacation season being over the force of the office is nearly up to its numerical standard, but owing to the enormous increase of business it is kept closely occupied to keep the files clear.

W. E. Todd has recently returned from a five-day trip to Scranton, Pa., Postal office where he has been installing an entire new outfit in that office consisting of a 24 jack switchboard, keyboard, repeater, and quad set, also three single sets. This improvement makes Scranton an up-to-date office in every respect and reflects great credit on Mr. Todd. Manager Rigdon and assistants of Scranton, are very proud of the fine appearance of that office.

Mr. J. J. Bundy, formerly of this office, and who resigned several months ago on account of illness, is now with the New York Central Railroad at Corning, N. Y. His many friends will be gratified to learn that he has recovered his health.

Eastern Wire Chief J. A. McNulty, and Night Manager J. J. Whalen are away on their vacations.

Resigned: J. J. Fourney.

Mr. W. H. Matthews, recently of Superintendent Usher's office, has been appointed chief clerk of the service department.

Yacht race week was a notable one for the operators who were sent to the Highlands to handle the press work from that point. An unusually large amount of matter was handled in an unexceptionably fine and rapid manner under the supervision of Assistant Manager J. F. Skirrow, of this office, whose arrangements for prompt handling the matter filed were as complete as it was possible to make them. His portable dynamos, engines and quads were a perfect success.

The 20th Century Key prevents the loss of grip and cures cases of long standing. For particulars address E. S. Russell, agent, 253 Broadway, New York. (Adv.)

The Annual Report of the Western Union Telegraph Company.

The annual report of the Western Union Telegraph Company, submitted at the shareholders' meeting, October 9, shows an increase of \$1,895,582 in gross earnings for the twelve months to June 30 last, and an increase of \$519,886 in net profits. The company now operates 872,766 miles of wire and 23,288 offices.

In his report, President Eckert says that there were added to the company's system during the year 884 miles of poles. There was an increase of 39,613 miles of wire. There were 338 additional offices established. The increase in the number

of messages transmitted was 2,289,265 greater than for 1900. Of the increase in the total revenues for the year, \$885,503 came from commercial messages, press dispatches, and election returns, \$363,072 from leased wires, and the balance of \$347,006 from sundry other sources.

For construction \$1,461,158 was expended in new and additional wires, etc. All reconstruction is included in expenses before a balance is struck. The surplus account of \$9,319,286 represents undivided profits, invested from year to year in new lines, real estate, and other valuable assets.

Stuyvesant Fish and Samuel Spencer were elected directors of the company, succeeding Wm. F. Cochran, resigned, and George Coppell, deceased. The other directors were re-elected.

Death of Daniel E. Martyn.

Daniel E. Martyn, night chief operator of the Western Union Telegraph Company, at Kansas City, Mo., died on September 15, as recorded in our issue of October 1. Death was due to a blood clot on the brain. On Thursday evening previous to his death, he seemed in his usual good health, but soon after coming on duty was seized with a



THE LATE DANIEL E. MARTYN.

violent headache and went home. A short time after reaching there he lapsed into a state of unconsciousness from which he never rallied.

Mr. Martyn was born in Detroit, Mich., in 1839. He began his telegraphic career at the age of 18 years, at which time he entered the employ of the Ohio and Mississippi Telegraph Company. When the Civil War began, he joined the Federal forces and became a military operator for the government, holding this position all through the war, being stationed most of the time in Kentucky. At the close of the war he re-entered the service of the Ohio and Mississippi Telegraph Company, remaining with them about two years, when he went to Kansas and was appointed manager of the West-

ern Union Telegraph office at Leavenworth, that State.

In 1877 he was transferred to Kansas City as night wire chief, and in 1884 was promoted to be night chief operator, which position he held during the remainder of his life.

Few men were esteemed more highly or held with greater respect by both officials and subordinates among the profession. His wife and one son survive him.

Obituary Notes.

Charles Hodge, aged 25 years, an operator at Jefferson, Ala., shot and killed himself on September 25, during a fit of insanity caused by excessive cigarette smoking.

John M. Moffat, an old time telegrapher of New York, but for the past ten years at Dunsmore, Pa., died at that place on October 7. For many years Mr. Moffat was secretary of the New York Telegraphers' Aid Society and was chief operator in the Western Union service at 195 Broadway. He was well and favorably known in telegraph circles.

John Neville, of New York, for many years the Wall street representative for The Associated Press and The United Press, and latterly secretary of the International Cable Directory Company, New York, publishers of the Western Union Telegraph Code, was killed by a train at Elmira, New York, on October 2. Mr. Neville was well known in telegraph and financial circles. In fact, he was considered one of the best authorities on financial affairs in the country.

William H. Eckman, 60 years of age, a well known old time telegrapher of Cleveland, O., died instantly of apoplexy in New York on October 6, while walking on the street. Mr. Eckman came to this city two years ago. About seven years ago he took an active part in local politics in Cleveland, and at one time was city clerk. He was for some time editor of Winslow's Magazine. Since he has lived in New York city he has corresponded for the Cleveland Plain-Dealer. Mr. Eckman, who was familiarly known throughout the country as "Billy" Eckman, was a member of the United States Military Telegraph Corps, and his death will be a shock to a wide circle of telegraph acquaintances.

Richard Sadler Cubitt, aged 85 years, died at Pilot Town, La., on September 25. He assisted in constructing the ocean telegraph line to the Passes. During the Civil War he was military telegraph operator for the Confederates, and served his country well until captured and made a prisoner of war by General Ben Butler. After the war he was commissioned a bar pilot by Governor Kellogg. For over twenty years he was justice of the peace, and so stern was he in the enforcement of law that he was feared and avoided by evil doers. He was judge, jury and supreme court all in one, often without the legal right to do so, fining heavily both parties to a criminal suit, which was rarely ever contested or appealed, for fear of future judicial

wrath. He was widely known and his death removes the oldest human landmark in lower Plaquemines.

William J. Bodell, for a long time manager of the Western Union Telegraph Company, at Fortress Monroe, Va., and a well known member of the United States Military Telegraph Corps, died at his home at Fortress Monroe, Va., on October 7, in the sixtieth year of his age. Mr. Bodell was born at Greenville, Pa., March 12, 1842. He entered the army in 1862, and in 1863, being detailed as clerk in the Military Telegraph Corps, at Washington, he learned telegraphy and afterwards performed some clever work as cipher operator. In 1866 he became manager of the American Telegraph Company, at Fortress Monroe, and when that company became merged with the Western Union Telegraph Company he was still retained as manager of the office, which he relinquished five years ago to accept a responsible position in the government quartermaster's office, at Washington.

Personal Mention.

Mr. W. H. Baker, general manager of the Postal Telegraph-Cable Company, New York, has returned from a western business trip.

Mr. Hugh A. Allan has been elected to the presidency of the Montreal Telegraph Company, filling the vacancy created by the death of his father.

General Thomas T. Eckert, president of the Western Union Telegraph Company, has been elected a director of the Bowling Green Trust Company, of which Edwin Gould is president.

Resignations and Appointments.

Mr. L. G. Lobaugh has been appointed chief operator of the Western Union Telegraph Company, Pittsburg, Pa., vice F. L. Bender, resigned to enter the telephone service.

Mr. W. Branch Wainwright, of Seaford, Del., has been appointed assistant superintendent of the New York, Philadelphia and Norfolk Telegraph Company, with headquarters at Seaford.

Mr. Benjamin H. Moore, chief clerk in the office of Superintendent C. C. Adams of the Postal Telegraph-Cable Company, Philadelphia, Pa., has been appointed manager of that company's office at Baltimore, Md., vice F. A. Grasty, resigned on account of ill health.

Mr. E. W. H. Cogley, assistant superintendent of the leased line of The Associated Press, New York, a position which he has held for seven years,

but with which association he has been connected for sixteen years, has resigned to engage in other business. Mr. Cogley has handled press circuits for different associations continuously since 1865, which is no doubt by far the longest unbroken record for press service in this country.

With Mr. Cogley's retirement the position of assistant superintendent of telegraph has been abolished, and the work heretofore performed by him devolves upon H. R. Clark, day chief, and C. L. Morris, night chief.

New York Visitors.

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

Mr. H. P. Dwight, president and general manager of the Great Northwestern Telegraph Company, Toronto, Ont.

Mr. C. E. Sawtelle, manager of the Postal Telegraph-Cable Company, Cincinnati, O. Mr. Sawtelle was accompanied by his wife.

Mr. John Campbell, at one time superintendent of the Postal Telegraph-Cable Company, Pittsburg, Pa., now in the roofing business in the Smoky City.

Mr. Chas. E. Page, manager of the Western Union Telegraph Company, Cincinnati, O. He came to New York to meet his wife and daughter who arrived from Europe a few days since.

Mr. I. McMichael, superintendent of the Western Union Telegraph Company, Minneapolis, Minn. He attended the International Yacht Races and was much pleased with his first New York visit.

Miscellaneous Items.

Mr. A. P. Velie, of The Associated Press, New York, has resigned to accept a position with a newspaper. Mr. Velie had been with The Associated Press for the past ten years.

Six telegraph operators in the Police Department, New York city, were sworn in as sergeants at Police Headquarters, October 9. Although for the last three years they have been wearing a sergeant's uniform they were not recognized as such and did not draw sergeant's pay. This victory ends a fight that started in January, 1898, when Brooklyn and New York were consolidated and there was a reduction of pay.

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.

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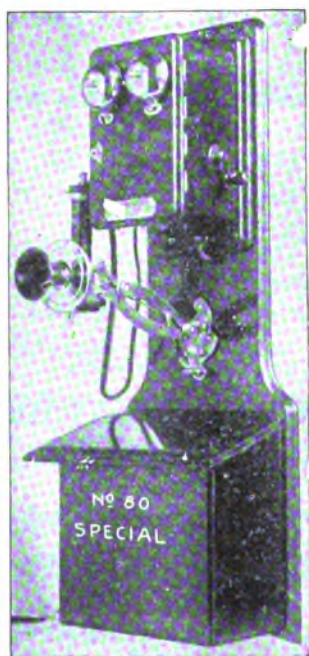
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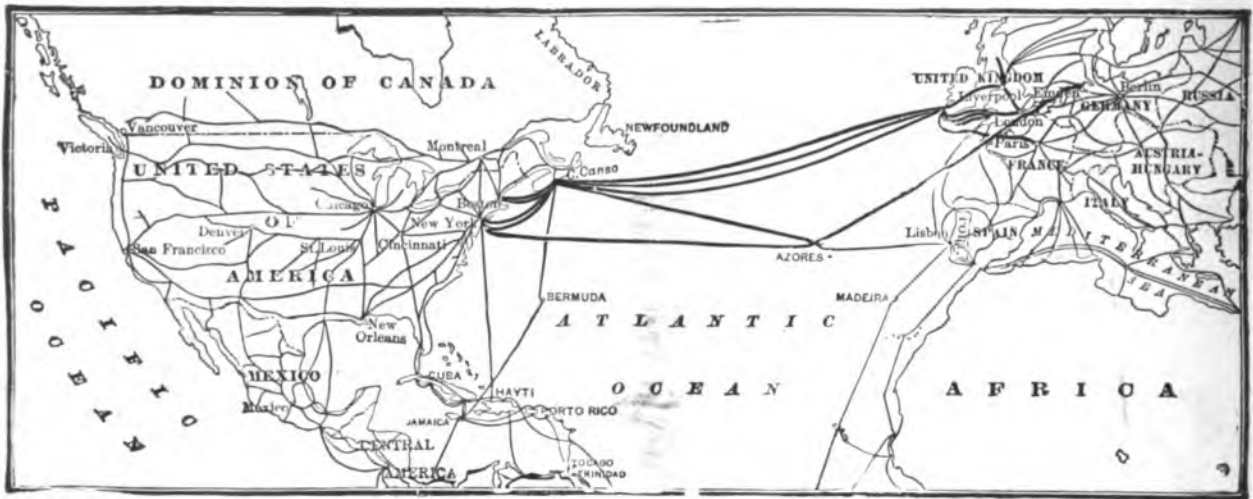


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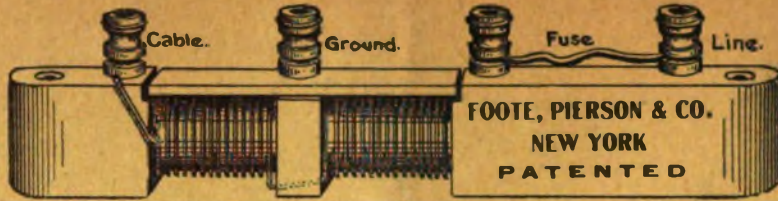
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