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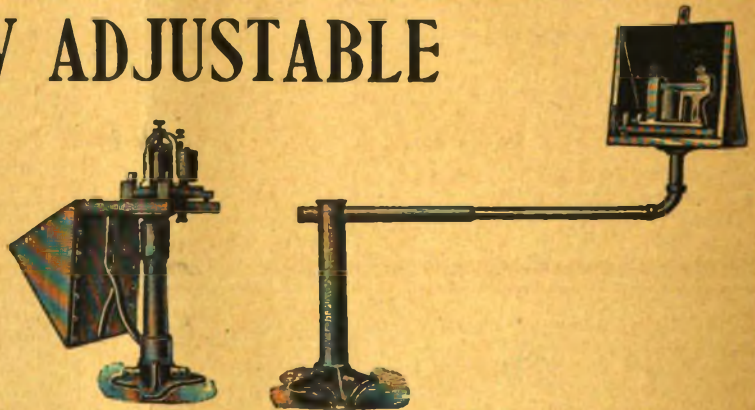
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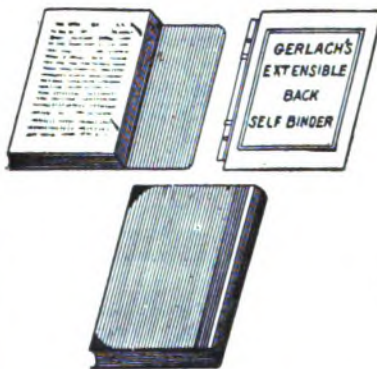
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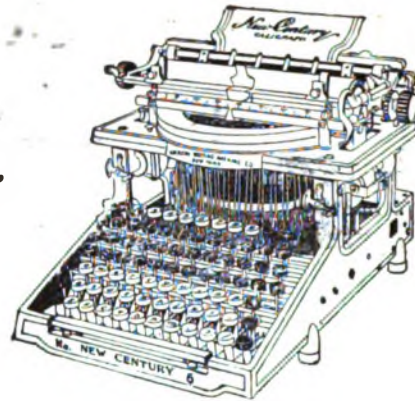
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No. 21.

NEW YORK, NOVEMBER 1, 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 the complete details of equipping a modern telegraph office. Beginning with the proper selection 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.

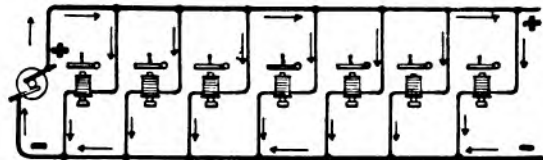
The series will be a complete handbook for any one contemplating the instalment of a new office or making alterations in an old one. The value of these important articles will be such as to interest a wide circle of readers, and those who desire to follow them in their consecutive order should send in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

In the preceding instalments of this article, the house wiring for a multiple arranged local sounder system was illustrated and described up to the point where the desk wires come up through the floor underneath the tables. The next move will be to show the manner in which the instruments are connected in circuit.

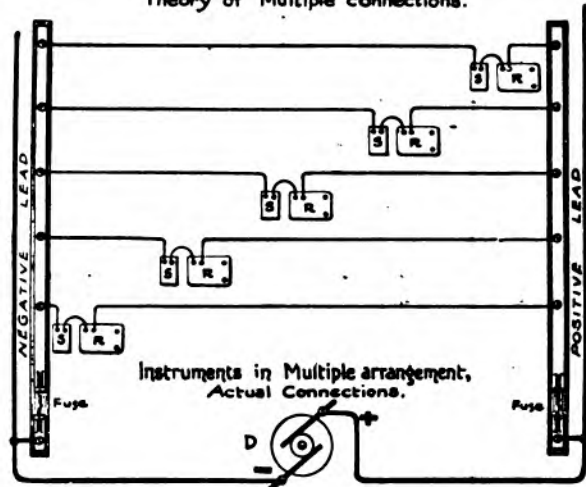
Now, the first thing to do is to fasten two fuses to some convenient and protected part of the wood-work underneath the desk, one for each polarity of

current. The importance of fuses is another matter which should never be forgotten. No apparatus should ever be connected directly to a main battery lead, not even the dynamo itself. Here is the order of arrangement invariably to be followed: First the dynamo, then a fuse; then the leads, and again a fuse; then the sounders, and finally (for multiple circuits) a second fuse.

The first accompanying diagram illustrates the multiple arrangement thoroughly, while the second cut shows the actual binding post connections and desk wiring through a single line relay contact points and sounder. It will be seen that the fuse holder consists of two separate bars of brass connected together by a small fusible wire. To the



Theory of Multiple connections.



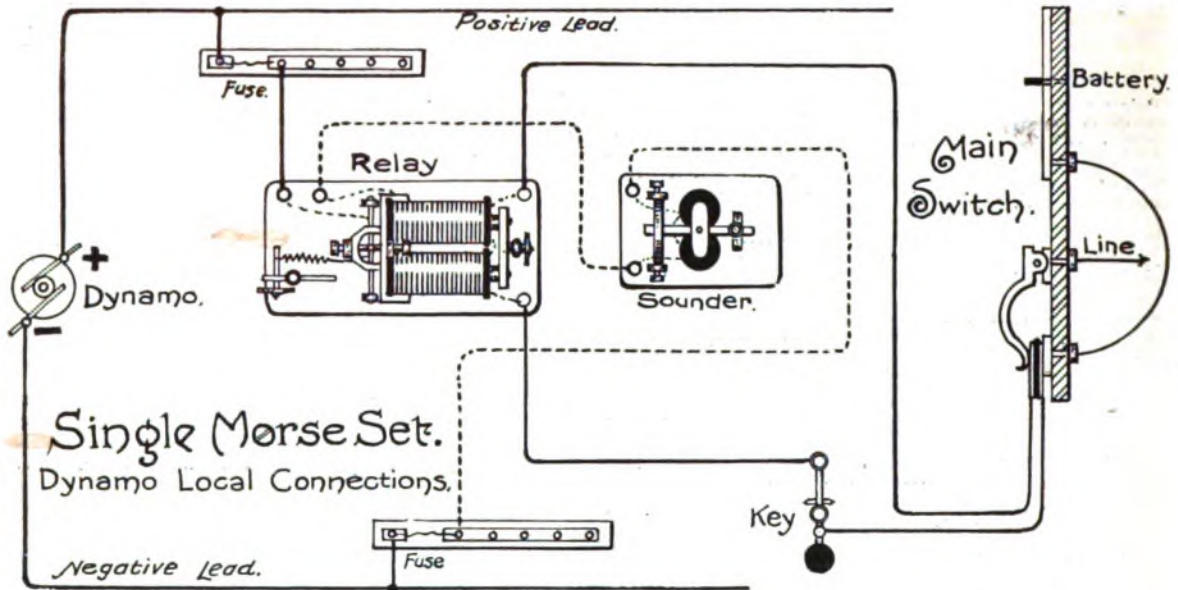
longer bar, as many similar circuits may be fed as there are disks on the latter for connections; but it is best not to feed more than four to eight multiple circuits from one fuse, for the reason that an accidental cutting out of the resistance coil of any one sounder by means of a pen or other metal accidentally placed across the binding posts would instantly melt the fuse and "open" every circuit in the combination until a new one is substituted. On account of these temporary interruptions to so many circuits at one moment it might be argued that such a combination would be unadvisable, yet the arrangement has its advantages in other ways. The plan certainly lessens the total number of fuses required and simplifies the running of the desk con-

nections; and last, but not least, it helps to locate a "blow out" quickly, as every chief operator should carry a supply of fuses about him. Such interruptions, however, should not be very serious.

The size of fuse, as measured in amperes, employed for multiple local circuits depends upon how

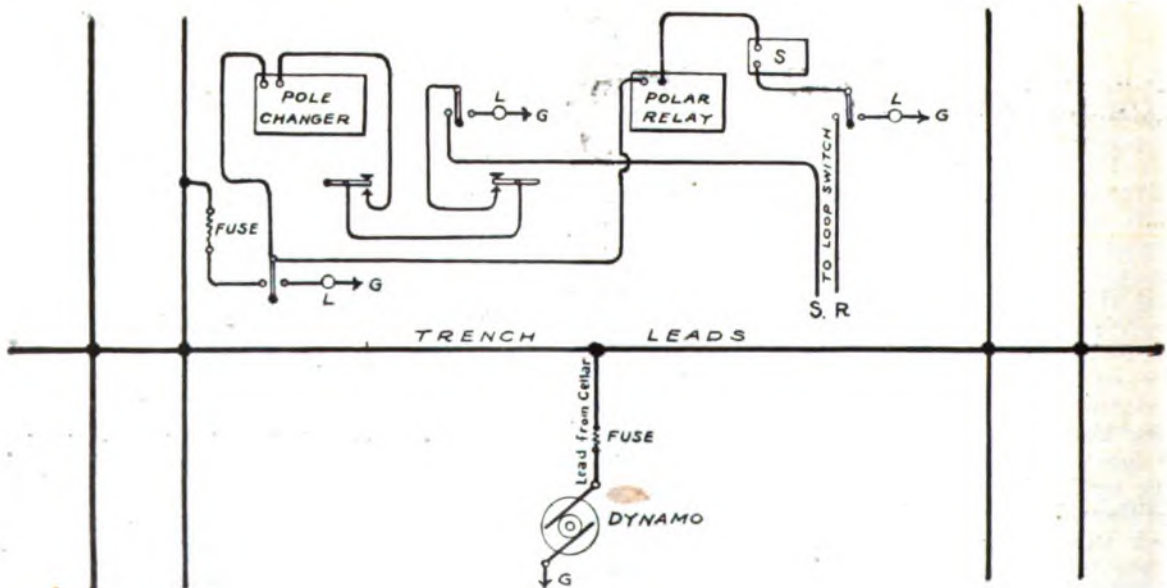
number of sounders in each group does not exceed eight, a 3-ampere fuse usually gives general satisfaction.

We will now take up the series local circuit arrangement. This concerns all sounders worked on pony wires or other conductors which are grounded



much current will be drawn through it by the group of sounders attached to the brass disks on the fuse holder. Thus eight sounders requiring one-quarter of an ampere of current each, would demand in all two amperes. The melting point of the fuse must

at the distant terminal; and, as heretofore stated, is especially advisable for multiplex apparatus where the local connections are extended to the loop switch for convenience in connecting broken or newspaper loops therewith when so desired.



FLOOR WIRING FOR GROUNDED LOCAL CIRCUITS.

necessarily be of a greater value than this, or it would "blow out" the moment all sounders close together; hence it follows that a value which will safely carry the maximum current with a margin to spare, is the guide for ascertaining the required size. For local circuits of this kind, where the

It is usual to employ 4-ohm sounders for such circuits, although 20-ohm instruments are preferred by some. The writer prefers the lesser winding, for the reason that the "cutting in" or "out" of a branch office sounder will not alter the existing strength of current in the loop to so great an ex-

tent as it would if the former was higher wound. For example: In a built-up circuit containing a total resistance of 100 ohms, including all sounders in circuit, the withdrawal of one 4-ohm instrument would increase the value of the current but 4 per cent., while the "cutting out" of a 20-ohm sounder in the same length circuit would make a difference of 20 per cent., quite an effective alteration.

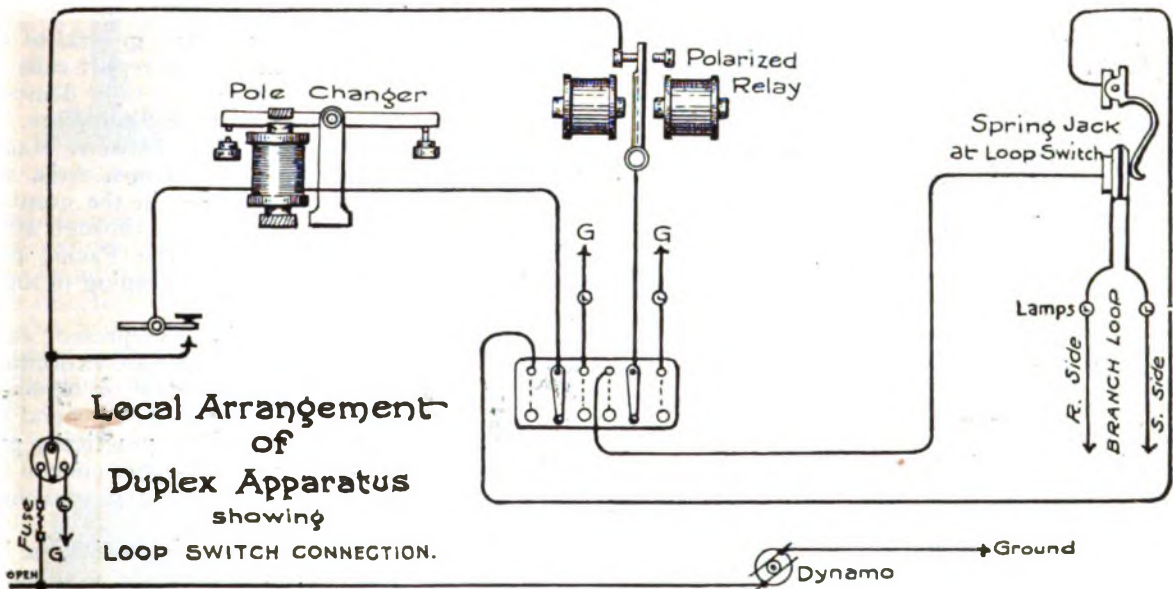
Of course, it may be argued that a compensating resistance may be substituted for each withdrawal, but unless such resistance be automatically inserted in the spring-jack by the mere act of "cutting out" at a branch office, the suggestion is hardly feasible, as those making such changes are liable at times to forget all about the compensating wedge, and two such failures on one circuit would nearly double the strength of the current in the conductor and thereby necessitate a readjustment of the remaining sounders in circuit; not to mention the danger of overheating the conductor which may possibly be in an underground cable. The removal of two

wire and attach the free end of it to a one or a one and a half ampere fuse, the other end of which latter should be connected to the lever of a three-point switch fastened to the woodwork underneath the desk.

From the left-hand disk of this switch run a wire through the coil of the polechanger to the left-hand lever of the double three-point switch which is situated on top of the table. For the receiving sounder tap the sending leg near the lever underneath the desk, as shown in the cut, and run it through the coil of the receiving sounder to the right-hand lever of the same double three-point switch.

To the right-hand disks of each of the top-of-the-table-switches run a wire through a lamp resistance to the ground wire. The right-hand disk of the battery switch under the desk should also be grounded, but no lamp or other resistance must be inserted there.

To the left-hand disks of the double switch the



4-ohm sounders would hardly be noticed, hence the preference for that winding.

The plan of house wiring and size of conductors for the leads in a series system is very similar to that arranged for the multiple circuits, as may be seen in the third accompanying diagram. The only difference in the plan of wiring is, that as one pole of the dynamo is grounded, but one lead is brought up stairs, and consequently but one "grid" of sub-feeders required in the floor trenches. The main lead should extend along the full length of the room, as shown in the cut, to which cross feeders may be tapped at right angles thereto, and laid in trenches running underneath each row of desks; or, at least, under such desks as are equipped or likely to be equipped with multiplex apparatus, at some future date.

The desk connections are then made as follows:

Tap the main cross lead underneath the duplex table with a No. 12 or 14 gage insulated copper

sending and receiving branch office legs may be respectively attached, if the connection is to be permanent; or those disks may be connected with spring-jacks in the loop switch (see 4th diagram) where any loop desired may be inserted and controlled by the operation of the duplex apparatus.

It will be seen that the fuse furnishes current for but two instruments; that is to say, for one duplex circuit.

For quadruplex apparatus a duplicate tap from the main lead, with separate fuse, wire, and switches must be provided for the neutral side, just as though there was no connection whatever with the main line upon which both sides work.

(To be continued.)

"Say, everybody around here seems to be a chief of some sort," declared a first-nighter in the operating room, "and the check boy and me are the only ones doing any work!"

Business Notices.

Anyone can be a long distance sender if he uses a Twentieth Century Telegraph Key. Address, Foote, Pierson & Co., 82-84 Fulton street, New York.

Farr & Farr, telephone manufacturers of Chicago, Ill., whose advertisement appears in this journal, are manufacturing short private line telephones used for factories, houses, etc. This firm makes four kinds of telephones for this use and guarantee them to give entire satisfaction and are pleased to forward their circular to any person who may ask for it.

Elsewhere in our columns will be found the advertisement of Eacutt & Cawthern of 86 Lasalle street, Chicago, Ill., who advertise a typewriter cleaner, a little brush which ought to find a ready market in telegraph offices. The inventors of this useful device are old telegraphers, and it is to be hoped that their friends in the profession needing an article of this kind will communicate with the firm. Mr. Eacutt, who was formerly an operator, is now a banker, and Mr. Cawthern is at present an operator on the Board of Trade in that city.

The Kerner Electric Company has been organized with headquarters at 17 West Forty-second street, New York, the organizers being Marion H. Kerner, an Old Time and United States Military Telegrapher, of the Western Union Telegraph Company at 195 Broadway, and Paul C. Oechsle, a well-known electrical engineer of this city. As both of these gentlemen have had a wide experience in electrical matters, it is safe to predict that the new firm will meet with deserved success. General electrical repair work will be their specialty, although they will carry a full line of electrical goods of all kinds.

Washing day, in all well regulated families, next to Sunday, heads the important events of the week, and its consummation has from time immemorial too often taxed the strength and patience of the housewife. To render this important, unavoidable and sanitary duty, fraught with weariness, less laborious, has been the hope of many a tired woman. It seems that this longing is to be realized early in this new century, for "The 1900 Washer Co.," of 56M State street, Binghamton, N. Y., have perfected a family washer that is simply marvelous in its helpful powers. An advertisement in another column tells all about it, and every reader who loves his wife should carefully read what is there stated. A free test of the washer may at least be had, for the company, with full confidence in its machine, offers to send it without charge for a 30 days' trial.

A field of investment where small savings, steadily accumulated for a few years, will bring a sure and liberal income for life, is hard to find; but one is offered in an agricultural enterprise in tropical Mexico, with which I am connected, and which is being conducted on the co-operative plan—a plan insuring the same protection to the person who invests \$5 a month as to the one investing many times

that amount, and preventing, absolutely, the freezing out of even the smallest investor; at the same time practically guaranteeing a yearly return of from 15 to 25 per cent., or more, on the amount invested. I want to secure an Agent in each of the large telegraph offices of the country, outside of the State of Ohio and that part of Pennsylvania lying west of Harrisburg, to interest telegraphers in this proposition, and for such service I will pay a handsome commission. For full particulars address Frederic N. Bassett, 608 Ashland Block, Chicago, Ill.

Recent Telegraph Patents.

E. and E. J. Lavers, of Brooklyn, N. Y., have been awarded a patent for a signal telegraph.

A patent has been granted to C. E. Diehl, manager of the Postal Telegraph-Cable Company, at Harrisburg, Pa., for a system of quadruplex telegraphy.

Pacific Cable Needed.

Gen. Henry C. Corbin, adjutant general of the United States Army, in his annual report calls attention to the need in the service of a domestic cable from the Pacific coast to the Philippines. At the present time communication between Manila and Washington is through Europe, Asia, and China. It naturally follows, that in the event of complications in any of the countries through which our cable communication from the Pacific now passes, we would find difficulty in keeping in touch with our new possessions.

General Corbin declares that the present rates charged by the existing cable service are exorbitant, \$2.38 per word being the regular tariff on messages between Washington and Manila. The general believes that these excessive charges practically prohibit satisfactory service, and the cipher code of the war department has therefore required adjustment to keep down the high demands.

If the War Department were to publish the list of charges for cable messages since the termination of the Spanish War, the public would be surprised at the amount of money which has passed into the hands of the cable people. The foreign cable companies have Uncle Sam at their mercy and have no compunctions about demanding excessive rates.

Our relations with the Orient are closer to-day than ever before, and there is no doubt that we will increase our prestige in that part of the world as the years pass. We should be able to communicate direct with our Pacific possessions without relying upon a cable service which might be used to our disadvantage by countries likely to be in opposition to us in the future. With a Pacific cable and an interoceanic canal, the United States would make secure its new territory and increase its commerce with the world.

The American District Telegraph Company, of New York, M. W. Rayens, superintendent, has, under his able management, succeeded in increasing its dividend to a 2½ per cent. basis.

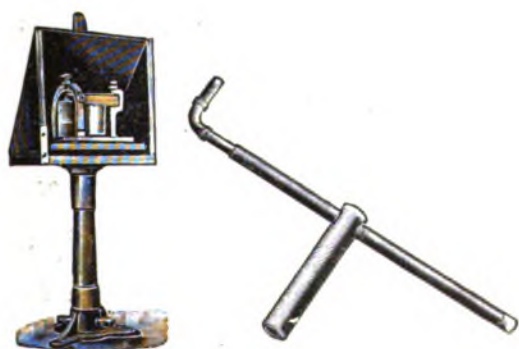
A New Resonator.

A new type of resonator has been invented and patented by Mr. J. F. Skirrow, the assistant manager and electrical expert of the Postal Telegraph-Cable Company, New York. It not only embodies the improvements previously devised by Mr. Skirrow in resonators, namely, the fiber sound deadening top, lateral adjustment of the sounder hood, internal wire connections, etc., but goes much further. The sounder hood connects with the standard by revolving electrical connections, thus



THE SKIRROW EXTENSION ARM RESONATOR, COMPLETE.

permitting it to be turned completely around laterally, or entirely removed at will. It is of new design being shaped so as to reflect the sounder signals directly outward to the operator, and is hinged so that it may be thrown back at will leaving the sounder itself uncovered. This feature renders it particularly convenient for adjustments, and permits the sounder to be heard from any direction when desired.



THE SKIRROW RESONATOR WITH EXTENSION ARM REMOVED.

A message clip is attached to the back of the hood, so arranged that the operator places the message on top of the resonator where it is securely held in prominent view.

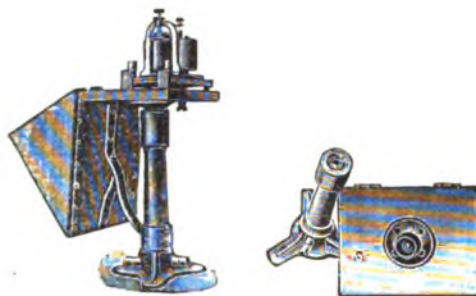
By removing the hood and inserting a slidable and easily adjusted extension arm in its place, upon which the hood in turn is again placed, the sounder may be brought as close to the operators ear as desired.

Since the inception of the telegraph the plan seems to have been to constantly increase the vol-

ume of noise given out by sounders. In fact a prominent claim of many telegraph instrument manufacturers is that their sounders will give a greater volume of sound than others. This application of the sounder principle is inherently wrong. Any sounder will give a far greater volume of sound than is required to read signals from.

It may be noted that this type of resonator marks a radical change in the construction of such instruments, the design in this case being to reduce sound instead of to increase it.

Instead of placing a noisy sounder at some distance from the operator the sounder should be turned low and brought very close to the operators ear. If a reflector (of itself non-resonant) is placed back of such a sounder it will reflect the sound waves directly to the operator's ear and enable him to read signals distinctly and comfortably even if he is working in a noisy place.



SHOWING THE SEPARATE PARTS OF THE SKIRROW EXTENSION ARM RESONATOR.

The condition is similar to that of two people holding a conversation in a crowd. If one should try to make the other hear him at a distance of several feet he would have to shout, but if he should draw near and speak close to the other's ear, even a whisper would be audible to the hearer. Hitherto the sounders have been worked too much on the "shouting" plan.

It has been demonstrated that with a resonator such as described a sounder may be turned so low that a person standing alongside of it is unable to hear any sound, and yet the operator may copy the incoming signals with comfort and safety.

A number of these instruments have been in use for some time in the New York main office of the Postal Telegraph-Cable Company with the result that this resonator has been adopted by that company as its standard. Its general introduction will result in a great reduction in the volume of sound in telegraph offices.

These instruments are manufactured by the Bunnell Telegraphic and Electrical Company of New York.

Buggs—"I hear it gossiped that Muggs has turned his hand to forgery."

Puggs—"No, he only turned his foot to 'raising' a 'check' who broke his typewriter!"

A subscription to TELEGRAPH AGE is one of the best investments a progressive telegrapher can make; it keeps him thoroughly posted.

The Telephone in Railroad Service.*

BY F. P. VALENTINE.

(Continued from page 426, Oct. 16.)

In installing telephone systems, a great mistake is often made by railroad companies in endeavoring to economize in the number of instruments. Enough should be provided to care for every branch of the service under any conditions that may arise. This is especially true in relation to offices handling train service.

The branch exchange should not only afford connection with points in the immediate vicinity of the terminal, but it will be found advantageous to extend the lines to the outlying towers and stations, supplementing the telegraph service, and in many cases economizing in the number of telegraph operators it is necessary to employ, as there are many stations and towers where it is unnecessary to issue train orders, and the use of the telephone relieves the telegraph wires of miscellaneous business which often delays more important matters.

If the extension of these lines from the switchboard is carried out, so that a pair of wires is run along the main line through the more important divisions, such wires also become valuable in emergencies. If a wrecking car is equipped with a compact telephone set, as soon as the car arrives at the scene of the wreck, instant communication may be established with the dispatchers and division headquarters by means of these division lines. Several instances have occurred recently demonstrating the value of this emergency service, where a telephone was attached to a telegraph pole within a few feet of the wreck, connected with the wires running to the switchboard at division headquarters, allowing the division superintendent, who was on the ground before the wrecking car arrived, to keep in touch with the dispatcher and the towers on each side of the wreck, and, as soon as one track was clear, permitting the movement of a number of delayed passenger trains with little loss of time. In this case no telegraph was available, but it was the opinion of the superintendent that, had it been, the work could not have been accomplished with equal satisfaction or expedition.

These wires running through the division, connecting towers and stations, also become valuable to section foremen and signalmen to communicate with headquarters, if a test set is carried or telephone boxes are established at intervals. An emergency telephone set might be carried in the baggage car of a train, enabling a train disabled between stations and towers to report the trouble at once.

It is of great advantage to connect the various block signal stations by telephone as well as by telegraph, thus relieving the train wires of messages between towermen, which they are often unable to send promptly, as the wire is in use for train orders. A simple expedient is to utilize two of the wires used for the bell or locking circuits

between towers. By the use of a two-way strap switch, a telephone may be thrown into the circuit on either side and the towermen may hold communication.

In some instances, block stations on entire divisions have been equipped by telephone on lines running to switchboards at division headquarters to the exclusion of telegraph and all business with and between the towers is transacted by telephone. This has a distinct advantage in the fact that special training is not necessary in the towerman, as they may be recruited from the men having actual experience in the handling of trains and not necessarily telegraph operators. It also affords a field for employees of the road who have been disabled in the service and are unable to take other positions. This results in bringing into the service men whose experiences makes them more valuable as towermen than would be the case were the choice restricted to telegraph operators.

The railroads terminating in New York and Jersey City have a problem which does not confront roads in inland cities, in having to float many of their cars from the docks of one road to the docks of another. The railroad having the largest floating equipment moves, in this manner, in the neighborhood of 2,000 cars per day. This float service is necessarily slow and, to obtain the best results, must be under a control similar to the train service. This has been accomplished by establishing a telephone dispatching system, so that the various captains of tugs and the floatmasters report and receive orders both on arrival at and departure from the terminals. The yardmasters and all concerned are notified of these movements and, knowing what cars to expect, are enabled to arrange for prompt movement upon the arrival of the floats. By the use of this telephone dispatching system an appreciable increase has been made in the number of cars handled daily and an economy in tug movements.

While it is universally admitted that the use of the telephone under the branch exchange system at terminals is essential, it is only recently that progress has been made in connecting the various terminals by long distance lines. This has opened up a new field, and the results obtained by connecting the various switchboards in different cities along the lines of the railroads are leading to serious consideration on the part of the railroad officials of extensive additions to this service. The fact that a general officer, sitting at his desk, is enabled to communicate almost instantly with his subordinates at all points on the line effects great economy in the transaction of business and excels in value the use of the telegraph or train mail. The fact that principals can deal direct with one another instead of through the medium of a telegraph operator has much to do with this. Five minutes conversation will often accomplish more, with definite results, than half a dozen letters or telegrams, without the delay involved in handling the matter by the latter means. The railroads that have established these long distance lines are finding constantly increasing use made by the various departments, from the Executive down.

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

While the expense of installing these lines makes it necessary to economize in their use, it is astonishing how much business may be transacted daily over one pair of wires, if the service is properly handled. From records taken, the average length of time consumed per connection on railroad business for calls between distant points appears to be about three and one-half minutes. This would permit, in nine business hours, about 150 messages. If such lines extend over a large territory, connecting several switchboards, of course, the different parts of a line may be worked simultaneously without interference. To obtain the best results a careful study should be made of the use made of the lines by the various departments and of the handling the calls. This will show that, by properly systematizing the operation, it is possible to increase the capacity of the line surprisingly.

(To be continued.)

The United States Signal Corps.

From the number of letters printed in the columns of the Railroad Telegrapher from members of the United States Signal Corps at the front in the Philippines, complaining of poor pay and worse treatment, it begins to look as if some radical reforms were needed in that department.

There is no excuse for the government of the United States being niggardly in the matter, and there is plenty of evidence that the sovereign people do not wish their representatives to make life a burden to those who are fighting their country's battles.

That the managing officials of the Signal Corps are open to the charge of incompetence, is very clear to every practical man who has given the subject any consideration. The following items clipped from the columns of the most influential daily in Manila, The New American, of August 24, 1901, is almost conclusive evidence on that point. It says:

"Owing to the difficulty in enlisting competent men for the Signal Corps the commanding-general of the division has decided that men from other organizations will be instructed in telegraphy and transferred to the Signal Corps as fast as vacancies may occur. Each telegraph operator will be made an instructor, and there will be a pupil at every post, selected from the enlisted men on duty at that post."

The division general order providing for such instructions is under date of August 17, and reads as follows:

"The commanding officer of every troop and company outside of Manila, at points where there is a telegraph office of the Signal Corps, will detail an intelligent enlisted man to be instructed by the operator of the station in telegraphy. The commanding officer at each station will give his personal attention to this matter and decide what hour of the day will be best for the instruction of the men with the least interruption of public business and other duties, and will see that attendance is prompt and regular. The men to be allowed to

practice as much as possible. The names of efficient men will be reported, through these headquarters, to the chief Signal officer of the division for enrollment, with a view to detail as operators when vacancies may in future occur.

It is a well-known fact that there would be no difficulty in enlisting experienced telegraphers, if anything like adequate salaries were paid. If the salaries ranged from \$75 to \$100 per month, instead of from \$13.50 to \$55 per month, they could get all the men they need.

It is also a well-known fact that adults cannot learn telegraphy, as the necessary skill must be acquired at a more receptive stage of development. As the saying is, "You cannot teach an old dog new tricks."

A writer in the September Railroad Telegrapher, who is a member of the Signal Corps located near Manila, P. I., says:

"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 \$25 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."

Of course, the expert telegraphers are leaving the service at the first opportunity, for they can get better treatment at the hands of a private employer.

Those who cannot get away, should join the Order and have their grievances taken up and adjusted through the regular Congressional Committee.

To have the attention of the proper persons called to the abuses that have crept into the Signal service, would result in having the matter remedied in a very short time.—The Railroad Telegrapher.

"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.

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.

Annual Proceedings.

The printed proceedings of the fourteenth annual convention of the Train Dispatchers' Association of America, held at San Francisco, Cal., June 11, 12 and 13 last, making a book of 185 pages, with a folder appendix showing a non-scheduled system for handling trains, is received. The pages contain matter of great interest to the train dispatchers, and reflect the excellent work now being accomplished in the proper handling of trains by this useful association. Several half-tone engravings of the officers of the association are shown, including one of J. F. Mackie, secretary, treasurer and editor, who in our opinion has done more than his share of the work in placing the association on the high plane it occupies to-day.

The proceedings of the Association of Railway Telegraph Superintendents, whose annual meeting was held at Buffalo, N. Y., on June 19, 20 and 21, is now being distributed by Mr. P. W. Drew, of Milwaukee, Wis., the secretary. The 142 pages of interesting papers read at the meeting, together with the discussion which followed their presentation, makes up a book of valuable and timely information, which all railway telegraph superintendents should possess. This association continues to maintain its high record as a deliberative body through the annual exchange of opinions and experiences of its members, which results in sifting out and making known the best methods employed on all roads in handling the various departments comprised within the limits of a superintendency.

Telegraph in Alaska.

The annual report of Brig. Gen. George M. Randall, commanding the Department of Alaska, was recently made public by the War Department. The report is dated at Fort St. Michael, and General Randall says: "In connection with the telegraph line it is proper to remark that in the original plan for its construction it was proposed that a large section of the line should be for the present a land cable, to be replaced gradually by a permanent line, regularly constructed, should the conditions justify; also that St. Michael's would be connected by cable with Unalaklik, the point of departure from the coast to the Yukon. The total length of the line constructed up to date aggregates approximately 400 miles. The work is being pushed along the Yukon River above Nulato and by the close of navigation in September it is hoped there will be telegraphic communication between this point and Fort Gibbon, a distance by the line of about 420 miles. There are many difficulties to be overcome in such construction, and which are peculiar to the Arctic climate. Along the coast of Norton Sound and a portion of the Portage from Unalaklik to Kaltag is a 'tundra' (a frozen marshy plain) country, merging into spruce forests, with dense undergrowth as the Yukon is approached. This latter condition extends generally throughout the Yukon Valley. The cable from St. Michael to Nome, which was laid by the Alaska Commercial Company, salvors of the cable ship Orizaba, and

operated for a time last fall, was carried away by the ice in November last and has not been recovered up to the present time."

Simultaneous Multiplex and Ordinary Telegraphy.

The simultaneous transmission of telegraphic and telephonic messages over the same wire is rendered possible by the difference in the effects produced by continuous and oscillating currents respectively. It follows that any system of telegraphy which employs oscillating currents offers the possibility of a simultaneous transmission of continuous and oscillatory messages. Such a system is that of E. Mercadier, who operates with electric tuning-forks. He has tested the possibility above indicated in a practical manner and on a large scale, and has succeeded in completely establishing it. The line worked with was that between Paris and Bordeaux. Among the various forms of auxiliary apparatus devised by Van Rysselberghe, Maiche, Cailho, Picard, etc., that of Cailho was chosen, and twelve simultaneous messages were transmitted by Mercadier's system, together with signals, with the Morse, Hughes, or Baudot transmitter. Since messages can be sent in both directions, this means that one wire can carry twenty-five messages at a time, together with extra messages between intermediate stations. This means a conveying capacity of some 1,300 telegrams of twenty words per hour, and a page of The London Times could be transmitted from London to Dublin in half an hour.—Comptes Rendus.

Martha's Vineyard Telegraph Company.

At the annual meeting of the Martha's Vineyard Telegraph Company, held October 7, the following directors were elected for the ensuing year: E. B. Pillsbury, Superintendent Postal Telegraph-Cable Company, Boston, Mass.; Thomas Roche, Superintendent Western Union Telegraph Company, Boston, Mass.; H. G. Haddon of Postal Telegraph-Cable Company, Boston. The latter was also appointed president and general manager, vice Geo. C. Maynard of Washington, D. C., resigned owing to heavy damages upon his time at the Smithsonian Institute. Mr. Haddon's headquarters will be at Woods Hole, where he will reside in future.

Western Union Officers Elected

The directors of the Western Union Telegraph Company met at 195 Broadway, New York, October 16, and re-elected the officers of the company as follows: Thomas T. Eckert, president and general manager; R. C. Clowry, George J. Gould, J. B. Van Every and Thomas F. Clark, vice-presidents; A. R. Brewer, secretary; M. T. Wilbur, treasurer; J. B. Van Every, auditor; G. H. Fearons, general attorney.

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NEW YORK, November 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 QUADRUPLIX.—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.

Telegraph Enactment of 1866.

The Act of July, 1866, referred to by Attorney-General Knox in his opinion regarding the right of the Commercial Cable Company to lay a cable across the Pacific, was passed for the purpose of facilitating, in case of necessity, the acquisition by

the Government of telegraph lines constructed by private companies. As effecting the case in question, its phraseology is as follows: "Any telegraph company now organized, or which may hereafter be organized, under the laws of any State, shall have the right to construct, maintain and operate lines of telegraph . . . over, under or across the navigable streams of waters of the United States; but such lines of telegraph shall be so constructed as not to obstruct the navigation of such streams and waters." In return for the concessions thus made the United States reserves the right to purchase all the telegraph lines, property and effects of any or all companies acting under the provisions of this Act, at an appraised value, to be ascertained by five competent, disinterested persons, two of whom shall be selected by the Postmaster-General of the United States, two by the company interested, and one by the four so previously selected. The only formula required of a telegraph company before proceeding with the work of construction is to file with the Postmaster-General their written acceptance of the restrictions and obligations thus set forth.

All telegraph and cable companies organized under United States laws have filed with the Postmaster-General such written acceptance.

Coharers Not Necessary for Space Telegraphy.

It has been shown by E. Ruhmen, in *Physikalische Zeitschrift*, August 24, 1901, that no coharers are absolutely necessary for space telegraphy, an ordinary telephone answering the purpose well enough for considerable distances. He used a Righi oscillator, with induction coil and turbine interrupter. One ball of the oscillator was earthed, while the other was attached to a mast wire twenty-five meters long. The receiver consisted of a mast wire five meters long, earthed through an ordinary telephone. The distance was two kilometers. Morse signals were easily read. It was found that the telephone answered only to the first of the damped oscillations proceeding from the oscillator. It is, therefore, desirable to increase the capacity of the oscillator as far as possible. It was found advantageous to insert a condenser in parallel with the oscillator. As regards the receiver, it was found best to put a condenser in the receiving circuit, and read off the signals by means of a transformer. Such was the loudness obtained that it seems quite feasible to convey signals in this manner over twenty miles or so. This would mean a great simplification and extension of space telegraphy.

Wireless Telegraphy.

A demonstration what purported to be a new system of wireless telegraphy, of which Ariel Or-ling, a young Swede is the inventor, was given in London, England, a few days ago. The public was made to understand that a marked advance upon past achievements was thus indicated. But scrutiny of the published accounts does not establish confidence in that opinion. The control of a torpedo boat's movements without wires is a rather

sensational feat, but not at all new. Nor is there any great novelty in telephoning from one ship to another by connecting the apparatus on each vessel with the sea. The most notable difference which is alleged to exist between Marconi's and Orling's apparatus is that the latter does not require a tall mast, but employs the earth as a conductor.

Reporting the Yacht Races by Wireless Telegraphy.

A practical test of the wireless system of telegraphy was made in reporting the yacht races off Sandy Hook lately, and viewing the results from a commercial standpoint, the system was found wanting in one vital point, according to the *Electrical World and Engineer*. It was shown that the problem of securing immunity from interference remains to be solved, at least so far as the systems under test are concerned. When there were no disturbing influences present the several systems appear to have worked satisfactorily, but owing to their interference the net result was far from satisfactory.

The Associated Press chartered the steam yacht "Mindora," and had her fitted out with a complete equipment of Marconi apparatus. The "Mindora" followed the yachts around the course each day and reporters aboard sent frequent bulletins to headquarters, announcing the details of the race. The wireless messages from the "Mindora" were received at a station located in the hotel at Long Beach, L. I., and from there transmitted to the New York office by telegraph. The Marconi Wireless Telegraph Company sent the entire equipment and staff of operators to this country from England expressly to report these races.

The "Mindora's" topmast was removable, and in its place was spliced a longer spar for the purpose of supporting the antenna or aerial wire. The total height of the mast from the deck was about 106 feet. The wire was not run down the mast, as is usual, but hung from the mast-head and drawn taut so as to form one side of a triangle whose opposite side was the raking mast, the base being the horizontal distance between the mast and wire. It was insulated throughout its entire length, except at the lower end, where it was connected with a cable leading down through a skylight to the instruments in the cabin. Judging from the character of the joint it is evident that resistance loses much of its terror in a system of this nature. It was what is ordinarily called a bell-hanger's joint, being a loose turn of the ends of the wires around each other. The cable leading to the instruments had a stranded conductor and was protected by a water-proof flexible covering.

The instruments were placed on a temporary wooden bench at the foot of the companion way, and included two large spark coils (only one of which was used), a battery of Leyden jars, a condenser and inductance in one large box, an ink recording instrument, and a box containing a Siemens relay and the coherer, besides a bank of incandescent lamps used to reduce the voltage in

charging the storage battery from the yacht's dynamo. The entire equipment was English except the lamps, and the enamel rheostat. The continental code was used in sending dispatches, and the operation of the system, when free from interference, seemed to be very satisfactory. The signals received from the land station were recorded very clearly on the tape, and messages were exchanged with great freedom.

More or less annoyance and trouble were experienced, however, through the interference of another system of wireless telegraph; in fact, there were three systems in use. The second was that known as the de Forest system, and was used by the Publishers' Press Association. In order that both systems might be used without interfering with each other, it was agreed that the time be divided between the two, The Associated Press taking five minutes and the Publishers' Press the next five minutes, and so on, alternately. This plan worked all right for a time until the third system appeared on the scene. The third party was very unwelcome, and seems to have had no other purpose in view than to upset the carefully arranged plans of the two press associations. The result was that while the third man was sending out his waves the other two systems were hors de combat.

The transmission speed of the Marconi system was about twelve words per minute, and the greatest distance from the land station to the "Mindora" was about twenty nautical miles, as measured on the chart.

On the tug "Edna V. Crew," which carried the Publishers' Press outfit, the aerial wire was a distinctive feature. It was a ladder-like structure, four vertical wires being held parallel to one another by cross pieces, and suspended from the mast head. It is claimed that the de Forest system sends out very powerful waves, but its real value in this respect was not demonstrated, owing to the breaking down of the insulation of an important piece of apparatus. In this system a motor of special design is used in place of the induction coil, and it was the motor that failed. An induction coil was substituted for it, and with this foreign element in its make-up the system was used throughout the races. The Publishers' Press had land stations at Sandy Hook and Seabright. It is stated that signals were transmitted over an extreme distance of 22 miles before the failure of the apparatus.

The operation of the Marconi and de Forest systems was witnessed by Lieutenant A. M. Beecher, of the United States Navy, who was detailed for the purpose by Admiral Bradford.

The Marconi interests were in charge of Mr. W. W. Bradfield, from the company's headquarters, the operator on the "Mindora," also from London, being Mr. A. Gray.

The system operated for the Publishers' Press was that of the American Wireless Telegraph Company, the inventor, Mr. de Forest, hailing from Chicago, where most of his experimental work was carried on.

Why don't you subscribe for TELEGRAPH AGE?

"Why Not Ethergraphy?"

BY JAMES B. DILLON, OF LOUISVILLE, KY.

Commenting upon my letter which appears on page 414, October 1 issue of TELEGRAPH AGE, wherein I suggested that "Ethergraphy" would be a logical term for Marconi's so-called "Wireless Telegraphy," the New York Times, of October 3, proceeds as follows:

"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?'"

Summing up the objections urged by the Times writer, and in view of the present existing circumstances, the most reasonable objection, as I see it, that he offers, is the clumsiness of the construction of the word "Ethergraphy." While I reluctantly admit so much, I must demur whereat the objector says: "It is difficult to speak"; unless it is also admitted that there are many partly similar words in the language that are just, or even more, difficult to utter. For instance, "Chirography," "Ethnography," "Photography," and so on. As for the absence of the intermediate vowel, I do not see that that should act as an impediment to the use of the word I suggested, because in the pronunciation of words such as I mention above, and similar ones, the intermediate vowel is often shifted so that it would be hard to determine, without dissection, where the "split" is.

Great stress is laid upon the idea that scientists are discontented with the ether, atom and molecule theories, and that the whole thing may be proven farcical, and Ethergraphy would then be a misnomer. Be this as it may; geologists, astronomers, mathematicians and anthropologists have for many ages been at variance as to the age of the earth; the antiquity of man; the evolution theory, and kindred subjects, yet has there been any agreement? On the contrary, their solutions as to the age of the earth, and the antiquity of man do not agree by thousands of years. As for the evolution theory, it is in the category of other "Scottish Verdicts"—not proven.

I do not know what substitution will be offered for the molecular theory, but just now I think the molecular theory would come in handy if the small boy should ask what becomes of the wood that was formerly in the board where the driven nail now resides.

Therefore, if ages have failed to solve the problems I have alluded to, what right have we to hope that the ether theory will be exploded. I think its solution will be equally as hard as the others cited.

Now, the Times writer asked for a logical word for Marconi's "Wireless Telegraphy" and I still feel that "Ethergraphy" is the word. However, I do not contend that it is the only logical term by which Marconi's invention could be called, but I do contend that it is suggestive, appropriate and to the point, present theories taken into consideration. If it can be proven illogical now according to scientific investigation, or knowledge, away with it to the dark recesses of oblivion, but, if not, let it shine forth (unless a better term is suggested), as I fully expect Marconi's invention to do, and fear not that scientists will upset the ether theory very soon, if ever.

A Telegraph Operator's Thrilling "Pipe" Story.

While waiting for a train at a small station on the Canadian Pacific Railway a short time ago, I spent the time in the telegraph office. On the operator's table lay a small dog of the black-and-tan species, which occasionally raised his head and cocked an ear towards the clicking sounder, as though listening to the words being spelled out.

"Acts as though he could read Morse," I said to the operator.

"Yes, he acts that way," replied my companion, "and his actions are not misleading. That dog—I call him Dash—can read the Morse alphabet as well as any operator on this string; furthermore, he can place his paw on the key and transmit a dispatch in better shape than any telegraph college graduate that ever flashed a diploma. It took me several years to teach him telegraphy, but it was time well spent. Dash has made good use of his education, too. That dog is a hero. His name once appeared on the pay rolls of a great railroad corporation; but I will tell you the story.

"In the summer of 1894 I was agent for the Northern Pacific Railroad at a small station in Western Montana. With the warm weather came high water, and traffic was at a standstill for nearly two weeks. Damages had just been repaired and trains were running smoothly. Freight and express, long delayed, was being hurried to its destination. Express safes were filled with treasure, and some of the knights of the road decided that it would be a good time to make a rich haul. Bonita, a lonely little flag station, situated among the western foothills of the Rocky Mountains, was the place selected by the robbers to carry out their nefarious plans.

"I was sitting in my office one evening about 10 o'clock, one of my duties being to remain and report No. 2, which passed there about 11:30 p.m. The outer door opened, and I turned around to face the forbidding-looking muzzle of a 44 Colt's and a pair of determined eyes gazing at me through holes cut in a cloth mask. I never had much of a reputation for personal bravery, and when the command came to throw up my hands I obeyed with alacrity. Several other masked men then entered the office, and I was commanded to light and hang out my signal lamp. When this was done I was bound and gagged and thrown

into a storeroom adjoining the office, one of the robbers facetiously advising me to keep perfectly quiet. In my helpless condition time passed slowly enough, I assure you.

"The desperadoes went outside to prepare for their work. Suddenly my attention was attracted by the sounder in the office without, which told me that some one was calling the superintendent's office at Missoula and signing my office call. At first I thought that one of the bandits was an operator, and was trying to ascertain whether or not the train was on time, but when the call was answered, and I listened to the following message, I knew that I was the owner of a dog that was worth its weight in—diamonds:

"Bonita, June 16.

"W. H. B., Missoula--Robbers here going to hold up No. 2. They have bound and gagged Williams and locked him in the freight room.

'Dash.'

"At Missoula, the division headquarters, there was suppressed excitement, and orders were being issued and carried out promptly. A posse was formed and a special fitted out for my relief.

"It seemed to me that I had lain in the storeroom many hours when I heard the whistle of an approaching train, which soon came to a standstill. Then a few scattering shots were fired, followed by volleys, mingled with the sounds of curses and groans. Then I heard steps on the platform, the storeroom door was opened, and in an instant I was free and looking into the familiar faces of friends. Three of the desperadoes were stretched upon the platform, and would never hold up another train; four others were wounded and in irons. Two of the posse were slightly injured.

"When the excitement had, in a measure, subsided, Superintendent Brimson said: 'who is Dash, and how does it happen that the telegram warning us was sent from here?'

"'There is the sender of that telegram,' I said, proudly pointing to Dash.

"The men who were present looked at me in a pitying way, as if they thought my late experience had made me delirious. 'I can prove my assertion, gentlemen,' I said: 'Sheriff Ramsey is an expert telegrapher, and will sustain me.'

"I lifted the dog to the table, and, opening the key, I spelled out the words: 'Dash, did you warn W. H. B. about the robbers?'

"The dog gazed around with a seeming look of triumph in his eyes, then placed his paw on the key and ticked off the following: 'Of course; does anyone doubt it?'

"The big Sheriff was listening, apparently thunderstruck, but he finally managed to gasp: 'Well, I'm d—d, if that dog isn't a dandy!' And then a shout went up that threatened to wreck the little office building.

"Here is your train. Sorry you can't stay a little longer. I had intended to have Dash send a telegram in your presence for the purpose of convincing you that he is all I represent him to be."

I too was sorry that I was not able to remain. I have since been wondering whether the dog was an expert telegrapher or his owner was a past mas-

ter in the practice said to have been made famous by Ananias.—Burton James in the Railroad Telegrapher.

A Telegram from King Edward VII.

In these democratic days, kings send telegrams over their own name, just like anybody else, handing them in to an operator, waiting till the words are counted and paying the cost, unless they happen to be sent "Collect."

C3



POST OFFICE TELEGRAPHS.

Shipment Dispatch No

Sept 14th 1901

Amman Fredensborg
at 10 am
Rundn SW 200 at 10 57 am
at 10 59 am

To my private hands of
my
Telegraphist
H. H.

TO. American Ambassador United States
Embassy London

Most truly do I sympathize with
you and the whole American nation
at the loss of your distinguished
and ever to be regretted President
Edward R.

FAC-SIMILE OF KING EDWARD'S TELEGRAM.

Here is a reproduced fac-simile of the telegram sent by Edward VII from Fredensborg, Germany, to our embassy at London upon the occasion of the death of President McKinley. A curious phrasing is employed in the address. "American Ambassador, United States Embassy." Why not "United States Ambassador, United States Embassy," or "American Ambassador, American Embassy?" Purists maintain that there is no such person as "American Ambassador," or such a place as the "American Embassy," but custom, which is all powerful in London, has adopted the simpler rather than the official designations.

"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.

Scoops Picked Off the Wire.

"While Denver has far exceeded in her wonderful growth and beauty the expectations and prophecies of probably all old-timers, I still find after my twenty years' absence many old landmarks, more especially among its people," said Ed Cowen a few days since. "Some have grown from boyhood to manhood, others from middle age to old men. Still the happy smile greets me as of yore. Time does not appear to change the average Coloradoan and some it has changed but little in looks. Take my friend George E. Lawton, night manager of the Western Union Telegraph Company here, or, more properly speaking, 'Old Farmer Lawton,' a title we gave him more than a quarter of a century ago. He does not look a day older than he did when I first met him in Pueblo in 1876, and I presume he has just as good an eye to business or he would not be retained so long. By his honesty and genial ways he has made many friends for himself and his company, especially among the newspaper fraternity.

"Years ago, when a dozen or more of us representing Eastern papers rushed to the telegraph office with our 'scoops' the contents of those specials were held as sacred by the 'Old Farmer' as though his life depended on them not leaking out, but next day he would josh the fellow that happened to fall down on a piece of news and comfort him by telling him that the next turn would probably be his.

"The 'Old Farmer' always had a great way of getting around either little or big difficulties. I remember in 1879 when Lawton was helping The Associated Press out as agent in Denver in connection with his other duties, that a severe blizzard passed over Kansas and Nebraska, cutting off not only telegraphic but mail communication for several days. The company was not then supplied with many different routes. The first night we got through tolerably well by spreading on local matter and clipping a little from Eastern exchanges, but the second night we could not even hear of a dog fight to work up locally and with no mails there was no use for the scissors, and we had to look to the 'Old Farmer' for relief. George was always pretty handy with the 'quill,' and after calling up the different offices in the State where the wires had not been affected by the storm, he sat down and began to write State specials for us, grinding out copy faster than either of the two morning papers could set by hand, and winding up with a column of a fresh Indian outbreak in which Little Piah and his band of renegade Utes had run off several hundred head of Wilson brothers' horses in the neighborhood of Kit Carson after a battle with the herders in charge.

"Of course, we were all very grateful to the 'Old Farmer' for saving our lives and jobs in assisting us in the getting out of the newsiest papers ever published west of the Missouri, but we didn't see the point gained by the 'Farmer' in his accommodation. Up to this time, Denver was Colorado. There was no dog with a tail to wag, hence the outside towns were not counted, and to have published

anything about one of them or that which happened in or near them would have been looked upon as bad journalism, besides it was quite expensive. In fact, we had always refused to pay tolls on specials previous to this, and returned them to the telegraph office regardless of their importance when an outsider occasionally became extravagant enough to place one on the wires. But after Lawton spread himself that night we had to follow up the State service, as the people seemed to demand it, and just think of the thousands of dollars it has brought the company in tolls since then! Of course, George is too modest to take credit for all this, but it was certainly that great big head of his that led us into the trap.

"Another instance of the 'Old Farmer's' eye to business is best illustrated in his first meeting with Bill Nye in 1878, I think it was. Bill had been East and skipped over to Denver to spend a few days with Fred Skiff. Going to the telegraph office Fred introduced Bill to the 'Old Farmer' and while swapping a few stories Bill utilized the time in writing out a short message to his wife, notifying her that he would be detained in Denver a few days and also quite a lengthy letter to his business manager. Lawton, in his usual accommodating spirit, accepted the message, and also told Bill he would have one of the messenger boys post the letter for him and save him the trouble of hunting up the post office. Bill always claimed that 'Old Farmer' mailed his message and put the letter on the wire, causing his wife to mortgage the Boom-erang plant in order to pay tolls on the same.

"In those days Lawton's only bad habit was smoking poor five-cent cigars. Rothacker used to take advantage of this occasionally, when passing, by dropping in and giving the 'Farmer' a very fine 25-cent Havana, just to watch him make all kinds of faces while trying to smoke a good cigar.

"Probably no man in America had greater admiration for Gen. Henry W. Lawton than 'Old Farmer' Lawton, and I do not believe there are many who know even now how close they were related by blood, as George is not one who goes back to his ancestral family tree to dig up relationship with prominent people, but in the case of the general the 'Farmer' cannot get around being about a third cousin to the great fighter.

"I well remember their first meeting. I had met General Lawton while in New Mexico where he was captain of a troop chasing redskins, and noticed his close resemblance to the 'Old Farmer,' not only in looks and stature, but also in speech. Later, when the captain was passing through Denver I met and introduced him to the 'Old Farmer.' It required but a few minutes for them to figure out their relationship, which was done in about the following language, as near as I now remember. The 'Farmer' said: 'Captain, you seem to retain a good deal of the Lawton blood in the size of your feet. You must wear about my size, a No. 11 shoe.'

"The captain said 'yes,' that he managed to squeeze on No. 10s on dress parade, but on long marches found No. 11s much more comfortable.

Then the 'Old Farmer' told us that his great-grandfather in Massachusetts, mentioning his name, wore No. 14s, but that his grandfather cut it down to 13s, and that a good sized cow hide made a pair of No. 12 boots, which was his own father's size. 'So you see,' said the telegrapher, 'we have succeeded in reducing our feet just one size each generation.' Then the captain smiled and said, 'We have done most that we'll, too, for your great-grandfather was also my great-grandfather.'

"Gene Field always had a warm spot in his kind heart for Lawton, but it used to worry him greatly while in Denver to think he could not play one of his jokes on the 'Old Farmer.' Gene would have caught him on a seatless chair, but George's frame was too large to go through and he stuck before hitting the floor. Finally the time did come. One night in 1886 the 'Farmer' happened to be in Chicago and came up to the old Record office to call on us just as Gene and I were finishing up our night's work. Gene had a good stomach then and was hungry, and he proposed we banquet our old friend. After they had eaten what six ordinary men would have considered a good square meal, Gene asked Lawton if he had ever eaten any shrimps. The 'Farmer' said he guessed not, as he had never seen any. Gene immediately ordered a plate for him and commenced to tell how they were caught in Lake Michigan, when in reality they came from San Francisco and cost 75 cents a plate laid down in Chicago. Lawton remarked that they very much resembled young lobsters very much in looks and taste, and he ground down four plates of them, shells, legs, whiskers and all. As usual, Gene never cracked a smile and was going to order the fifth plate when Lawton said: 'Not for me, Gene. It's about my bed-time and, you know, it's bad policy to eat too much just before retiring.' Gene and I often laughed about it afterward and wondered if the 'Old Farmer' walked all the way back to Denver to settle that meal that cost us \$8."

Submarine Cables and Gutta-Percha.

Botanists in France are now engaged upon the problem of acclimatizing the *Isonandra gutta*, the tree which produces gutta-percha. It seems that no other product, says the *Electrical World and Engineer*, known at present replaces the gutta-percha found in the forests of the Malay Peninsula and in certain districts in Malacca. Inferior qualities have not the requisite durability for submarine cables. The plantations in the above-mentioned districts have been so ruinously exploited by the natives that it is feared there will be a shortage in the course of fifteen years, unless means are taken to protect the forests or to propagate the plants elsewhere.

The following figures will give some idea of the rapid increase in the export of the gum: In 1845, Europe imported only 19,841 pounds of gutta-percha; in 1857, when the Singapore supply was exhausted, the Malay Archipelago exported more than 529,104 pounds; in 1870, Sumatran exportations exceeded 299,621 pounds, and Borneo

exported 2,863,900 pounds. In order to attain these figures, it is estimated that the natives must have sacrificed more than 5,000,000 trees.

Expeditions sent out by France, England, and Holland to discover the botanical origin of the precious gum, and to increase its production, have reached the same conclusion. As it is almost impossible to find a full-grown gutta-percha-producing tree, the situation will be extremely grave if urgent measures are not taken. The British Government has posted placards for the protection of the trees, with no effect. Holland has planted trees, but in insufficient number and of inferior species. Productive species have, however, been found in the Malay forests extending between the rivers of Pahang, Patani and Perat. They have been transplanted into Reunion and Madagascar, and if they thrive there will be less danger of a dearth in the supply of gum required for submarine cables.

An Ambiguous Telegram.

A good story illustrates the danger that lies in ambiguously worded telegraph dispatches. The wife of a New York lawyer of large means and adequate knowledge of the value of the dollar had gone to an auction sale of laces, of which she is inordinately fond, and had seen some pieces which took her fancy. The price was \$2,000, and she hesitated to make the purchase without asking her husband whether she should do so. She did so, and received this reply: "No price too high."

Madam promptly bought the laces, and so struck was she by the generosity, not to say gallantry, of her husband that she added to her store \$8,000 worth beside. When her husband returned that evening, she learned that the dispatch he had sent read this way: "No. Price too high."

Cape to Cairo Telegraph.

The building of the Cape-to-Cairo telegraph line has offered plenty of opportunity for the inventive mind. Difficulties of transport have perhaps never before been so keenly experienced, and have forced the engineers to fall back on many devices of their own in the absence of regulation material.

Live trees now take the place of telegraph posts, and, according to a Cairo correspondent, they offer more than one advantage over the dead-wood uprights. In particular, they afford protection against the swarms of white ants which infest the country. From time to time the branches are kept lopped sufficiently to preserve the wires from being too much enveloped in foliage. Cords of tarred hemp are used as insulators.

Automatic cable translation from section to section of cable has recently been established and is working successfully at Gibraltar on the cables of the Eastern Telegraph Company. The apparatus employed has been constructed under the patents of Mr. Herbert Taylor, Mr. S. G. Brown and Mr. Arthur Dearlove, all of England.

Government Ownership of the Telegraph.

BY R. HITCHCOCK.

The article entitled "The Government and the Telegraph," which appears in TELEGRAPH AGE of October 16, presents a strong *ex parte* argument against Government ownership of the telegraph, although the writer alludes to the probability that the Industrial Commission will recommend legislation in favor of it. If the affirmations and deductions of the article are sustained, it is difficult to see what foundation the Industrial Commission can have for such a recommendation. An examination of the evidence, however, shows very clearly, that while there are two sides to this as well as to most questions, the arguments presented in the article are far from conclusive, while the facts and figures are either not fully stated or have been wrongly construed.

The subject is not new, and the arguments referred to have been repeatedly controverted by persons who have investigated the subject. Nevertheless, if they are repeated often enough some people will come to believe them sound.

The question of Government ownership and control of the telegraph is of greater commercial importance than is commonly recognized, but it is of even greater moment to the people at large, by whom the best and cheapest means of communication should be available. There should be no private monopoly of electric communication, nor should it be a means of private gain regardless of public interests. Somebody has said that there are three reasons why the Post Office could not establish a parcels post—the three Express Companies. Likewise it has been discovered, in the course of congressional inquiries, that the only strong opposition to Government control of the telegraph comes from the companies.

The object of Government ownership is to get relief from conditions which are restrictive and burdensome. No doubt a private corporation might, if managed on conservative business principles, afford as good, and almost as cheap, service as the Government. But the experience of the world has shown that in the control of a monopoly it never does. The public would be willing to favor private telegraph control which would render effective and prompt service, pay its employees well and utilize the best methods and means of operation. There would be no objection to rates which would yield a fair return on the capital of such a corporation directly invested in plant and actively employed. On the other hand, there is a decided and eminently proper objection to high tariffs for slow and unsatisfactory service, exacted for the payment of dividends on large issues of stocks and bonds. The public also protests against underpayment of employees upon whom the efficiency of the service depends and the continued use of antiquated methods which tend to perpetuate the evils complained of.

We are told that the charges for telegrams in this country compare favorably with those abroad. The fact is, the charges in this country are consid-

erably higher, both per word and per mile of transmission. The fact is not mentioned, although it would seem to have a bearing, that whenever it is found that the charge is greater abroad, the reason is that the message crosses an international boundary, and therefore has to pay charges of two or more telegraph administrations. Professor Bemis has stated, that in Europe "a special tax is imposed on messages that cross a national frontier." But with the lower charges they have also quicker service. In England, for example, the average time for the delivery of a message is half an hour. In the United States it is about two hours or more, even for the distances of a few miles.

The statements concerning miles of wire, number of offices and extent of service in the United States as against great Britain should be taken with some allowances. Instead of miles of wire it would have been more to the point to compare miles of line. But such comparisons are not very significant, owing to the widely different conditions in regard to extent of territory and the distribution of population. The telegraph business of the United States should be, in proportion to population, enormously greater than in England, but for some reason it is not. The reason is not far to seek.

Regarding the number of offices, it should be remembered that in this country the railway companies probably maintain about one-third of them.

In all arguments against Government ownership the greatest stress is laid upon the experience of the British Post Office Department since the telegraph was taken from private hands. We are told, as a fearful warning of dire consequences to follow a similar move on our part, that "the total loss of the Government on its telegraph business since its assumption in 1870 has been \$40,000,000!" Ergo, if the United States takes over the telegraph it would have to meet an annual deficit of unknown magnitude! Well, it must a very expensive business, this managing of a telegraph. But how does it happen, then, that the Western Union Company is able to declare annual profits of from \$6,000,000 to \$7,000,000? What would become of these profits under Government management, unless they were applied to reduction in rates? And how about other economies which would naturally result from Government control, as in England? How about the use of improved methods and the better service?

The reports of the British Post Office Department show a considerable annual deficit. There is a heavy annual interest charge of nearly \$1,500,000, due to the purchase price which was about four times what the properties were worth. Nevertheless, the Department has been extending lines and increasing its facilities, opening additional offices, increasing the pay of operators and reducing the hours of labor, while rates have been reduced to one-third or one-half of what they were under private control.

The newspapers took advantage of the opportunity to gain recognition for their aid in effecting the change to Government ownership. They have

a contract rate of one shilling for the first hundred words, but this dwindles down to four cents per hundred words on long dispatches. This is a source of loss. All Government and railway business is done free, so that there is abundant reason for the deficit. There is a peculiar method of accounting in the Department, whereby the telegraph is burdened with charges which do not properly belong to it.

There is, however, a profit on operation, and the cost of new purchases and new construction is paid out of the earnings. It is universally conceded that the service is more reliable and quicker than under private management. It has been estimated that the \$40,000,000 "loss" in 30 years has given the people of Great Britain a telegraph service which has saved them at least \$150,000,000 in charges during the same period. If it were proposed to return the lines to private control because of the deficit, it would quickly be discovered that this loss is not so seriously regarded by the people of Great Britain as it is by the opponents of Government ownership in the United States.

When, by reason of its cheapness and prompt service the telegraph becomes an essential social as well as business utility, a universal recourse, an integral part of daily life, it will be found, as the people of England have learned, preferable to pay a general tax on a small deficiency, rather than high tariffs to provide a surplus for division among a few individuals controlling a telegraph monopoly. With us it is not necessary that there should be a deficit; but Government control seems necessary if the people are to enjoy the greatest possible use of electric communication at a minimum cost.

The bugbear of political patronage always comes up in this line of argument. It is not exactly dignified or patriotic to declare that our Government is so venal that it cannot be entrusted with the telegraph. If there should be any reason to anticipate the interference of spoilsmen, the nature of the service would, by arousing public indignation, preclude a repetition of the offense. It would disarrange and demoralize the service to have employees appointed by political favor. A telegrapher cannot be trained as easily as a postal clerk nor in the same way. Indeed, nothing would lead more directly to improvement in all branches of Government service than the establishment of a technical service, under strict civil service rules, with which politicians would not dare to meddle.

Apart from this, if the people want a Government telegraph they will take measures to have it well conducted, and opponents of the idea need not cherish so many misgivings on the political side.

The writer of the article neglected to state another fact which also has an important bearing upon his argument. The United States stands practically alone among nations in regard to Government ownership of the telegraph. Of seventy-five countries the telegraph is operated by the respective Governments in all except Bolivia, Cuba, Cyprus, Hawaii, Honduras, and—the United States.

Yet, in the face of this overwhelming evidence of the practicability and advisability of Govern-

ment ownership, we are confronted with futile and trivial arguments and objections to offset the accumulated experience of the greater part of the world.

Order of Railroad Telegraphers.

The thirteenth regular biennial session of the Order of Railroad Telegraphers convened at St. Louis, Mo., on October 14, president M. M. Dolphin, presiding, with H. B. Perham as secretary. Delegates from every division of the Order in the United States, Canada, and Mexico were in attendance, and an immense amount of business was transacted during the several days of its session.

The following officers were elected: H. B. Perham, president; J. A. Newman, first vice-president; T. M. Pierson, second vice-president; D. Campbell, third vice-president; L. W. Quick, secretary-treasurer; A. S. Sinks and C. E. Layman, directors. The hold over directors are: L. A. Tanquary, T. W. Barron, and F. J. Reynolds.

The selection of Mr. Perham as president elevates to that position probably the strongest individual within the Order. He is a man of strong personality, conservative yet of broad gage in his ideas, of infinite tact and good judgment, and just such an officer as can be trusted to safely guide the intricate affairs of the organization. He is in the prime of life, in the best of health, and starts out with the esteem of both the railroad officials and railroad employees. We predict a bright future for the Perham administration, and congratulate the Order upon its wise selection.

Yukon Telegraph Rates.

The tariff rates adopted by the government telegraph service for the recently completed Yukon telegraph line have been issued by the Canadian government. The local rates at present in force on the line beyond Atlin are to be continued. The rate for any office on the line, above or below Atlin, to or from Ashcroft, is to be on the basis of 50 cents for the first 100 miles, and 25 cents for each additional 100 miles, which would figure out from Dawson to Ashcroft \$4.50 for 10 words and Atlin to Ashcroft \$3 for 10 words, the usual proportionate rate for additional words being 30 and 20 cents respectively.

For through business the proposed rate contemplates 30 cents for additional words where the 10 words each is over \$4; 20 cents for additional words \$3 up to \$4; 15 cents for additional words \$2 up to \$3, and 10 cents for additional words \$1 up to \$2.

The cable rate from Europe will be 35 cents per word with a minimum of \$4 to any point on the line. The press rate will be 5 cents per word except to Skagway, Shops and Glacier, in Alaska, and Bennett, Log Cabin, White Pass and Frasier, in British Columbia, points on the White Pass line, where the rate on press matter will be 6 cents per word, and the cable rate 43 cents per word, with a minimum of \$4. The minimum charge for any one press dispatch to any point will be \$3.

Subscribe for TELEGRAPH AGE, \$1.50 per year.

Telegraphers' Mutual Benefit Association.

Assessment No. 385, has been levied by the Telegraphers' Mutual Benefit Association to meet the claims arising from the deaths of J. E. Zeublin at Chicago, Ill.; L. H. Shults at Baltimore, Md.; J. S. Evans at Tybee, Ga.; D. E. Martyn at Kansas City, Mo.; M. Gordon at Bellaire, O.

The annual meeting of this 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 the same 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.

Water and Writer's Cramp.

Mr. Ahern, of London, England, one of Marconi's telegraph experts, while on his way to the international yacht race recently, was seen to let his hand drag through the salt water. When asked for an explanation, he said:

"I am good for 10,000 extra words," and he rubbed his wrist in a patronizing way. He added:

"I have found that by placing the wrist in cool water for half an hour any operator is able to double his energy and endurance for the following twelve hours. The wrist is the main machinery of the telegraph operator. Its muscles and nerves are dependent upon perfect action. This immersion in the sea is worth considerable money to the company. Not only can I send quicker, but I can send better Morse and with greater endurance."

Copper Wire Thieves Caught.

Three wire thieves were caught near Chester, Pa., in the act of robbing the poles of the Western Union Telegraph Company of copper wire, on October 11. This point is where a theft of this character has been committed almost weekly during the past two years, both telegraph companies suffering alike in the depredations. The gang of thieves had succeeded in escaping arrest so long, that the companies were about to substitute iron wire for the copper wire, in order that their circuits might be maintained intact.

Cuba Submarine Telegraph Company.

At a meeting of the Cuba Submarine Telegraph Company at London, England, on October 23, the chairman expressed confidence that the United States Congress would, at its coming session, appropriate funds to pay the company's war damage claim of \$4,237. Regarding the arrears of the subsidy, amounting to \$25,000, the chairman said he expected the amount would ultimately be paid, but this depended on the settlement of the future relations between Cuba and the United States.

You can't afford to be without TELEGRAPH AGE.

LETTERS FROM OUR AGENTS.

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

BEAUMONT, TEX., NOTES.

The telegraphers of Beaumont and Galveston are receiving the congratulations of their friends from all over the country, because of the successful completion of their oil gusher on Spindletop Heights. The "Eureka" oil company is composed almost exclusively of operators. It was promoted by Messrs. P. G. Tompkins, manager of the Western Union, at Beaumont; C. W. Davis, of the Galveston Western Union, and now manager of the Eureka Oil Company; F. C. Cole, night chief, and L. F. Fox, of the Western Union, at Galveston.

The Eureka well is one of the best in the field, and a test made at the time of its coming in, gives it a registered capacity of 50,000 barrels daily. The Eureka stock also enjoys the distinction of being the only Texas oil stock that has never sold for less than par value, and none of its stock can now be purchased at any price.

Manager A. J. Escude, of the Postal, has resigned to go into the oil business. Mr. Frank Darling, who for some time has been Mr. Escude's assistant, has been appointed his successor.

Mr. J. M. Laurendine, of Atlanta, Ga., is among the recent additions to the Western Union force.

Mr. C. Peacock, an old commercial operator, and for several years chief dispatcher of the Southern Pacific Company at Beaumont, died on the 7th inst., of inflammatory rheumatism. He was one of God's noblemen, and the profession loses one of its best men.

Mr. C. E. Berry, of Evansville, Ind., is now chief operator of the Stag Pool Rooms.

PITTSBURG, PA., WESTERN UNION.

George W. Timney, formerly of this office, has returned to his old position with the Pittsburg, Fort Wayne and Chicago Railroad, at Alliance, Ohio.

E. D. Walker has resigned.

A. R. Stone has been made manager of the office at Warren, Pa.

CINCINNATI, OHIO, POSTAL.

Fred. Huntsman has been appointed manager at Fostoria, vice A. R. Wilson, promoted.

Operator J. P. Randall, relieved manager, Miss M. S. Griswold, at Hamilton, during a recent brief absence.

This company has completed new wires from this point to New York, and also from here to Indianapolis, Ind.

Recent visitors: Wm. H. Baker, vice-president and general manager, New York; E. J. Nally, general superintendent, Chicago; S. A. Duncan, as-

sistant general superintendent, Atlanta, Ga.; T. W. Carroll, electrician, Chicago; J. B. Hayes, manager, Eaton, Ohio; R. W. Daniels, manager, Wellington, Ohio.

On the night of October 17, Sylvester F. Reid, night telegraph operator at Augusta, Ky., was shot in the head and severely wounded. The bullet came through the window, and it is believed to have been fired by a tramp on a passing train.

Miss McKenna has been added to the force here.

The many friends of H. L. Bennett mourn with him for the death of his wife, October 10.

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.

SOMETHING NEW—no operator should be without. The Eacutt-Cawthern Typewriter Cleaner is a simple little brush; can be inserted in machine in two seconds, type thoroughly cleaned in 30 seconds without soiling fingers. Formerly required 15 minutes, and soiled and inkstained fingers. Price 50 cents, postpaid. Agents wanted. Eacutt and Cawthern, Room 704, 86 La Salle St., Chicago, Ill.

POSTAL.

Mr. Edward Stanton is now night time-keeper, vice Arthur Hanlon, chief check.

Mr. Ditch and Mr. Tanner left for New Orleans, where they have accepted positions with the Postal.

Messrs. John Forest, Harry Dunbar, James Barnett and Elmer Simpson were recent visitors at the Buffalo Exposition.

Messrs. P. Williams, C. G. Seward and J. Cleary are among the recent arrivals. Mr. Gradzki has been assigned to a branch office. Mr. J. T. Cawthorne, of the Board of Trade office, is the inventor of a type cleaning brush for typewriters.

Mr. Paxton is working the late night trick, Mr. Forest the Pittsburg bonus wire.

WESTERN UNION.

At the regular meeting of the Executive Committee of the Telegraphers' Mutual Aid Society, the resignation of A. J. Gallagher, the president, was accepted, and Mr. Perry F. Miller, vice-president, was appointed to fill out the term. Mr. Otto Enking, of the Western Union, being appointed to the vice-presidency. Members will please take notice.

Mr. Louis Benson has been confined to his home with a touch of rheumatism.

The beautiful penmanship of Mrs. Harry Austin is admired by all.

Mr. Harry Jones returned from a short vacation, feeling well braced up.

Mr. Frank Donaldson is assisting Chief B. F. McKee on the early morning trick.

Mr. C. E. Clapper, a recent arrival here, holds a fine record in the athletic world as a high jumper.

Mr. E. J. Dolen has the sympathy of all in the sudden death of a brother in Iowa who was manager of a Postal Telegraph-Cable Co. office.

There was recently exhibited in the operating department some fine pen and ink sketches and among the best were those of Mr. Parker, of the Des Moines wire, and Mr. A. H. Stoner.

A report was current recently that one of our well-known operators in this office had made some large winnings in the stock market, but the gentleman to whom this report is accredited is still putting "five words on a line."

Mr. A. B. Cowan, our popular assistant night chief operator, has returned from a ten days' fishing trip in the northern part of this State, his position being filled during his absence by Mr. Oscar Olson, the Eastern wire chief.

ST. LOUIS, MO., POSTAL.

Miss Lydia Herdeman, for several years an employee of this office, died September 19.

Mrs. Ellen Roche, mother of Alex. J. Roche, of this office, and of Wm. Roche, an operator whose present whereabouts is unknown, died September 28.

Arrivals: Miss M. L. Wilson, F. P. Mullen, J. R. McDonald, H. W. Thorp, F. A. Grace, F. A. Clogston, P. Mercer, S. A. Mulroy, J. F. Robb, M. Halpin, C. D. Hewlett, D. G. Ellington, H. D. Roach, George Martin, and J. D. Smith.

Departures: H. P. Wells, J. A. Latture, R. H. Caldwell, F. E. Parker, J. M. Strong, Miss Mamie Mullen, J. M. Alvis and L. C. Bader.

Vacations: W. H. Miles and Roy K. Talbott.

PHILADELPHIA, PA., WESTERN UNION.

Robert H. Morris, electrician from New York city, and Robert Morris, Jr., from Pittsburg, Pa., were recent visitors. The latter will probably locate with us in the near future.

R. T. Brown, who was with us for some time, is now located at El Paso, Tex.

Dr. A. H. Reynolds, dentist, who is still doing a short day trick for The Associated Press, is having well-deserved success in his profession and is building up a very lucrative practice.

Since the wholesale vaccination, took place the common form of salutation now is: "How's your scab?" In passing each other, a cringing attitude is observed and the left arm jealously guarded.

KANSAS CITY, MO., WESTERN UNION.

Chester F. Beeson has been appointed to fill the position made vacant by the death of Night Chief Operator Daniel E. Martyn, and the honors could hardly have been more worthily bestowed. He has served the company in various positions for the past twenty years and has proven himself equal to all emergencies. Mr. A. R. Pippitt takes Mr. Beeson's place as wire chief, being relieved on quads and loops by Chas. R. Fisher, transferred from day force. Gilbert V. Burns takes the latter's place as assistant loop chief, changes which complete the reorganization.

Miss Kathleen O'Brien, formerly of this office, now of Denver, Col., was calling upon her old friends recently, and her very healthful appearance speaks volumes for the western climate.

Mr. Samuel Sheets has packed his grip and gone to the sunny South for the winter.

Mr. and Mrs. E. H. Hobart recently returned from a two weeks' vacation among the Ozark Mountains of southern Missouri.

Messrs. C. H. Daniels, J. H. Vogan, F. E. Redline, Frank Vestal, Arthur Killick, Chas. Hagen and Peter Uken were off for a two weeks' pleasure trip in the vicinity of Chilton, Mo.

Mr. H. D. Roach has taken up his abode in St. Louis, Mo., having engaged with the Postal Telegraph Co.

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.

Mr. Harry W. Sauer, president of the New York Telegraphers' Aid Society, returned recently from the Catskills, where he has been sojourning for several months, and while greatly improved in health is not fully in condition to resume work indoors.

Miss Emma Firl, of the New Britain, Conn., office, who owing to her many admirable qualities, has won the high esteem of all in the eastern division who work with her, was a recent visitor.

Mr. J. F. McGannon, assistant traffic chief of the southern division, has been assigned to the night force at his own request, and Mr. Arthur M. Lewis will take the place vacated.

Mr. W. J. Evans has resigned to take a course in medicine at Cornell University, of Ithaca, N. Y.

Mr. J. G. Kelly, of this office, died at the Home for Consumptives, Brooklyn, October 21.

Mr. Ellis E. Beebe, an old-timer from the West, and lately from Beaumont, Tex., where during the past year he has become an "oil king," was a recent visitor. Mr. Beebe has taken an interest in the banking firm of W. G. Hudson & Co., of Bos-

ton, Mass., and will remain in New York as its representative.

Appointments: L. A. Walters, B. J. McLoughlin, D. F. Baker, J. Rosenbaum, L. McGinnis, H. Lieber, H. R. Klitz, M. L. Snyder, I. Baker, C. A. Beah, C. P. Martin, H. Gersch, A. C. Barnhardt, E. McBride, J. D. Wooten, T. H. Grady and W. C. Wilson.

Resignations: T. P. Murphy, A. E. Fredking, J. H. Ryan, J. D. Daggett, W. J. Evans, F. A. Post and W. A. Young.

John de la Motte, son of the veteran observer at Sandy Hook, N. J., who was an operator in this office, has gone to Atlanta, Ga., for the winter.

Mr. George S. Brown, who left here for Colorado about two years ago, is quite ill at Redlands, Cal.

Miss Melita Brown has returned to work, after several weeks' illness.

The recent appointment of Mr. M. L. Harner as a traffic chief gives much satisfaction to all concerned. Mr. Harner is gentlemanly and devoted to his new duties.

Miss Lottie Wiggin, of the Wheatstone Department, is confined to her home with a severe illness.

Misses Grace and Ruth Worthington have returned, after spending a two weeks' vacation in the mountains.

Thomas Donahue has returned, after an absence of six months.

Miss May Gifford has been transferred to the Wheatstone Department.

Senator W. L. Ives, of this office, is devoting almost every night to enlightening the voters in Brooklyn as to how they should cast their ballots. The senator, as a campaign orator, it is said, has few equals. Walter C. Burton, also of this office, is campaigning on the opposite side, and it remains to be seen who will make the most votes for his party.

POSTAL.

Frank Ganung, of the Subway Department, has returned from his vacation, passed at Greenwood Lake.

Mr. J. J. Madden is also back from a vacation.

\$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.

Appointments: F. A. Shandley, J. F. Logan, Charles Bossler, T. F. Hannigan, Mrs. Dieckman and Mrs. MacConnach.

W. H. Rhodes has returned, after an absence of three weeks, caused by illness, and has been assigned to the Second Philadelphia bonus wire.

Mr. J. P. Gallagher has been assigned to the first Philadelphia bonus wire.

Changes of hours on early force: J. D. Mann and G. R. Knaess, W. C. Morris and Wm. Stirling, M. J. O'Donnell and J. H. Havice.

Frank O'Meara has gone to The Journal office.

BOSTON, MASS.

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

POSTAL.

Mr. T. F. Sullivan, of the Globe night force, has returned from New Haven, where he was sent to help out on press matter during the Yale bi-centennial.

The Canal street branch has been removed to Hotel Haymarket.

Miss Costello has been appointed manager at the post office, vice Mrs. H. Joyce, resigned.

Miss McVey has been transferred to the Castle Square hotel branch, vice Miss A. M. Haggerty, resigned.

Miss Blanche V. White has been appointed manager at Hotel Plaza, vice Miss Simmons, resigned.

Mr. H. L. Fishascher has resigned to engage in other business.

Among the new arrivals are: Miss A. M. Austin, B. J. Kearney, from Woods Hole; F. C. Bradbury, from the Western Union, Bar Harbor; D. J. Conroy, D. J. Sullivan, F. J. Burchard, F. R. Johnson, R. H. Johnson.

Resigned: W. G. Howard.

PHILADELPHIA, PA., POSTAL.

Night Traffic Chief Walton Smith made application for a transfer to day duty and was accommodated; unfortunately, however, sickness interfered with the fulfilling of the plans. It was expected that Mr. Smith would relieve Mr. Harry Thompson, assistant day traffic chief, who, on account of continued muscular trouble with his left limb, has asked to be assigned other duties not requiring so much walking.

Meanwhile, Mr. Milton Connell, of the night force, has been appointed traffic chief in Mr. Smith's stead.

On top of this promotion, Mr. Connell contracted a still more important matter when, on the evening of October 23, he was married at his home in Ebensburg, Pa., to Miss Edith Little Barker, of that place. A host of friends extend hearty congratulations.

Mr. Clinton Christine has been transferred from the Ordnance to the Equipment Department at the

League Island Navy Yard. This move has its accompanying advantages.

The Camden, N. J., office is now under the care of Mr. Henry G. Stewart, Mr. M. Auerbach having been transferred to this office at his own request.

A new son has arrived at the home of Mr. Oscar H. Phillips.

Mr. A. H. Friese, agent and operator at Pocomoke, Md., while en route to Buffalo, made us a friendly call.

Mr. Heber C. Robinson has been absent quite a while, superintending the construction of telephone lines in New Jersey.

Not having found employment with a private firm quite as desirable as anticipated, Mr. J. A. McKain returned to this office.

Other arrivals are: Messrs. Joseph Lane, W. E. Joyce and John J. Sullivan.

Fred. E. Brown has resigned.

Mr. Furman, of the first, New York, is developing into quite an expert photographer.

A birthday party at the home of Miss Jennie Hallman, of this office, was quite eventful, if a flash-light photograph can be regarded as authentic evidence.

WASHINGTON, D. C., WESTERN UNION.

Mr. Dennis Brown, southern wire chief, has just returned to the switch, after an absence of ten days, due to a severe attack of sciatic rheumatism. During his absence Mr. Dowling acted as southern wire chief, and Will Patton relieved Mr. Dowling as traffic chief.

Mr. J. F. Riley has returned to duty, after a spell of sickness.

Mr. John Sampson is slowly recovering from a stroke of paralysis.

Mr. James Hayes has returned from a two weeks' fishing excursion down the Potomac.

Mr. P. C. Hyam has returned to the main office, after a month's service at the Navy Department, vice Charles Oliver, who took his annual leave.

Mr. J. S. Thompson is visiting in Buffalo.

Mr. Eugene Cadmus is visiting relatives in New York State.

Mr. L. E. Steele has returned from Roanoke, Va., where he went to relieve Manager Rawie, who took a short vacation.

Mr. W. E. Peirce is mourning the loss of a very handsome diamond ring, which he lost recently.

Major John Vowles is watching repeaters at night, during the illness of Mr. Harry Larcombe.

Messrs. Field and Harrison have returned to duty, after brief absences, due to illness.

SAVANNAH, GA., POSTAL.

Business is on the boom.

The personnel of this office is as follows: P. H. Hughes, manager; W. A. Larey, chief operator; R. H. Miller, W. B. Jenkins, R. W. Ballard and O. T. Hughes, operators; W. A. Boyle, book-keeper; clerks: receiving, J. S. Sullivan; delivery, John J. Scott; collector, W. M. Nelson; repairers, G. B. Marvin and P. H. Beaton.

Death of James C. De Long.

James C. De Long, one of the best-known telegraphers in the West, died at Chicago, Ill., on October 18, after a lingering illness of nine months. He was probably one of the finest receivers that ever graced his profession. He was chief operator at the Chicago Tribune office almost continually from the time that the Mutual Union Telegraph Company put in the first "loop" in that office in 1881, except during a few years when he went to southern California with his wife, on account of her poor



THE LATE JAMES C. DE LONG.

health. She died some years ago. In 1879 Mr. De Long was a member of the New York city force where he did some brilliant telegraph work. He was born in Cambridge, Ohio, on July 27, 1852, his father being judge of the probate court and afterward consul general in South Africa. Mr. De Long was a member of Morse Council of the National Union and the Telegraphers' Aid Society. The remains were interred in Rose Hill Cemetery on Monday, October 21. Mr. De Long leaves a son and daughter.

Obituary Notes.

Charles Mitchell, a telegraph operator at Hamilton, Mo., was instantly killed by a train, October 13, while delivering a message to the engineer.

C. J. Abbott, of New York, an expert telegraph operator, for many years past employed by The Anglo-American Telegraph Company, died of consumption on October 2. Mr. Abbott was one of the best receivers in the cable service, and was the support of his widowed mother. He remained at his post of duty until ten days before his death.

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.

Personal.

Mr. John I. Sabin, president of the Chicago and Central Union Telephone companies, an old New York operator, has returned from Europe.

Mr. F. N. Bassett, formerly assistant general manager of The United Press, New York, is now general sales agent of the Vista Hermosa Sugar and Mercantile Company, of Chicago.

Horace N. Snow, who was one of the members of the United States Military Corps during the Civil War, and who retired from the telegraph service immediately after the close of hostilities in 1866, is now and has been for the past twenty years cashier of the Blackwell Durham Tobacco Company at Durham, N. C.

Mr. B. E. Sunny, of Chicago, an ex-telegrapher and now western manager of the General Electric Company, whose interest in juvenile-reform work is of long standing, has been appointed one of three trustees for the Home for Delinquent Boys which has been authorized by the Legislature of Illinois. Governor Yates made the appointment.

Gen. A. W. Greely, chief of the United States Signal Office, recently arrived at London, after five months in Japan and the Philippine Islands. After making some investigations in London, in connection with the cable service, he will return to Washington. General Greely is satisfied with the efficiency of the 6,000 miles of cable and telegraph lines now working in the Philippines, and he is enthusiastic over the Japanese telegraphic systems.

New York Visitors.

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

Mr. Max Handler, of the Gold and Stock Department of the Western Union Telegraph Company, Cleveland, Ohio.

Miscellaneous Items.

Mr. Benj. C. Wilkins, manager of the Western Union Telegraph Company at Ashland, Wis., dedicated a poem entitled "Our Nation Mourns," to the late martyred President McKinley, which has gained great publicity through the daily press. Mr. Wilkins is a poet of exceptional ability.

A coroner's jury which investigated the cause of a railroad smashup on the Great Northern Railroad in Washington, lately, resulting in the death of several persons, rendered a verdict censuring the railroad company for keeping on duty for twenty consecutive hours the telegraph operator who was responsible for the wreck. The railroad company claims that this was necessary in this emergency, on account of the impossibility of getting additional operators. Several other wrecks of less importance, but resulting from similar causes, have occurred within the last few weeks.

Mr. J. W. Yealy, train dispatcher on the Pennsylvania Railroad at Pittsburg, Pa., and one of the best known men in the telegraph service, also a

member of the Old Time Telegraphers' and Historical Associations, has announced himself as a candidate for member of the advisory board of the Pennsylvania Railroad Voluntary Relief Association. Mr. Yealy has been connected with the road for thirty years. He is a gentleman of good address and has maintained himself in good standing with all the employees. If elected, it is safe to state that his work will be satisfactory. He has the endorsement of some of the best men in the Pennsylvania Railroad service.

Mr. John D. Rockefeller has a private wire between his mansion at Forest Hill, Cleveland, O., and the Standard Oil offices in New York, and, with the aid of an operator, transacts all his business, involving millions, as though he were in New York. He uses the long-distance telephone occasionally, but never for important business. The mails he never uses. He devotes certain hours daily to work and has his secretary and telegraph operator constantly at his side. He never writes his messages, but simply talks to the operator as though he were engaged in conversation with another oil magnate in his New York office. When a question is asked the reply comes back instantly. The private secretary and telegraph operator of Mr. Rockefeller, referred to, is Mrs. Mattie Tuttle. This lady entered the employ of the Standard Oil Company, at Cleveland, O., in 1872. She was then Miss Mattie Skinner, a native of Minnesota. She was a first class telegraph operator and at once became the trusted secretary of Mr. Rockefeller and has remained continuously in his employ with the exception of a period of about two years of wedded life. When her husband died she re-entered the service of Mr. Rockefeller.

A reception of the Ladies' Catholic Benevolent Association, under the auspices of the Brooklyn Advisory Board, was tendered to the president of the organization, Mrs. Mary E. Costelloe, at the Pouch Mansion, Brooklyn, October 4. The affair was a pronounced success, as members of the association, not only from Brooklyn, but from branches throughout New York State and New Jersey, assembled to join in attesting the appreciation and esteem in which the popular president is held. A program of merit was interpreted by well known local artists. The occasion also gave the members an opportunity to express in a substantial manner their love for her, and this portion of the program was the bright particular feature of a memorable occasion.

A beautiful diamond pin, with thirteen stones, and a gold chain attachment, was presented to the president by her associates on the Advisory Board.

From the various local branches came a costly and handsome gift, as a recognition of the zealous spirit with which Mrs. Costelloe had labored while acting as the supreme deputy and supreme treasurer of the order.

This well known lady is the wife of John Costelloe, the popular manager of the Postal Telegraph-Cable Company office, Cotton Exchange, New York.

MAGNETIC CLUB.—The fall meeting of the Magnetic Club, of New York, will occur on November 20. 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, and will be present at the annual dinner of the latter, which occurs at 6.30 P. M. on the above date at the St. Denis Hotel, Broadway and Eleventh street, New York. Mr. Thomas F. Clark, vice-president of the Western Union Telegraph Company, will make an address. A very interesting program is being prepared for the occasion by the Entertainment Committee, and it is hoped that there will be a full attendance of members.

The International Exposition of Fire Preventing and Extinguishing Appliances at Berlin, Germany, closed on the 15th of September. The most prominent American exhibit was that of the Game-well Fire Alarm Telegraph Company, of New York, which was represented by Mr. A. L. Tinker, of that company. The display was a very complete and handsome one, and attracted much attention and favorable comment abroad and won the gold medal.

The Cane Belt Railroad, Eagle Lake, Tex., which has up to this time used the telephone, will at once put in the telegraph system. Mr. Leo Levy, Western Union operator at Eagle Lake, has been appointed train dispatcher for the company.

The number of telegrams handled in Japan in 1889 was 3,500,000; in 1899, a decade later, the number had increased to 15,500,500.

"I think it is just horrid!" she exclaimed, "I hear the whole night force nearly are suspected of being anarchists!"

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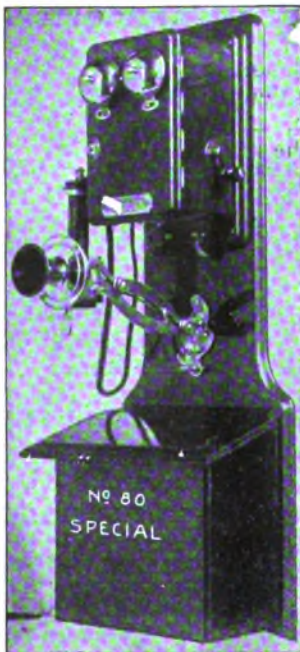
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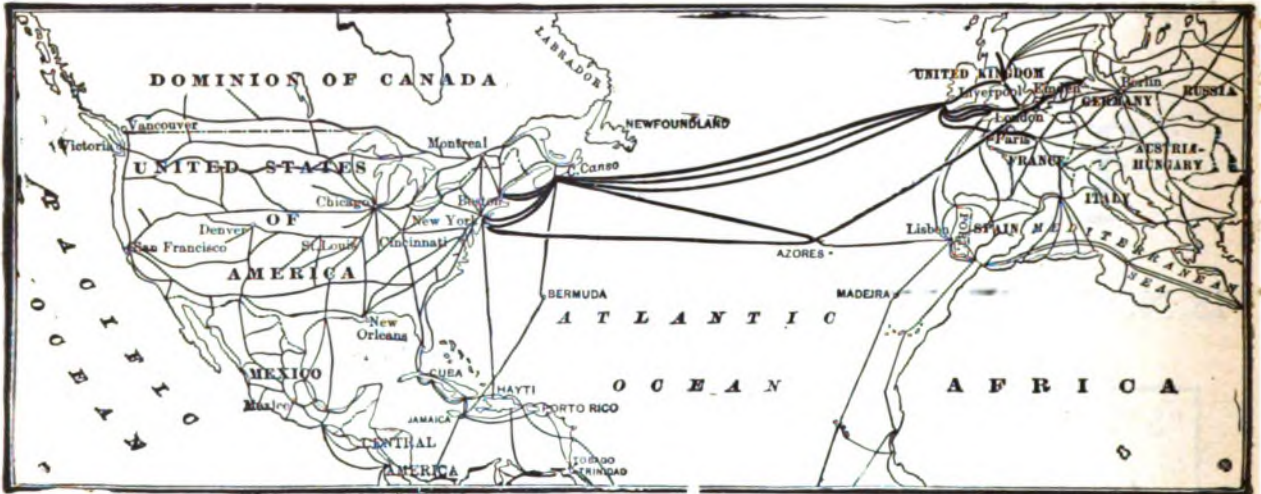
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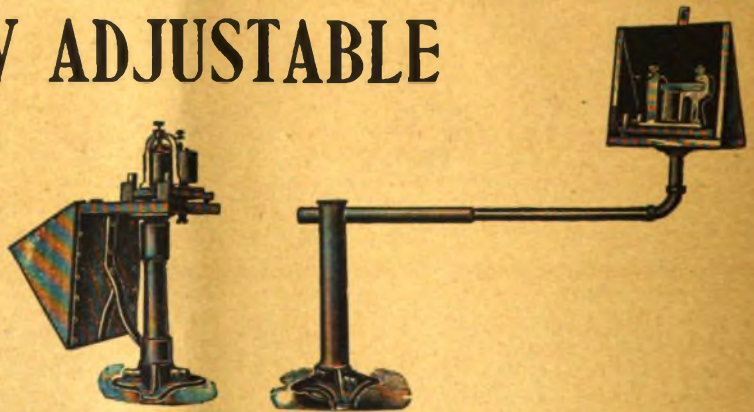
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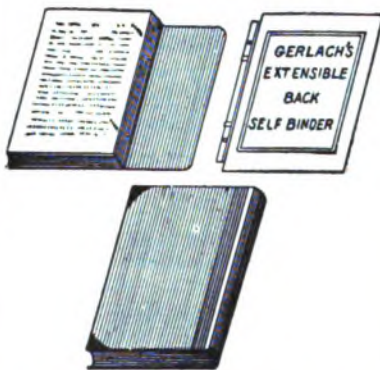
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THE TELEGRAPH AGE.

No. 22.

NEW YORK, NOVEMBER 16, 1901.

VOL. XXIV.

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[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 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.]

In the preceding issue of this journal a system of house and desk wiring suitable for grounded local circuits employing but one common dynamo to furnish current for both loop and multiplex apparatus was shown diagrammatically up to the point where the local connections of the latter are extended to the loopswitch from the left hand disks of the double three point switch on top of the table.

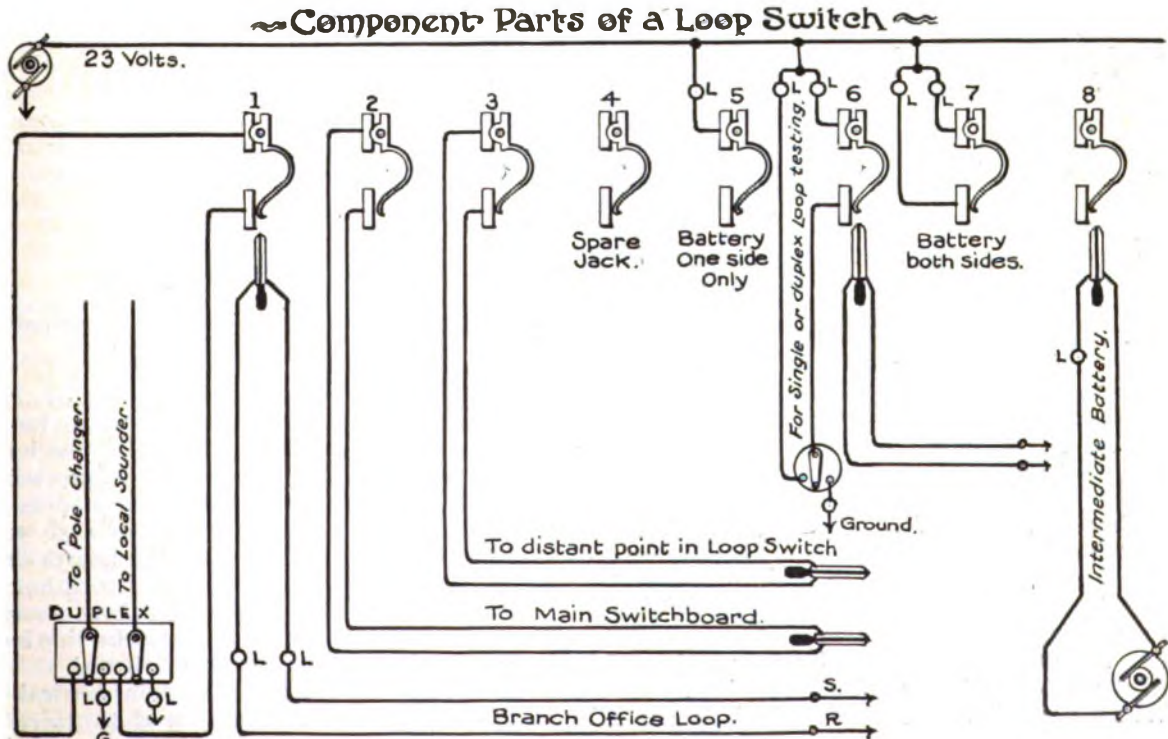
Particular attention is called to this switch, as it is there that a means is provided by which a

SOME POINTS ON ELECTRICITY.

The Equipment of a Modern Telegraph Office.

(Continued.)

BY WILLIS H. JONES.



given strength of current from one and the same machine will actuate the local apparatus of a duplex or a quadruplex with equal efficiency whether a branch loop be connected in circuit therewith or merely the desk instruments alone; in other words whether a loop be "cut in" or "off."

This convenience is accomplished by attaching to the right hand disk of each switch a grounded conductor containing a lamp or other resistance, the value in ohms of which is identical with that of the resistance of the branch loop connected to the left hand disk. With this arrangement you will see that regardless of the position of the two switch levers the "length" of the local circuit (measured in ohms) fed by the dynamo is identical, hence the same volume of current will flow through the desk instruments at all times.

The resistance of the lamps employed for this purpose should be identical with that which represents the uniform ohmic value of the built-up branch loops. Thus, if all loops be built up artificially to a value of exactly 100 ohms then every compensating desk lamp should also contain 100 ohms resistance. The "lengths" of all loops should be made equal by inserting lamp resistance in the branch conductors sufficient to bring each leg up to a given uniform value. Thus, if 100 ohms represent this uniform resistance, a 40-ohm branch conductor would require a 60-ohm lamp in series with it to build that circuit up to the standard value. In like manner 10, 30 and 90-ohm legs would require, respectively, 90, 70 and 10-ohm lamps to even them up. The artificial resistance is inserted behind the loopswitch where the branch office legs of all multiplex loops first pass through lamp sockets. (See diagram.)

THE LOOP SWITCH.

Every modern telegraph office should possess a so-called "loopswitch." In reality it is not a loop-switch, but a centrally located lot of springjacks by means of which loops which are grouped there may be extended to any distant part of the room, and where wires located in different switchboards may be connected together metallically or through repeaters by means of extension conductors radiating therefrom in all directions. The first accompanying diagram shows the principle uses to which the springjacks are put, the number of assignment, each, of course depending upon the demand.

Thus springjack No. 1, and as many others as may be required for the purpose, represent the local connections of multiplex apparatus. The upper lip should invariably be connected by wire to the sending side disk of the three-point switch at the multiplex table and the under lip to the receiving side. No. 2 connections represent extensions to various parts of the room where the conductors end in wedges which may there be inserted in any desired circuit within reach and carry with them any loop, repeater, intermediate battery, or other apparatus which may be inserted in that particular jack at the loopswitch.

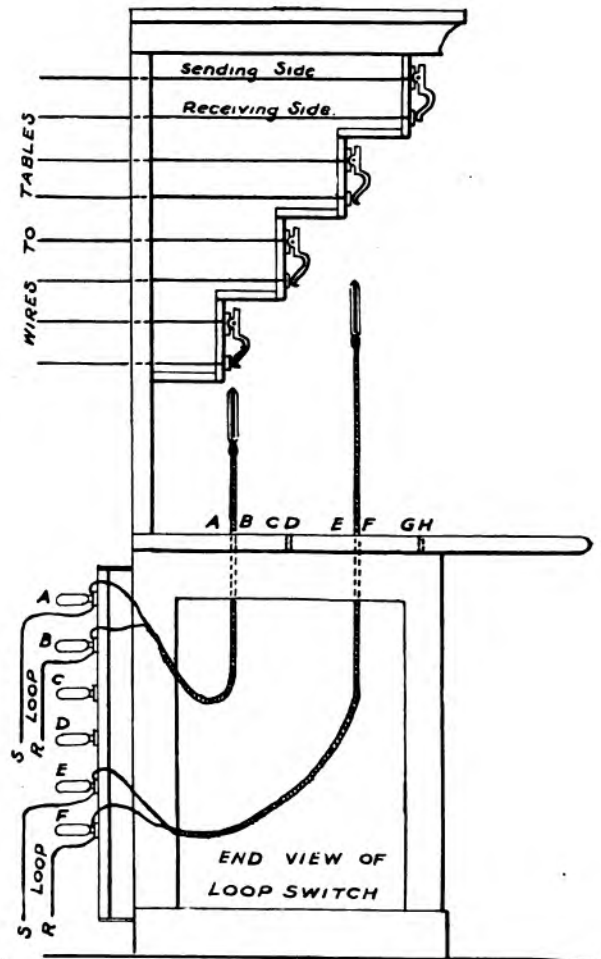
When a cord wedge and springjack are all

contained in one switch the combination is called a "flip."

Other springjacks are employed for battery or testing purposes as shown in the cut.

There should be no trouble in wiring a loop-switch as the various connections are plainly shown. The springjacks should be arranged in rows divided into three or four tiers, each of which latter should project out and over the one beneath it to a distance sufficient to permit loop cords inserted in one tier to hang free of those in the tiers below.

The second cut showing one end of the switch-



board illustrates the manner in which a systematic record is kept of the exact location of each loop and its individual lamp sockets. The cut shows but one row of lamp sockets and one of augur holes in the desk shelf through which the loop cords come up from below. Duplicate rows of each extend side by side the full length of the board directly under the springjacks. The row of cord holes are numbered from left to right, and there should be as many rows as there are springjacks side by side in one full length tier across the board.

The lamp sockets are placed in vertical rows behind the switch and numbered to correspond

with the horizontal rows of holes in the shelf (as it appears to the eye in the illustration), but there must be two lamp sockets for each augur hole, one above the other, because the cord contains two conductors; that is to say, the sending and the receiving legs of the loop.

Then, in order to locate the proper lamp for a leg of any given loop, the sockets are also lettered, beginning with A at the top and continuing down the row alphabetically. Thus, the first two lamps at the top would be A and B. A would represent the lamp for the sending side, and B that for the receiving leg of a branch loop. The cord for the loop traversing A and B lamp sockets should of course be run through the first hole in the desk shelf, counting from the inner edge. The cord for the second pair of lamps, B and C, should come up through the second hole; the third couple through the third, and so on to the bottom. Finally, to make the record complete, the augur holes themselves are lettered to correspond with the lamp sockets, beginning with A at the inner edge of the shelf. The first hole would be A and B; (one letter for each cord conductor) the second B and C; the third C and D, etc., to the outer hole.

For the benefit of those not familiar with the location of the loops, a switchbook should be kept showing the exact spot where any desired loop may be found. Thus, should the book show that loop No. 1 was in section A, row 7 E F, we would immediately turn to section A (provided of course that the board was divided into sections) and pick out the cord and wedge in the third hole from the inner edge of the shelf in row 7, counting from the left. Should this same loop open on, say the sending side, and we suspected a loose connection in the lamp, the latter would be found to be the 6th lamp from the top of row 7 in the same section. The ends of the green cord should be wound with different colored twine in order that the sending and receiving conductors may be easily distinguished when connection is made with the lamp sockets. The two sides of the wedge should also be marked S and R respectively in order to place the conductors properly in the springjacks.

(To be continued.)

Business Notices.

Have you lost your grip? You can recover it by using a Twentieth Century Telegraph Key. Address Foote, Pierson & Co., 82-84 Fulton street, New York.

The International Correspondence Schools of Scranton, Pa., the largest institution in the world conducting a system of education taught by mail, brings its course of instruction in the field of telegraphy to the attention of operators through the medium of an announcement, printed on advertising page ix in this issue. It is not designed, as there stated, to teach telegraph operating, but to furnish operators, whether in the commercial or railroad service, with the practical instruction necessary to fit them for advancement in their profession. The course pursued is especially thorough in

all of its details, and is under the direct superintendence of fully competent instructors. The text books used are remarkable for their excellence, comprehensiveness and clearness of statement, and fully cover the subject taught. No telegrapher who desires to fully master the technicalities of his profession, should hesitate to enroll himself as a student in the Correspondence Schools.

Mr. D. A. Mahoney, of the Western Union office, Philadelphia, Pa., announces in his advertisement, printed elsewhere, in this issue, that he has been appointed agent of the Fay-Sho typewriters in that city, and that he is prepared to rent machines of all makes to members of the fraternity at special prices. Mr. Mahoney is an old-timer in the typewriter business, as well as being an old-time telegrapher, and he is prepared to satisfy his old associates in the line of bargains in "mills."

Miscellaneous Items.

Mr. W. I. Frost, agent and operator of Tiverton, R. I., was elected representative to the legislature of that State, November 5.

John F. Cleverdon, of the electrical engineers office of the Postal Telegraph-Cable Company, New York, has returned from a trip to Nova Scotia, where he spent two weeks with his parents and friends.

Mr. E. S. Sherwood, manager Postal Telegraph-Cable Company, Fremont, O., has undergone a successful operation, which it is expected will greatly improve his general health, which has not been of the best for a number of years past.

Mr. John Mitchell, manager of the telegraph department of the New York Herald, New York, has returned from the Nantucket Light Ship, where he has been for some time past, installing the Marconi system of wireless telegraphy, in the interest of the Herald.

Mr. David Martin, of the Commercial Cable Company's station at Rockport, Mass., is in one of the New York hospitals, where he underwent a successful operation a few days since. His friends will soon, it is expected, have the pleasure of seeing him entirely restored to health.

The heavy weights of the Municipal Electricians are Mr. Frank C. Mason, of Brooklyn, N. Y.; Morris W. Meade, of Pittsburg, Pa.; John W. Aydon, of Wilmington, Del.; Adam Bosch, of Newark, N. J. The work of these gentlemen is reflected in the improved municipal service manifest in all sections of the country to-day. The gentlemen mentioned, it is safe to say, devoted almost their entire leisure time to the interests of their Association.

The dispute was as to the number of words in a market message.

"Will you count 'frogs-legs' as one?" asked the sender.

"No, sir," answered the receiver, "not unless they were one-legged frogs!"

Obituary.

Edwin D. Avery, an old-time operator, died at Coldwater, N. Y., October 25.

John J. Tierney, an old time and well-known New York operator, died suddenly October 26.

Samuel Charles Blackwell, of New York, treasurer of the Mexican Telegraph Company, died of paralysis October 27, aged 78 years.

R. J. Murphy, 19 years of age, a telegraph operator at Cleveland, O., died from the effects of an operation for appendicitis, on November 8.

Edward S. Stokes, of New York, who shot and killed "Jim" Fisk, and who was at one time president of the United Lines Telegraph Company, died in this city November 2, in the sixty-second year of his age.

Homer Pingle, formerly superintendent of the Canadian Pacific Telegraph Company at Toronto, Ont., was found in his room with the gas turned on, on October 5, and died soon afterwards. He was born at Markham, Ont., in 1852, and his entire telegraphic career beginning in 1870, was spent in and around Toronto.

Joseph Virag, the celebrated telegraph engineer of Budapest, Hungary, died recently in that city after a short illness, aged 31 years. He was the inventor, in conjunction with Mr. Pollak, of the system of rapid telegraphy known as the Pollak-Virag system, and was a visitor in this country two years ago, where he made many friends.

Lew Wallace Welch, one of the best known telegraphers in the West, and a resident of Milwaukee, Wis., for about six months past, died Nov. 4, of heart trouble. Mr. Wallace was ill but a week. He went to Milwaukee from Chicago, where he was employed by the Western Union in the Tribune office. Since his residence in Milwaukee he was employed by The Associated Press. He leaves a widow and three children. Mr. Welch was 39 years of age.

William Blanchard, who has for the past quarter of a century been operator of the Phelps Printer of the New York and Boston circuit, at both the points named, and who has been a resident of Boston for the past fifteen years, died in that city on October 30, aged 64 years. Mr. Blanchard had a host of friends in the telegraph service all over the country, who will mourn at the sudden taking away of their old and genial friend. The interment was at Milwaukee, Wis.

Omar J. Augé, formerly lieutenant First United States Volunteer Engineers, died in J. Hood Wright Hospital, New York, November 10, from diseases contracted in Porto Rico while in the military service in 1898. He was in the employ of the Central Cable office, 46 Broad street, New York, until too sick to work. He was an exceptionally fine operator and a man of innate refinement and of sterling character. He spoke several languages fluently. Entering the military service as a private he rose through merit alone to be a commissioned officer.

James W. Godfrey, the general manager of the Habirshaw Wire Co., New York, and well known in electrical and telegraph circles throughout the country, was killed November 9 by being thrown from his carriage while on his way home after a drive.

Personal Mention.

Mr. H. J. Pettengill, vice-president of the Michigan Telephone Company, Boston, Mass., has returned from Europe.

Mr. M. M. Dolphin, late president of the Order of Railroad Telegraphers, will make New York City his future home, where he will practice law.

Col. A. B. Chandler, chairman of the Board of the Postal Telegraph-Cable Company, New York, is again at his desk after a sojourn at his country home, at Randolph, Vermont.

Mr. M. H. Redding, assistant superintendent of the Western Union Telegraph Company's central cable office, New York, has been confined to his home for the past two weeks through sickness.

Mr. H. P. Dwight, president and general manager of the Great Northwestern Telegraph Company, Toronto, Ont., has presented ninety-six volumes of standard books to the Muskoka, Canada, cottage sanitarium.

Mr. Ernest Van Every, son of Mr. J. B. Van Every, vice-president and auditor of the Western Union Telegraph Company, New York, who has been confined to his home with typhoid fever for the past eleven weeks, is now convalescing.

Mr. E. B. Baker, of New Haven, Conn., an old time telegrapher, who has been the general superintendent of the Southern New England Telephone Company ever since the company was organized, has tendered his resignation to take effect on May 1, next.

Mr. M. C. Sullivan, the electrical engineer and contractor who has given considerable attention to signal service work, is corporal in the First Signal Corps of the National Guard of New York State. A few days ago he received the championship medal decoration for 1900 for the corps, won by his work ranging from field line construction through the whole line of signal drill and operation.

Pacific Cable Increases Capital.

The Commercial Pacific Cable Company, recently incorporated to operate a cable line between this country and the Philippine Islands, filed with the Secretary of State at Albany, N. Y., on Nov. 8, a certificate of increase of capital from \$100,000 to \$3,000,000. The stockholders who consent to the increase are John W. Mackay, George G. Ward, Clarence H. Mackay, Edward C. Platt Albert B. Chandler, Albert Beck and William W. Cook.

The cable tolls to the Philippine Islands have been reduced from \$2.35 per word to \$1.66 to Luzon, and \$1.76 to all other islands of the group.

The Telephone in Railroad Service.*

BY F. P. VALENTINE.

(Concluded from page 449, November 1.)

A long distance line in operation by one of the leading railroad companies of the country, connecting branch exchanges in four cities on its main line, thus breaking the line into three sections, is handling some 250 calls per day very comfortably. It is not thought that the maximum capacity of the line has yet been reached. The operators have been carefully trained in the handling of the calls for the various officials, preference being given to those highest in authority. By discriminating between the various calls asked for, and by intelligent operation, practically instant service is afforded the executive officers, while other calls of importance are handled next, leaving less important business to fill in the time on the wire. To accomplish such results, a system of tickets carefully checked is necessary. These tickets should show time call was received, forwarded, connected and disconnected, with a code record of all attempts made to complete connection, reasons for delays, etc. The facts thus shown are often of value in case of dispute, and, from these tickets, a chart can be readily made showing just what the line is doing at any minute during the day. From such a chart defects in operation can be immediately detected and corrected. With the development of this class of service many problems arise which require careful study, as many of the conditions attaching to public service do not apply to the railroad service.

The development of the long distance feature in railroad telephony has brought out the importance of proper construction of lines. Roads not equipped to construct proper telephone circuits will find it more economical to lease them from the telephone companies, but as their needs increase, they will undoubtedly find it to their advantage to organize a force of experienced telephone men to install and care for these circuits. Against the cost of these lines should be considered the fact that there is a great saving in time effected by this means of communication. In the instance cited of the line handling 250 calls per day, it is estimated that some 10,000 letters and telegrams per month are saved. This cannot but have its effect on all branches of the railroad service.

It is possible with experienced men to build and maintain properly constructed telephone circuits on the right of way of the railroad company, if necessary, running them upon the telegraph poles, but careful attention must be paid to details, or the results will not be satisfactory. Induction from high tension currents will give more or less trouble, but this can usually be overcome by careful transposition of the circuits. At terminals it will be found most economical in the long run to do away with overhead construction and provide a liberal equipment of underground cable, figuring a large surplus

capacity for future growth. The maintenance cost of such a plant is small, and in a few years it will pay for itself in the saving in the cost of maintenance over the open wires. It will be found advantageous also, where there is heavy suburban railroad traffic, to extend the cable beyond the terminal limits. In the case of one road doing a heavy four-track suburban business, covering a distance of ten miles from the terminal station, it has been found economical to run a lead covered paper cable on the telegraph poles the entire distance, utilizing the conductors for both telephone service and the various signal circuits between the block towers. In this case it was impossible to find room on the existing pole lines for the necessary number of open wires. It was found possible to install this cable quite economically, as it was run from a work train running at a low rate of speed, the suspension wire having been put up first, and over 1,000 feet per hour run, and that when obliged to give way to one scheduled train each hour.

It is also possible by using cable to elaborate the telephone service by utilizing the dead ends of the circuits terminating at various points, thus affording additional direct connections between towers and points having much intercommunication, simply adding small switches to the telephones and thus relieving the main switchboard of much operation.

The equipment best suited to the needs of the various departments is worthy of some attention. Originally, a desk stand set was considered somewhat of a luxury, but in the case of an official having to answer from thirty to forty calls per day, much time is saved by the telephone being right at hand, instead of his being obliged to leave his desk for the call. Some rather interesting figures have been taken, giving the comparative results of the use of the desk stand as compared with the ordinary wall equipment. In the case of two railroad exchanges connected by a long distance line, one being equipped mostly with wall, and the other with desk stand sets, it was found that it took on an average fifty seconds longer to get the party ready to talk with wall sets than with the desk stands, which, on the number of long distance calls per day, amounted to a loss of one out of six busy hours in the use of the circuit. The rental of the line amounted to several dollars per day, while the cost of proper equipment was but a few cents per day.

In developing a railroad telephone system, uniformity in equipment is essential, as, sooner or later, a large proportion of the telephones will be brought into the general branch exchange system. Private lines are built at different points and, as the circuits from the principal centers are extended, it will be found of advantage to arrange switching connection with these private lines. If uniform equipment is adopted, changes in the instruments will not then be necessary.

To obtain the best results with a system having several hundred miles of wire and several hundred instruments to care for, there should be a properly organized force to make regular and systematic inspections and repairs, and care for instrument and

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

line troubles on short notice. This force should be preferably composed of experienced telephone men, as the average telegraph or signal linemen lack the necessary training to produce the best results.

The extension of the branch exchange system is not confined to points on the railroad premises, but direct connections are made from switchboards to the residences of the officials and to the switchboards of other roads, until the larger railroad telephone systems have become an important part of the commercial system of the territory in which they operate. If the residences of the operating officials of the railroad are equipped with telephones and connected either with the public service or direct to the branch exchange, it is possible to immediately notify them out of business hours of any emergency or of accidents, so that they can quickly be on the ground or direct matters from their homes.

A great deal of dissatisfaction with telephone service, resulting in the claims of liability to error in the transmission of messages by telephone, is occasioned by the fact that only about 10 per cent. of the users of telephones know how to talk properly. Telephone users should be taught how to use the instrument and also to express themselves clearly and concisely, as much time is wasted in needless repetition.

It has been found of advantage to utilize stenographers in connection with switchboard operation, that messages may be taken in the absence of the party desired, and on his return can be delivered to him. The use of stenographers and typewriters in connection with railroad telephone service will undoubtedly be developed with the extension of the service, as it is possible for an expert typewriter to take direct from the telephone at a greater speed than from the telegraph.

As the lines are extended, reaching the various junction points and stations, with trunk lines between the boards, and to the various centers, constantly increasing use will make it imperative to furnish only the best class of equipment to give satisfactory service. When the lines have been properly built and equipped, and there is due appreciation of the value of the service to the railroad, the matter of expense in comparison with the results will not be considered in the same light as heretofore.

When railroads have equipped themselves so that they can care for their commercial and domestic office business, the question of train operation by telephone, instead of telegraph, will be settled on its merits, but this should not be attempted until the equipment is sufficient and suitable, and the service is brought up to a standard that will compare favorably with that furnished by the more progressive of the telephone companies. Much of the criticism as to the danger of transmitting train orders by telephone has been justly based on the poorly constructed lines and cheap equipment used by many of the railroads, under the belief that economy in initial cost is the principal thing to be considered.

In itself, the substitution of telephone for telegraph is no more radical a change than took place when reading by sound supplanted the use of the register on the telegraph wires.

It can be predicted that the next few years will see some developments in the application of telephony to railroad service that will surprise some of those whose conservatism has led to the long delay in the appreciation of what seems destined to become the chief means of communication in the future.

Signal Cipher Letters.

C. E. Ross, of Madras, India, in a recent article on cipher codes, recommends the adoption of a cipher containing only three-signal letters. These letters are only eight in number, viz., D, G, K, O, R, S, U, and W, and he thinks that any combination of these letters should be charged for at the rate of eight letters or twenty-four signals to a word. He maintains that there is less chance of error in signaling five three-signal letters, such as DGUKS than in sending an outlandish word of ten letters, such as glorierijk. That may be so; but, while Mr. Ross is reforming, why replace one form of torture to telegraphers for another nearly as bad? What state of mind does he think a telegrapher would be in after reading such words as DGUKS for eight hours at a stretch? No code will be safe to the public, nor fair to the telegrapher which is not compiled or approved of by a practical telegrapher. All codes should contain the vowels, and words should be framed that would be intelligible.—London, England, Electricity.

The First Inventor of Wireless Telegraphy.

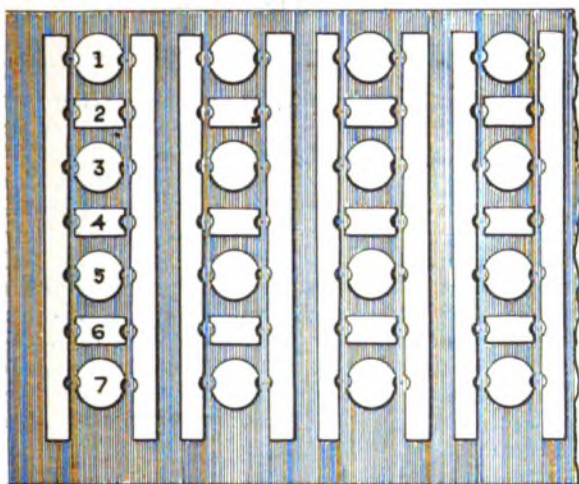
Recently there assembled at Dundee, Scotland, a goodly company of men of culture to attend the unveiling of a monument to James Lindsay, an investigator and inventor whose experiments in wireless telegraphy and other scientific advances fifty years ago ought not to be forgotten. Sir William Preece, in unveiling the monument, remarked that Lindsay was long before his time. In 1834 he wrote that houses and towns in a short time would be lighted by electricity instead of gas, and heated by it instead of coal, and machinery would be worked by it instead of steam.

Sir William recollected, says Nature, that while he was attached to the electrical department of the Electric Telegraph Company there came from Dundee to London a man representing Mr. Lindsay with a proposal to dispense with wires and communicate across water. He made all arrangements and conducted all the experiments to illustrate his system in London. Unfortunately, there was really no necessity for the invention in those days, said Mr. Preece. An invention to be of use must come at the proper time. There must be a want for it, otherwise it dies. This accounted for the fact that the system of Lindsay was neglected.

"I have no objection to men wearing bicycle pants while on duty," said the chief operator, "but remember I draw the line at 'short checks.'"

Improvements in Switchboards.

Mr. J. M. Creamer, manager of the Western Union Telegraph Company at Knoxville, Tenn., has devised and patented an improvement in switchboards that will doubtless recommend itself to all chief operators. On large switchboards it is often most difficult for the eye to follow the line of disks in plugging for cross connections. Mr. Creamer's arrangement of the board, as shown in the diagram, possesses the following merits: The space between



MR. CREAMER'S IMPROVED SWITCHBOARD.

disks is materially increased without enlarging the size of the board, thus very much reducing the chance of arcing between disks, which in these days of strong electric currents arcing is not only possible, but probable. There is no perfect horizontal alignment which the eye can follow on the present style of board. The alignment of the Creamer design of board approaches perfection and appears to be well adapted for rapid and accurate work.

Opposes More Bureaus.

In the annual report of Auditor Castle of the Post Office Department made public a few days since, he devotes some attention to the neglect of attaching a telegraph system to the Department and to similar suggestions, including a life insurance bureau and a postal savings bank. He points out the losses sustained by the postal system in Great Britain and grouping all together he draws these conclusions:

"It does not occur to the promoters of this and other enterprises of State socialism, that failures and disappointments are incident to all kinds of commercial and financial business, that if the Government is to protect all its people against losses by investments, financial, industrial and otherwise, it must practically conduct all the business of the country, guarantee prompt and liberal returns from all classes of investments, and devise some new incomprehensible method of raising funds necessary to pay fat dividends to all citizens, thus making a universally happy, prosperous and contented people."

Zincs and Batteries.

Commercial zinc is not chemically pure, but contains impurities, such as bits of iron, carbon and other substances. When the zinc is immersed in any liquid which attacks the zinc more than the impurities, an e.m.f. is set up; as the two substances are connected through the liquid and also through the metal, local currents ensue which eat away the zinc until the foreign substance is set free and falls away. When the zinc is amalgamated, that is, coated or alloyed with mercury, the mercury seems to cover up the impurities and to bring only the pure zinc to the surface. The smooth surface seems to hold a film of hydrogen when the cell is not at work, and this film seems to protect the zinc from attack when acid is present, and to protect it from local action at all times.

In closed circuit cells it is usually necessary to keep the circuit closed all of the time to prevent injurious action in the cell, as it is harmed more by standing idle than by use. The best known example of a closed circuit cell is the gravity, or "crowfoot" cell, used so largely for telegraph and fire alarm circuits. The zinc electrode is commonly cast in the form of a foot, which gives it the common name. The copper positive plate usually consists of several sheets of copper riveted together and to an insulated wire, which forms the terminal. Crystals of copper sulphate, often called "blue vitriol" or "blue stone," are placed in the bottom and the cell is filled with water. As the cell stands, the copper sulphate dissolves in the water and the solution rises higher and higher until it reaches the zinc, unless the circuit is closed, in which case the zinc is dissolved, forming zinc sulphate at the top of the cell, while copper is deposited from the blue solution upon the copper plates at the bottom. So long as the cell is working, there is more or less distinct division between the two solutions, but if the cell is left on open circuit, the copper solution rises until it comes into contact with the zinc, where the copper deposits and a local action rapidly eats up the zinc and exhausts the solution. As the copper solution is heavier than the zinc, it tends to stay at the bottom of the cell, and gravity keeps the zinc and copper solutions apart when the cell is working. This gives it the name of "gravity cell."—American Electrician.

The Lehigh Valley Railroad Company has issued an order to its train crews requiring that all conversation between them while on duty shall be in English. This is the result of a recent accident caused by the conductor giving an order in "Pennsylvania Dutch," which the brakeman, addressed, misunderstood.

"So young and lost your 'grip.' What a pity," was the tender of sympathy from one key-worker to another.

"Naw," said the young fellow, "I ain't lost no 'grip;' I send with me left so's they'll think I'm an old-timer."

The Telegraph in Cuba.

There is something of more than usual interest in the report of Captain Otto A. Nesmith, chief signal officer, department of Cuba, which has just been published. The following is an extract from the report:

While the general plan of the telegraph system deemed necessary and as productive of best results had been practically carried to completion, much of it was so hastily constructed, and by force of circumstances necessarily of such temporary character, as to require constant repair, much change of line and reconstruction, and as the country has been opened up by the lines already built, the demand for better means of communication has called for the construction of new and the betterment of old lines during the year.

While the net increase in mileage of lines, including the Cape Maysi telephone line, and deducting length of the old line between Guantanamo and Sagua de Tanamo, has been but 162 miles, making the present mileage 3,418 miles, as against 3,256 of the previous year.

As the list of employees shows, Cubans have superseded Americans and have been employed whenever practicable, until at present over 80 per cent. of the entire force are natives, though the difficulty in obtaining competent operators on the island has continued, and it has been found necessary to secure them from the United States as vacancies occurred, as otherwise the high state of efficiency which has prevailed, and which is required to satisfy the public, could not have been maintained.

The general working of the telegraph service has been exceedingly satisfactory, complaints have been few, and when made, investigations have proved them to be wholly without reason, or of such character as to be incidental to the telegraphic services.

While the term of service of the present chief signal officer has been limited and his time of observation brief, his experience enables him to have the pleasure of commending generally in his official report, the services of the enlisted men and civilian employees, for the efficient and faithful manner in which they have performed their duties.

The World's Telegraph Wires.

The International Telegraph Bureau, at Berne, Switzerland, has recently issued some astonishing figures in regard to the length of telegraph and cable lines the world over. It appears that there are 1,380 government cables, covering 24,907 miles, and 370 cables owned by private companies, which have a length of 168,920 miles, in all an aggregate of 223,836 miles. The longest cable in existence is that from Deolen, near Brest, France, to Cape Cod, Massachusetts, which has a length of 3,674 miles.

The United States has the greatest amount of telegraph wires, there being one mile for every 77 persons. The figures for this country show 222,587 miles of pole lines, representing 1,118,086 miles of wire. The mileage of Europe is 425,600 miles of line and of wire 1,585,267.

Multiplex Telegraphy In France.

What is considered the perfection of multiple telegraphy has just been demonstrated in a series of experiments between Paris and Bordeaux, France. The apparatus is invented by M. Mercadier, one of the head masters of the Paris Polytechnic School. The operators found no difficulty in transmitting on the same wire sixteen messages at the same time and received messages from an equal number of operators without the slightest confusion.

The success of the experiments is so unquestionable that Mougeot, director of the French Post and Telegraph Department, proposes to establish the Mercadier apparatus immediately for the purpose of transmitting to Havre and Brest cablegrams for England and America.

Before the Academy of Sciences M. Mercadier, on October 26, explained his new system. "It is based on the principle of using undulatory currents," he said, "instead of continuous, its well known movements transmitting themselves in undulations that co-exist without destroying one another. Every drawing room illustrates this—the voices of the different talkers, the sounds of a piano and other noises not interfering in the slightest degree because they are undulating as well as pitched in different keys.

"Thus I have used a number of transmitters, each accorded to a different note in the scale, and therefore making a different number of vibrations. The first transmitters were tuned to G, the second to A, etc., each vibration sending a short, sharp current over the wire. A corresponding apparatus is placed at the receiving end, each responding only to the similarly tuned transmitter. In other words, messages fly along amicably and distinctly on a single wire precisely as conversations cross one another in the same room."

M. Mercadier added that his apparatus could be established at any point on a wire and was perfectly capable of sending messages in different directions, the number being limited only by the number of pitches employed.

Magnetic Club.—The regular autumn meeting of the Magnetic Club will be held at the St. Denis Hotel, Broadway and Eleventh street, New York, on Wednesday evening, November 20. Dinner will be served promptly at half past six o'clock.

Delegates from various sections of the country to the annual meeting of the Telegraphers' Mutual Benefit Association will be guests on this occasion. An interesting program of entertainment is being arranged. Mr. Thomas F. Clark, vice-president of the Western Union Telegraph Company, will make an address. The president of the club, F. W. Jones, desires the full attendance of members.

"Think you could learn to telegraph in six months, do you?" and there was a heavy trace of irony in his tone as he added, "See here, it was nearer sixty years before Prof. Morse himself could telegraph!"

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NEW YORK, November 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.

Losses Through the Post Office.

Postmaster Van Cott has recently been in receipt of numerous letters of complaint from all sections of the country reporting the loss of mail matter passing through the New York post office. So serious had the matter become that a watch of de-

TECTIVES was set, which resulted in the arrest, on October 30 last, of Thomas Barry, a post office clerk, in whose possession several hundred stolen letters were found. Men like Barry, who have had fifteen or twenty years' experience in handling letters, learn to know almost intuitively whether an envelope contains money or not.

The arrest of Barry probably explains the mail losses, to which Telegraph Age, especially of late, has been subjected. This thieving had apparently extended from letters to books, for it had become a matter of common occurrence for books which are mailed in the New York post office, to fail to reach their destination, and all trace of them to disappear. The inference is that they did not leave the post office in which they had been deposited, at all. In consequence of these losses we have been compelled to utilize, to a large extent, the responsible services of the express companies in the transportation of our book mail matter, rather than to trust to the custody of the post office department which repudiates all distinct responsibility in case of loss.

People doing business with Telegraph Age, and using the mails for money transmission, should never, under any circumstances, place bills or change loosely in a letter. Experience has repeatedly proved that it is not a safe way to send it. The standing notice at the top of the first column of the editorial page, calling attention to this matter, seems frequently to escape attention, for oftentimes we are advised that money has been sent in this careless manner. Such methods are unbusinesslike, and if persisted in must be in all cases at the risk of the sender. A few cents will purchase either a post office or an express money order, thus guaranteeing absolute safety of the amount involved, for, in such cases, if lost or stolen, the post office or express companies, will reissue an order.

Pensions for Telegraphers.

At the meeting of the Old Time Telegraphers' and Historical Association, held in Montreal, Que., on September 11, the proposition to establish a home in Colorado for indigent telegraphers, which has so long engaged the attention of the fraternity, was declared to be impracticable. The project was made the topic of considerable debate and it was made manifest that those who favored the plan of a home were, after all, but few in number, and even these evinced but little enthusiasm in its advocacy. They were not sure of their proposition.

As all of the available time allotted at the convention for discussion was absorbed by this single phase of the subject, no opportunity was afforded to consider the proposition of Mr. Andrew Carnegie, who last February wrote to Mr. W. C. Connolly, agent of The Associated Press at Pittsburg, Pa., favoring the idea of a pension fund for telegraphers, rather than a home, and declaring himself ready to contribute a sum as a nucleus of such a fund. Mr. Connolly is a personal friend of Mr. Carnegie, and the letter received by him was in response to one he wrote asking Mr.

Carnegie whether he was willing to contribute to the support of a home for telegraphers. The letter is as follows:

5 West 51st Street,
New York, Feb. 13, 1901.

Mr. W. C. Connolly, Jr., Pittsburgh, Pa.:

Dear Mr. Connolly:—Yours of January 14 is before me this morning. I have known several "Homes for the Aged" of specified classes that amounted to little or nothing, from Bulwer's "Home for Decayed Authors," down. Old men will not leave home and all its associations to live in a distant place. Would it not be better to have a pension fund for telegraphers, who are aged and invalid? I do not see why the Pennsylvania Railroad system should not be introduced; the railroad pays half and the employees about half, and this takes away from it the element of charity. Men enjoying the pensions are really using what they themselves have contributed. If the Telegraphers' Association would get up a scheme like that, I should be glad to give a sum as a nucleus.

I feel very warmly toward my old associates, and should be glad to give a considerable sum, provided the pension scheme could be made available. My opinion is that this would do far more good than your proposed home away out in Arkansas.

Very truly yours,

ANDREW CARNEGIE.

P. S.—The telegraph companies would also contribute, I think, as the Baltimore and Ohio and Pennsylvania Railroads do. Please let me know how the idea strikes you.

The pension fund has been the favored plan held by many of the telegraph people, including officials of the companies, who never, it should be said, have approved of the establishment of a home for indigent telegraphers. While, as we have stated, a preference for the pension fund has been expressed, it has not yet been made plain just how a scheme of this magnitude can be successfully inaugurated and carried out. It is a highly complex subject, and its solution will call for a profound study of the situation. The telegraph profession is made up of men and women who are constantly changing their positions from one company to another, and just how to keep track of all telegraph employees of all companies, including the press associations, and perhaps the railroads as well, is not a subject that can be disposed of as an ordinary business transaction. However, now that the letter of Mr. Carnegie, embodying his ideas, has been published, it is possible that some of our readers may be able to offer some satisfactory solution of the proposition under advisement; and from any who have given the matter careful and mature thought we shall be pleased to hear and invite correspondence. The time for action in this important matter, so vitally affecting the welfare of all telegraphers, is evidently at hand, and the need of an energetic and well considered movement in the direction indicated, should be apparent.

Why don't *you* subscribe for TELEGRAPH AGE?

A Mysterious Call.

BY MARY AGNES BYRNE.

"Now girls we will set the table for thirteen and await the coming of our future fates who will appear at midnight and take seats at it," announced Caddie, carefully locking the door after good-byes had been said to several guests who left to catch the last train cityward.

The evening had been spent in merry hallowe'en games and Caddie's words referred to a certain charm which she and two young lady visitors had agreed to try, keeping their intention a profound secret from the others.

"I imagine that Eleanor's 'spook' will resemble Will Seaford," she continued, as they all three proceeded to the dining room.

"You are a very imaginative young woman, fair Mistress Fred Winslow," returned Eleanor, "but say, what think you of Cecil's conquest—Mr. Horace Lesley?"

"Nonsense, girls! Mr. Lesley drew the thimble in the cake—the sure badge of bachelorhood," protested Cecil. "But when I saw him trying to fit it on your finger shortly afterwards I thought he was in a hurry to get the job of mending off his hands," retorted Caddie demurely.

Amid this airy badinage the table was extended and plates arranged for the unlucky number; all the lights were extinguished except two candles which, placed on the table, one at each end, shed a ghastly glow that failed to penetrate beyond the table, leaving the corners of the room in darkness.

"Coffins stood round like open presses, showing the dead in their last dresses," Cecil quoted pointing to the white lace draperies of the windows which loomed against the wall like stately ghosts, while they and the two pale lights on the table were reflected in a mirror opposite.

"I declare, I'm getting nervous," said Eleanor in a half whisper as she cuddled closely to Cecil who sat beside her on the lounge. Caddie's restless nature kept her flitting around from the table to the mirror, from there to the windows and then back to her friends.

"Do sit down, or you'll keep them from coming," Cecil entreated warningly.

"I'm only afraid they will come," murmured Eleanor.

"And I'm afraid they won't," returned Caddie flippantly, "so we'll all be left in single blessedness."

"As there are three of us, you might call it triple forlornness," remarked Cecil with a yawn, taking out her watch. "It's 11.55 now, and if they're not here in exactly five minutes I'll go to bed!"

"Hark, don't you hear that noise?" cried Caddie a minute later, pausing in front of them.

"Like creeping footsteps?" "Yes!" returned Cecil, and Eleanor whispered tearfully "I wish, Oh, I wish we never tried this!"

They sat in silence, holding tightly to each other, feeling decidedly frightened and echoing Eleanor's wish.

The old-fashioned clock in the hall began to strike; it had a funeral tone; at each stroke their hearts beat more nervously. One—two—three—up to twelve, and as the last stroke fell on the air telling the mystic midnight hour the door leading into the hall opened slowly, the draught causing one of the candles to flicker and go out, while into the room came a tall figure all arrayed in white flowing garments, then came another, followed by a third. Slowly, solemnly they glided along, they seemed to the terrified girls to be treading on air, so noiseless were their movements: their figures appeared giant-like in the semi-darkness. They advanced to the table and gravely took chairs. All this occurred in a few moments, though apparently an age to the onlookers. Then arose a shriek from Eleanor which partly revived her half-paralyzed friends. Caddie jumped to her feet, seized a pitcher half filled with lemonade from off the mantel and dextrously emptied it over the three ghosts. In a moment all was confusion; the girls watched in amazement as the phantoms bounced from their chairs in the most undignified manner—a comical contrast to their former solemn mien—throwing their damp robes from off them—and a familiar voice exclaimed, "Great Cæsar, she almost drowned me!"

Cecil's blood, which had frozen in her veins, resumed its normal condition; she broke from Eleanor's detaining clasp, hastily lit the lamp and turned to confront the uninvited guests toward whom Caddie was directing a flood of reproaches.

There they stood partly divested of their grave-like habiliments, three very much alive young men, the three whose names had figured in the girls' conversation a short time before—their faces wreathed in smiles and their hair and mustaches showing traces of Caddie's onslaught.

"Will Seaford, how could you, O, how could you!" wailed Eleanor who reclined amongst the cushions on the verge of tears.

He started to approach her, his draperies still hanging picturesquely around him, but she waved him away and buried her face until to reassure her he was obliged to discard his phantom attire.

"I'll never forgive them, never," Cecil said to herself, but she changed her mind later when her disapproving glance met the amused light in Horace Lesley's eyes.

"Angels and ministers of grace defend us," cried Fred emphasizing the first word with a sweeping bow to the young women, at the same time trying to find a pin which fastened the sheet around his neck; he looked imploringly to Caddie for assistance, but found it not.

"You turned the tables nicely on us," remarked Horace, fishing a piece of lemon peel out of his collar.

"Turned a cataract on us you mean," said Will who, seated at Miss Eleanor's side, was feeling happy in having won a smile from her.

Then an explanation was in order. It seems that the girls' plot had been overheard by a young man who jokingly mentioned it to Fred; that was enough; he and his two friends arranged to remain

over night at the town hotel, and the aid of Caddie's mother was invoked to help their plan along. She it was who let them in silently through the kitchen where a supply of sheets was ready in which they hastily enveloped themselves and waited patiently for the midnight hour to strike.

They sat around the smouldering fire in the parlor for an hour or more, Eleanor's hand clasped in Will's under cover of a friendly cushion; Horace in a chair tilted back against the wall where he could watch Cecil sitting arm in arm with Caddie, while Fred lounged on the rug at their feet.

Their talk turned from their late escapade to tales of witchcraft, ghosts and goblins, and Horace related a story that had come under his own observation which bordered on the marvelous and unexplainable.

"But first tell Caddie the first-verse and the last, or she won't enjoy it—that's the way she reads stories," said Fred, sotto voce. He was effectually silenced by that young lady throwing a tidy around his head completely covering his mouth; he lay panting and smothering, while Caddie unmindful gave all her attention to the raconteur.

"When I entered on my career as train runner about five years ago I worked for the B. and L. in their main office at B—. Besides myself there were five other dispatchers as jolly and good natured a set to work with as one could wish. But there was one man, Orin Gregory by name, who was quite a mystery, he alone never talked of himself nor spoke of having any friends, nor ever joined in any fun with the rest, more from constitutional reserve, I think, than because he disapproved of our boyish antics, he kept on at his work seemingly unconscious of everything else. He was a first class workman and had the reputation among railroad people of being the finest dispatcher on the road. Always right on time going to duty and, unlike the rest of us who often glanced at the clock near quitting time, he became so interested in his work that I am sure he would often have worked for hours after time if not notified by his 'relief.' In times of wreck and delays he knew just what to do; we all relied on his advice; with him it seemed to be a natural talent to do train work well. Besides, he had an unlimited fund of general information; we all went to him for answers to questions no one else could solve; as for electricity, of which we all had a smattering picked up at our work, he had studied it thoroughly, but he never made a display of his knowledge; it was only in the course of years of work together that we found out all this. His appearance—of course you ladies would ask that question—I don't think you would call him handsome; he was tall and rather thin, but carried himself with an air of unmindfulness of what was going on around him that would attract attention, for the rest he had a fine forehead and deepset, thoughtful eyes, very dark hair and pallid complexion.

Though Gregory treated us all in this polite, indifferent way, there was one person of whom he made an exception—Irma Carleton—a clerk in the office—a little wild rose of a maid with limpid blue

eyes and sunny tresses. She was quite at home among us, took our teasing good humoredly and was always ready to oblige; she had won our good will, in fact, some of the boys were half in love with her—to her Gregory unbent in a surprising manner. From the first we remarked the great interest he took in Irma. Finding her anxious to learn telegraphy he helped her in every way and finally secured her the office in her home town, an unimportant station called Silverton, about sixty miles out the road, where she could board with her widowed mother. We were inclined to joke old Gregory—that's what we called him, his forty years seemed patriarchal to our twenty-five—on his infatuation, but he was not easy to jest with, he would put it off with "in love with that child!" She was only seventeen. She seemed to think the world of Gregory "as an elder brother;" she was careful to explain but once when he undertook to chide her in a brotherly way about receiving the attentions of a certain fellow who had the reputation of being wild, she resented either his interference or his brotherly tone; perhaps she didn't want to be a sister to him; anyway, there had since been a decided frost between them, they didn't even say "Good morning" over the wire.

I suppose you are wondering where the strange part of my story comes in, and now I'll enlighten you.

(To be continued.)

Nature's Revenge for Overwork.

On my first Monday in town, says a well known writer, I sent in my card to Hon. John A. McCall, of the New York Life. Finding him in, I expressed my surprise that he had come up from beautiful old Monmouth country on such a fine day.

"I do go down every Saturday," said he, "and come back on Monday. You will be surprised to find how much the English custom of taking week-end holiday is being followed here, and it is a good thing, too. It gives us a change and puts ozone in our lungs and fresh blood in our veins."

Then this man of vast and complex affairs went on to say that for his own part he had systematized his duties and surrounded himself with the best assistance obtainable in order not to wear out too quickly at the great and consuming game of business. I admired his shrewdness and the genius he has for obtaining able helpers and then winning their enthusiasm. But a large part of his best stock in trade came to him in his blood, and for it he must thank his parents and the racy soil of their native land. I refer to his irrepressible and bounding humor and wit. A real wit like Mr. McCall must certainly enjoy his own sallies and conceits so that such a man has the constant refreshment of the fun within himself as well as the wit and humor of his friends and his books. I had a long visit with him and came away feeling fresher and younger for having been with a man able to see the bright side of all things and so equipped as to serve up the weightiest matters lightened with the appetizing salt of fun and brightened by sharp wit.

And how wise is Mr. McCall to resolve not to burn himself up in the furnace of New York's commercial energy; to see that a man of great responsibility has the option of staggering only a short distance under a back-breaking load or springing forward on a far journey with only what he can carry surely and safely. I am no old man, yet how many of my fellow New Yorkers have I seen attempt the other course and fall by the wayside in what should have been the days of their prime.

Wasn't it Mr. Rutter, of the New York Central, who had a cot set up in his office that he might work at night until he was only able to stagger a few feet to his bed? William Orton, a former president of the Western Union Telegraph Company, not satisfied to trust details to lesser men or content with an ordinary day's work, used to work long after the others had gone home, and then take what he could of his papers and documents in a green bag to his home, there to complete the rapid demolition of his powers and life. It is needless to say that he died suddenly. Those who ventured the assertion at the time that Orton's place never could be filled were later compelled to acknowledge that his successor, although he did not work half the number of hours, was the better official of the two.

Mr. Hyde, of the Equitable Life, a giant of enterprise and a mammoth for work, may be said never to have freed his mind from cares and serious thoughts until offended nature had her revenge. But why prolong a list innumerable? Joseph H. Choate came very near to killing himself with hard work, and grew to show the burning scars of overheated energy in his face. But he seems to have taken alarm, and not only has he moored his craft in a reasonably placid harbor, but not long ago, when a Cabinet position was dangled before his eyes like a glittering ball of gold, he said: "I will never work hard again."

Old Time Telegraphers' and Historical Association.

Mr. G. H. Corse, of Ogden, Utah, president of the Old Time Telegraphers' and Historical Association, has appointed the following named gentlemen members of the Executive Committee of the Association: L. L. Downing, agent of the Chicago, Milwaukee and St. Paul Railroad, Salt Lake City, Utah; J. B. Twiford, manager Western Union Telegraph Company; E. T. Hulaniski, lawyer; G. W. Jones, broker, and W. J. Shealy, secretary and auditor of the Ogden Union Railway and Depot Company, all of Ogden, Utah. All are energetic and enthusiastic men, and will doubtless do their best to make the first reunion beyond the Rocky Mountains a success.

The telegraphone is a device invented by Valdemar Poulsen, a Danish electrician, which automatically records sound transmitted by telephone. As its name implies, it is a combination of the telegraph, the telephone and the graphophone or phonograph, and its successful operation has astounded the scientific world.

When the Telegraph Came to California.

BY JAMES GAMBLE.

[Mr. James Gamble holds the distinguished honor of having been the first manager and superintendent of the first telegraph line built in California. He also occupied the same position when later the great transcontinental line was constructed.

In the beginning the position of manager meant active service in the field and not chair and desk duty in an office. Mr. Gamble had direct charge of the party that stretched the first wires in California. Many a night he slept on the "soft side of a plank" after having worked from dawn until dark, but he got the California line up and in working order between San Francisco, San Jose, Stockton, Sacramento and Marysville in the incredibly short time of six weeks and saved a valuable franchise for his company as well. That was in 1853.



JAMES GAMBLE.

In 1861 he had control of the building of the transcontinental line between Carson City and Salt Lake that connected the Golden West with the Far East and bound California by cords of steel to the heart of the Union. This work was commenced on the 27th of May, 1861, and on the 24th of October of the same year, barely five months later, the first message was clicked over the wire. This was California's first step in the remarkable growth that she has since attained.

Mr. Gamble has written especially for the San Francisco Call an account of the building of these two lines that laid the cornerstone of the prosperity of that State. What he has to say is not merely interesting as a recital of adventure and enterprise, but, coming from such a source, it is telegraphic history pure and simple.]

Probably no line of the same length in the world made so much money as the old California State Telegraph Company, nor was any line of so much practical utility as the first wire stretched across

the continent. I had the honor to assist in the making of both.

It was in 1852 that Messrs. Allen and Burnham obtained from the Legislature of California a franchise giving them the right to operate a line between San Francisco and Marysville, via San Jose, Stockton and Sacramento, for a term of fifteen years. For the right to be exclusive it was necessary that the line should be completed by the first of November, 1853.

W. B. Ransom was appointed superintendent and W. M. Rockwell, for many years after a prominent hardware merchant of San Francisco, had the contract for the construction of the line.

I had just returned to Sacramento from the mines and by accident met Mr. Ransom. He learned from my conversation that I was a practical telegrapher and asked me to take charge of the men employed to string the wires. It was to be a rush job from the start, for the first of November was not far away and unless the line was in operation by that time the franchise would not hold good.

I found the pole-setters were already many miles in advance and there was no time to be lost. There were five men in my party besides myself. Our means of transportation consisted of the running gear of a wagon on which were placed loose boards enough to hold our meager outfit—a coffee-pot, small sheet-iron boiler, tin plates, tin cups, knives, forks and blankets. This wagon served the further purpose of carrying the reel and running out the wire.

It was then the 23d of September, 1853. In less than six weeks we must have completed and in operation over two hundred miles of line. It was high pressure work right from the start.

On the first day we strung up about three miles of wire. The next day we commenced at daylight, worked until dark and managed to get six miles more in good shape. So interested had we been in our labors that as night closed in we found we were lost. We had no tent with us and during the day having noticed a squatter's cabin had decided to pass the night with him. A heavy fog rolled in with the darkness and the cabin had disappeared as if by magic. After seeking for it in vain we gave up the search and set about to prepare supper. Then it was that one of the party in hunting for firewood stumbled right on the cabin that had been almost under our noses all the time. That cabin was one of the brightest spots in all those six weeks of hard work.

At that time there was no eight-hour law, and as our beds were generally made on "the soft side of a plank" it was almost easier to work than to sleep. We sent the line along at the good rate of from five to seven miles a day. On the fifth day out we had reached a point near what is now Belmont, and the site of what was afterward noted as the Ralston mansion.

Here the first attempt was successfully made to open up communication by telegraph with San Francisco. On testing the line I found a good current coming from the San Francisco batteries.

I connected my instruments and placed myself in direct communication with that office, then located in the Old City Hall, which is now replaced by the Hall of Justice.

This was the first message ever transmitted on the Pacific Coast over a telegraph line.

After this the line was used every night to report the progress of work.

The native population were wonder-struck and overwhelmed with curiosity at the construction of the line. They examined the poles, looked at the wire, and then the wise heads, after noting the cross-trees, decided that the inventive Yankees were fencing in the whole country with crosses to keep the devil out.

Finally we reached San Jose and there established the first regular station. The office was fitted up the day after our arrival, and I soon had it prepared for business. The word was passed around by the natives that something remarkable was going on and the street was soon filled with open-mouthed miracle-seekers.

The day was so hot that all the windows of the office were open, and of course every one of them was street deep with awe-inspired observers. Noticing the sea of heads curiously expectant, I purposely acted as mysteriously as possible. Every time the instrument clicked there was a hushed buzz of concentrated wonder. I had just received the first message from San Francisco, copied it and placed it in an envelope. On seeing me do this my audience thought that I was preparing a message on magic paper and getting ready to presto change it by the spirits of the wire to San Francisco.

Instead of giving the telegram to the boy for delivery I purposely took it with a great gesticulation and held it under the table out of sight. Then I assumed a theatrical pose, stared at the wire overhead, waved with my right hand and began to work the key.

The buzz at the window increased to a murmur and then passed to an excited roar from those who could not see, but knew that the spirits were about to work. In a second the crowd knew as one man that a yellow envelope with the message was about to be sent over the wire. Only an instant and the windows were vacant—everybody was tumbling over his neighbor to get a look at the phenomenon of a yellow envelope flying over the wires that left the side of the building.

There was an expectant hush. Then somebody yelled:

"There she goes!"

"No, she didn't, I've had my eye on that wire for ten minutes."

"It's a fraud!"

"It's bogus!"

A second of silence and the burst of laughter from the inside of the office told them that there was a joke somewhere, and the show was either over or had not begun.

As they had failed to see the message pass along the wire their second supposition was that the wire must be hollow and the envelope had been rolled

up under the table and shot through to San Francisco. Everybody wanted to look at the end of the wire, and after finding that their second guess was wrong they gave it up.

There was only one solution. The telegraph was an enchanted spirit of some kind. I was a wizard. The whole thing was uncanny. It might blow up at any minute, and the best thing to do was to keep away from something that no one could understand and no one could explain.

This was California in 1853.

After finishing at San Jose we made arrangements to push the work on to Stockton. I found that the wire for this next run was larger than that used before and would not work so well on our reel. The first day we were able to make only three miles, and I decided to return to San Jose and have some alterations made in the mechanical part of our wagon. That night we had stopped at the house of a farmer who had left the Eastern States before the advent of the telegraph. He was very much taken with the possibilities of telegraphy and would like to believe in it, but according to his mind it was impossible and that was all there was about it. To convince him I clicked off a message to the operator in San Jose. That settled it. No sane man could be made to believe that anybody could read the taps of a little iron bar like that, and according to his mind I must have a great imagination and small conscience.

I told him that I had just asked the San Jose man to expect me in the morning and be ready to repair the machinery. The farmer was very polite, but he intimated that he had a wagon load of watermelons to back up his opinion that the operator would know nothing about my coming until I rode up in front of the office the next day.

Watermelons at that time were one dollar each and the days were very warm. The temptation was too great.

I said that not only would the operator be expecting us, but I should wire him to meet us at the door with the question, "Where are the watermelons?"

My agreement to do this increased the interest of my rancher friend, and with true California hospitality he turned over his house to us. After a fine breakfast he hitched up his best pair of horses and away we went for San Jose. I felt as if I were robbing the man, but watermelons on a hot day are an elegant conscience salve.

I thought he would fall out of the wagon when we reached the door of the office and there was the operator excitedly shouting:

"Where are those watermelons? Where are those watermelons?"

I made up the disgrace of "betting on a sure thing" by explaining all the mysteries of the telegraph to him, and he enthusiastically decided that he would give a wagon load of melons every day if he could lose bets on new inventions as great as that one.

In the meantime and while my party was working toward the north, L. L. Baker, later of the firm of Baker & Hamilton, had charge of the wiring

party working from Marysville south. We saved the franchise by six days, for the line was completed and in operation by the 25th of October. This won for the company the exclusive right of telegraphing for fifteen years from the date of the completion of the line—and a most valuable concession it was.

The opening of that line placed all the large cities of California in direct communication, and as money was plentiful and time valuable the telegraph was largely made use of.

The tariff between San Francisco and San Jose was 75 cents for ten words and 25 cents for every additional five words or fraction thereof. From San Francisco to Stockton, Sacramento and Marysville the rate was \$2 per ten words. Still no complaint was made by the public that the rates were too high. To them the line was a luxury at any price.

(To be continued.)

Funny Blunders in English Newspapers.

Accidents will happen in the best regulated families, and blunders will creep into even the most carefully edited paper, says the New York Press, but the English seem to excel in making amusing newspaper mistakes. An Englishman is always funniest when he doesn't try to be.

A Newcastle paper, in giving an account of an inquest recently, declared that "Richard Wilkinson, one of the deceased, repeated the evidence given by him at the inquest," and a woman's paper of London is authority for the statement that "On her deathbed, and even after death, the Empress Frederick showed her preference for everything English."

In speaking of the naval manœuvres a London paper declared that "The Devenport instructional flotilla left yesterday to carry out their program already carried out," and another paper records the startling fact that "The Long Sutton School Board has arranged to grant the scholars attending the schools seven weeks' holiday this month, so that the children can work in the potato fields."

Another paper states that "The late William Carr, who was the highly esteemed clerk of Waltham Abbey for eighty-five years, passed to his rest at the ripe age of 79."

"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.

General Greely's Report.

Brigadier-General A. W. Greely, chief signal officer, in his annual report recommends an international cable conference to prepare regulations for ocean cables. Concerning the proposed Pacific cable, he says:

"It is only a matter of time when Luzon shall be connected with Japan and Tonkin and the Chinese empire. The Philippine Islands are now only accessible telegraphically over a short cable of about 600 miles of the Eastern Extension Company, between Manila and Hong Kong.

"The experiences of the War Department in connection with the relief of the legation at Peking show clearly the tremendous disadvantage under which the United States would labor without its own cable facilities in case of an extended war in the East.

"An American transpacific cable is a military and commercial necessity if American interests are to be safeguarded in Asiatic regions. Such a cable, while of great value militarily, will especially foster industrial interests and facilitate commercial operations.

"As is officially known that an American cable can only enter Japan from the East and not from Russia, China nor the Philippines, the only possible route is that already recommended to Congress by the President, via Hawaii and Guam."

Concerning the signal work of the army, he says:

"The operations of the signal corps have been coexistent with the operations of the army of the United States, not theoretically, but on broad lines and activities which have comprised practically the entire area, not only of the United States proper, but also of Alaska, Cuba, Porto Rico, the Philippines, and a portion of China. The corps should be increased to meet present demands.

"There have been constructed 336 miles of telegraph line in Alaska, and arrangements have been made with the Canadian government to use its line to Alaska.

"The signal corps operates 3,418 miles of telegraph in Cuba, an increase of 162 miles during the year.

"The operations of the corps in the Philippines have been very extensive, there being 4,801 miles of telegraph line, an increase of 2,054 during the year. The military cable lines in the Philippines connects Manila with Mindoro, Marinduque, Masbate, Samar, Leyte, Cebu, Negros, Mindanao, Jolo and Siasi.

"If the officers and men of the signal corps had struggled only against the natural disadvantages they were under their work in the Philippines would have commanded commendation; but to this must be added the extreme difficulties arising from the practically constant efforts of the insurgents to destroy indispensable means of intercommunication. In the region southeast of Laguna de Bay, Santa Cruz to Antimonan and thence to the head of the Gulf of Ragay, the insurgent troops had caused no end of trouble and annoyance, not only by the cutting of the wire, but by the removal or destruction of considerable stretches

of line. The commanding officer at Santa Cruz informed me that experience had caused him to furnish every repair party with at least a mile of wire, as nearly that amount was taken away at each break. Destruction of sections of two, three and even five miles of line was not unusual, but the climax was reached in the total destruction of thirty-eight miles of line, every insulator being broken, every bracket destroyed or removed, every pole cut down and the entire wire carried away.

"In wireless telegraphy the signal corps has perfected its own system, which was the first one ever successfully operated in the United States, on September 30, 1899, between Fire Island and Fire Island Lightship, a distance of ten miles. There are now in successful operation two stations in San Francisco harbor, one at Fort Mason and another at Alcatraz Island. Arrangements have been made for the establishment of stations in the Philippines at suitable points. The chief signal officer adheres to the opinion that this system has its limitations, which are not entirely dependent on distance."

Wanted, an "Ancer" at Once.

The chief operator of one of the large offices recently found in his mail the following application for a position as a telegraph operator on his staff. The date and signature are, of course, omitted: The western union Telegraph compinna

Der sur, Theas feu lines, are for to ask if I may get a job from you all in some office as a helpor if so pleas ancer this at once. I have been studying telegaphy for some time, and takin lessons from ——— The opparator at this place and I hav instraments and can send teen words all write and proboly moor. But I cant receive moor than five or teen words as I havent had no one to practice with, and I am in school now. I would be glad to get a job if posibull.

And I have been living at this place for four years and if you want a ricamendation from me pleas let me no at once and I will do so?

My age is 19. I way one hundred and sixty pounds. My occupation beefore I beegan school was farring in the barbor room and I takin up telagephy thinking I would probly like it bettor.

pleas ancer this at once and give all infimations, your friend."

International Association of Municipal Electricians.

Mr. Frank P. Foster, of Corning, N. Y., the Secretary of the International Association of Municipal Electricians, has issued the following circular, which he is mailing to all sections of the country:

"The International Association of Municipal Electricians has been in existence for six years, and is composed of men who have the care of the electrical interest in cities, with regard to both municipal ownership and the supervision of franchise rights. For this reason we believe we can be of great benefit to you and your municipality, in handling the many questions coming under our supervision: also you can be of use to us in the consideration of them. Our advantages are certainly in

united action, particularly with regard to such matters as are under State control, and are brought about by acts of legislatures; also with regard to securing the experiences of others in the handling of the many problems connected with the electrical control of streets and care of public property, including fire and police protection, thus avoiding the danger of experimenting which would tend to weaken our standing in the eyes of the public. Cities can be greatly benefited by uniform laws and rules, and uniformity among state laws will undoubtedly facilitate our work.

"For this reason we request that you suggest subjects for our next meeting, possibly those that would be of most interest to your city, and then be present at the meeting to discuss them. If you are not a member, we ask you to join not later than the date of the next meeting. These subjects will be assigned to their authors not later than January, and your suggestions should be in the hands of the Secretary by November 25. The annual dues are \$5.00 per year and the next meeting will be held in Richmond, Va."

Large Switchboard in Cortlandt Street Exchange.

The Cortlandt street exchange of the New York Telephone Company was "cut-over" from the magneto to the new common-battery system on Saturday, November 2. A total of about 9,300 subscribers' lines were transferred in two hours. The newly installed switchboard is said to be the largest in the United States. It is 256 feet long and is shaped like a horseshoe. During weekdays 246 operators are required to attend to the wants of the 9,300 subscribers whose lines terminate in this exchange. The board is provided with 1,000 incoming and 840 outgoing trunk lines. Adjoining the switchboard room are a handsomely appointed parlor and reading room, a locker room for the street clothes of the operators, a dining room and a hospital. The New York Telephone Company began putting in the new system in its various exchanges in 1898 and the Cortlandt street exchange was the last to give up the old "drop" system.

"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.

"'Figures won't lie,' you know," vouchsafed a man who was talking about his own ability to "send."

"No," retorted a listener, "but 'Truth is stranger than fiction,' when it come to figuring on a 'bonus' wire!"

Comparative Merits of Telegraphy and Telephony for Railroad Service.

A paper on "Telegraphy" was read by D. McNicol at the September meeting of the Northwest Railway Club, in which some reasons were given why the Morse telegraph is preferable for railroad work instead of the telephone in the United States and why it promises to continue so.

The telephone has been in constant use for 25 years, but has been little used by the railroads, except at terminals. This is due partly to the fact that all business sent by telegraph necessarily goes on record, but more perhaps because a railroad officer can send ten telegrams in much less time than he can hold ten different conversations. Again, a wire will transmit 400 messages a day more by telegraph than by telephone. Superintendent and telegraph superintendents continue very cautious about using the telephone for train orders. On roads of heavy traffic and high speed the train dispatcher must be able to communicate quickly with any and every station, and he needs a trained person at each station. Therefore the telephone would be about as costly as the telegraph. The equipment of a telephone line costs much more than that of a telegraph line.

The automatic and printing telegraphs have not yet made any improvement on the Morse. The Wheatstone automatic appears to be losing ground, even in England. The advent of the typewriter has enabled the Morse telegraph to deliver messages in as good shape as automatic telegraphs, with less complicated and less expensive apparatus. Wireless telegraphy has made progress, but its sphere is limited because the speed of transmission is very slow; at all events, its field will not conflict with that of the ordinary telegraph.

The Morse being still at the head, the telegraph engineer should aim to perfect it. The greatest obstacles to perfect service with lines on poles are the weather conditions. The remedy for this is to put the wires underground, and this would seem to be the next great improvement to be expected. The problem is receiving serious attention in England, and an underground cable has lately been put into use between London and Birmingham, 117 miles. This cable contains 76 insulated copper wires in a lead sheath, which is enclosed in cast-iron socket piping, made in sections of 450 feet each. The cable is laid four feet beneath the surface.

Putting wires underground would do away with a great amount of costly damage every year. Underground conduits should have a smooth interior and water-tight joints. The material of the conduit must be a non-conductor, non-inflammable and not subject to contraction or expansion. In Europe the practice in this art is better than in this country. Cables are laid in trenches, not drawn in. The insulation is compressed paper, with which the conductor always remains in the center of the cable.—Western Electrician.

The life of a chief operator can hardly be a happy one, he meets with so many "reverses."

LETTERS FROM OUR AGENTS.

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

MONTREAL, QUE., CANADIAN PACIFIC.

The personnel of the operating staff at the new office is as follows: James Kent, general manager of telegraphs; W. J. Camp, superintendent; J. F. Richardson, electrician; F. T. Jennings, chief operator; H. Bott, assistant; A. Malcolm, traffic chief; J. F. N. Caisse, night chief; J. Mitchell, assistant; W. J. Atchison, all-night chief.

Operators: Misses A. L. Jennings, N. Massey, E. R. Curry, A. Pinault, M. Duncan, and J. A. Phelan; Messrs. J. H. Lawson, J. A. Collie, A. M. Bennie, O. C. Castleman, J. E. Gale, P. J. Ryan, W. G. Medley, J. A. Fortier, A. E. Jarvis, J. C. Jennings, J. H. Egli, W. Currie, W. P. Spence, E. Hartman, F. J. Spear, C. Gibeau, J. E. Flood, J. D. Wood, A. R. Vallee, W. Bancroft, H. Schrader, J. G. Ross, J. Cole, J. Ross, J. W. Hayden, J. E. Poole, D. P. McLaren, D. McKenna, C. F. Moss, H. H. Lyle, N. E. Noble, G. Fitzpatrick, L. L. Hines, J. McCaffray, P. D. Duff, L. M. Walden, R. Bow, W. H. Brunnini, A. W. McLaren, W. D. Fraser, L. Van Every, R. McLea, A. T. King, P. P. Dow, W. J. Barclay, R. J. Ellis, W. F. Gainfort, W. R. Watts, R. P. Dow, J. W. Dunn, and Xavier Senecal.

Service clerks and checks: J. D. Gerard, T. K. Rodger, M. E. Chabassol, C. Laurie, A. Tracy, V. Wallace, A. Lawson, W. C. Farrel, G. Baile, J. Grace, N. Lafond, and H. Masters.

Receiving and delivery departments: A. Walsh, local manager; R. E. Tait, cashier; W. F. Ryan, A. McCormick, J. M. Morrissey, J. Murray, H. Brown, A. O'Sullivan, E. Wright, A. Lavigne, J. Kilcullen, A. McDonald, and Z. Urbane.

In connection with the general manager's and superintendent's offices are: Messrs. Robert Murray, F. McNally, J. Manning, H. Forsyth, and J. Morrissey.

KANSAS CITY, MO., WESTERN UNION.

Night Chief Operator Beeson is happy over the arrival on October 26 of an assistant; weight seven pounds.

We are indebted to Mr. Joseph Masker, one of the standbys of the Chicago office, for a very pleasant call on November 4. He was here in attendance at the marriage of his son.

Mr. Wilson O. Appleby, of the telegraph department of the Sante Fé general offices at Topeka, Kas., was among us November 2.

The annual meeting of the implement manufacturers was held in this city October 30 and 31, and as they filed verbatim reports for their Eastern trade paper, amounting to some fifty thousand

words in the two evenings, it seemed for a short time as though a miniature National Convention had struck our office, but with nine good direct wires well manned both here and at Philadelphia, the matter was soon in the hands of the printers, much to the satisfaction of all concerned.

E. M. Meisburger has been added to the day force. He has worked several years in Galveston, Texas.

Col. R. C. Clowry, vice-president and general manager, accompanied by his secretary, F. J. Sherer, J. C. Barclay, electrician, and C. H. Bristol, superintendent of construction, all of Chicago; Superintendent T. P. Cook, of St. Louis, and C. W. Hammond, superintendent of telegraph of the Missouri Pacific Railway, stopped over night in our city, November 7, en route to the Pacific Coast.

INDIANAPOLIS, IND., POSTAL.

Arrivals and departures: Mr. J. T. Rogers has returned to Louisville, Ky., after two months in this office. Mr. Lonsdorf, of Toledo, takes his place. Mr. David Connors is our only extra man, and as he is independently wealthy, he only subs when he feels like it.

Our chief operator, Mr. J. F. Looney, left on his vacation November 1.

Mr. W. I. Lupperlatz is busily engaged during his spare time in building a gasoline launch.

Our office was visited a short time ago by Mr. W. H. Baker, vice-president and general manager, who said this was the neatest and best equipped office he had ever seen. We also received a visit from Mr. M. M. Davis, traffic manager, New York, who remained with us several days. As a result of his sojourn here, several of us have had our salary increased. We will be pleased to see Mr. Davis soon again.

INDIANAPOLIS, IND., WESTERN UNION.

Mr. L. K. Whitcomb, chief operator of the Chicago office, recently made us a short visit.

Wire Chief Frank Coit made a trip to Evansville to install half-set repeaters for leased circuit to be used in connection with our Evansville-Indianapolis quad.

Arthur Hamilton and Martin Ryan have resumed work after two weeks' vacation.

WACO, TEX., POSTAL.

The Postal has just moved into their new office at No. 113 South Fourth street, which was fitted up with everything new. Among other additions to the office we have one of Edison's Phonoplex systems which was installed by Messrs. Wyrick and Bennett, of Dallas. This office is one of the neatest up-to-date telegraph offices the Postal has in the State.

Although the cotton crop is short, business has continued good, and two additional operators were pressed into service. The personnel of this office is as follows: H. L. Peoples, manager; C. G. Allen, Morris H. French, and J. J. Dermody, operators; C. L. Peoples, clerk.

Mr. A. G. Steele has resigned to accept a position with the Turf Exchange.

Messrs. Logan and Sullivan, of the Logan leased wire, have recently moved into a very handsomely fitted office, with R. E. Parnell as operator, assisted by George P. Montgomery as board marker.

WASHINGTON, D. C., WESTERN UNION.

Miss Bertie Callan, of the clerical department, and Mr. Frank P. Saffell, formerly of this office, were married in Atlanta, Ga., on November 9. Their Washington friends made them a handsome present.

Mr. R. Y. Cadmus, late of the Cleveland, Ohio, Western Union office, is a recent addition to our waiting list.

Mr. J. L. Carney is another recent addition. Mr. Carney was in the Signal Corps during the Spanish-American war, serving in Cuba, and later, in the Philippines and Porto Rico.

The Schley Court of Inquiry did not develop as much telegraph business as was anticipated. The court was located at the navy yard, and numerous wires were strung by both companies, but the various press associations covered the proceedings so fully that there was very little left for the correspondents to say. Night Manager Young was in charge of the Navy Yard office, assisted by members of the night force.

Mr. Charles Burlingame, after making a tour of the Canadian race circuits this summer for the race department, is back on our extra list.

Benning's races started on the 11th instant, with Mr. Dowling in charge, assisted by Messrs. Burlingame, Hohbein, Parker and Nolan. Mr. Motherhead is receiving clerk, and Mr. Hubbard Bean delivery clerk.

Mr. William Patton is acting northern traffic chief, while Mr. Dowling is at the race track.

Messrs. Richard Patton, and Duke Johnson of the Capital messenger force, have been transferred to the main office as file boys.

Mr. John La Gorce has returned to the main office after several month's service at the weather bureau.

The infant daughter of Mr. J. S. McCarty was burned to death on November 8.

The appearance of the operating room has been greatly improved by a fresh coat of paint.

EVANSVILLE, IND., NOTES.

R. H. Morris, agent of the Southern Railroad, is one of the best railroad men in this city. He is a prominent figure in the telegraphic scrapbook now in the hands of the Old Time Telegraphers' Association. The following are the names of the operators employed at the Southern depot: D. C. Powell, C. H. Wrigel and Guy Evans.

Mr. J. R. Sample, the local agent and superintendent of terminals of the Illinois Central Railroad, is the only official of the Peoria, Decatur and Evansville Railroad that was retained. This speaks volumes for the ability of Mr. Sample as a railroad man. He is an old-time telegrapher.

D. H. Ireland, operator at the Illinois Central city office, learned to telegraph when in the Western Union Company employ in 1880.

Mr. George Hickson is an operator at the Illinois Central local freight office.

A. J. Dugan, the up-to-date lineman, has been a subscriber of TELEGRAPH AGE for five years.

The following are in the employ of the Evansville and Terre Haute Railroad:

E. N. May, an old-time operator, trainmaster; Dispatchers: Joseph Ehret, who entered the service in 1871; Ollie P. Williams, Robert H. Hutchinson, A. R. Dakin, and E. R. Glidden; E. E. Wieland, agent, and John Kennett, operator.

Col. J. W. Logsdon, superintendent of the Louisville and Nashville Railroad, tells the following story of his early days at telegraphing: I was agent of the Louisville and Nashville Railroad at Sheperdsville, Ky., a wreck occurred. I was kept on continuous duty for three days and nights; on the third night I was overcome by sleep. I kept my grip on the key, however. The next morning "Jim" McIntosh, the chief dispatcher, called me up and asked me to account for reporting more trains than the company had on the road. I was forced to acknowledged to "Jim" that I had been dreaming.

Major H. K. Corrington, the accommodating chief clerk in the superintendent's office of the Louisville and Nashville Railroad, began his telegraphic career in 1873, at the age of 12. He was for many years chief dispatcher of the St. Louis division. For the past twelve years he has been chief clerk, serving under four superintendents.

Chas. Wilson is operator in the superintendent's office.

The force in the dispatcher's office is as follows:

R. E. Kemper, chief; M. N. Walker, E. F. Yearwood, I. O. Hart, and Chas. Bour, assistants; Royal Jones, operator, and A. S. Logsdon, operator local freight.

PHILADELPHIA, PA.

My Motto—Honest 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.

POSTAL.

The recent Market street fire, by which so many people lost their lives, also came very close to claiming telegraphers among its victims.

Manager Howard McClellan and Clerk Thomas Caldwell, together with those of the messengers then in the office, which adjoined the burning structure, had barely time to escape before the flames and falling walls had destroyed everything.

C. C. Figgs is now at the dry goods district branch office, vice Mr. Harding, transferred to the main office, nights.

The second New York bonus wire is now yielding a little fruit to the energetic efforts of Mr. Monett. The earning of bonus money was heretofore confined to the workers of the first New York.

By the surrender of a leased wire, Mr. W. T. McCorkle has been returned from a broker's office.

After an absence of about four months, the Misses Jennie Melville and Lou Koch have also returned; these, together with the appointments of Messrs. Auerbach, McIntyre, Carroll and Lane, from the extra to split tricks, and Messrs. Behan, Murray, McCartney and Horner from extra to night duty, has placed our entire force on a permanent basis.

In trying to defend himself from a swinging pulley, Mr. W. J. McCartney had his hand hurt; fortunately, not seriously.

Mr. Elmer Locke has been transferred from day to night duty. He was relieved on the Baltimore local by Mr. L. S. Miller.

In the branches, Mr. Cyrus Moffett, on North Third street, feels he is getting his share of the business, while Howard T. Wright, of the dry goods district, has just had a record breaker in the month of October, it being the banner of his fifteen years' service in that office.

Mr. Samuel Lewallen is on the sick list.

Wire thieves are again very active. It is a common thing for the early chief to report the loss of a number of spans of copper wire.

One noticeable feature about the staff on election nights is the periodical visit of a number of outside operators who are never seen on other occasions.

Mr. Robert C. Mecredy, of the Commercial Exchange office, surprised the political rounders in his ward by carrying his division for the opposing side by the largest majority in the ward.

WESTERN UNION.

Our sympathy is hereby extended to C. E. Mapes, of this office, whose sister-in-law, and also a cousin, perished in the recent Hunt, Wilkinson & Co. fire, where both young ladies were employed.

Robert Jaggard, assistant manager of the city electrical bureau, who is well-known here, has been lying at death's door for several weeks.

Charles Saunders of the Stock Exchange office, is the proud father of a son.

John Hannon was sent to Coatesville for several days to relieve the manager, Miss Cullen, who was summoned to New York on court business for the Pennsylvania Railroad Company.

How's This?

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

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

We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by his firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O. WARDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c. per bottle. Sold by all Druggists. Testimonials free.

Hall's Family Pills are the best.

Eastern Wire Chief E. L. Maize and wife spent a week at the Pan-American and at Niagara Falls.

Miss Clara Gregg, accompanied by her mother, were also visitors at the above named points.

R. R. Stoddard, who was absent several weeks suffering from rheumatism, has again returned to duty.

Doctor Bradley, a well-known old timer, recently celebrated his forty-third year of active service in the telegraph profession. In length of time of such employment he ranks next to veteran Col. Joseph Greene.

John La Gorce of Washington, D. C., was a recent visitor while en route to Wilkesbarre and Scranton, Pa.

Four weddings, quiet but pretty, have taken place within the last two months, the contracting parties being co-laborers with us; we therefore extend our best wishes to all and hope the duplex system will work smoothly and that there will be no "kicks."

The marriages were as follows: Benjamin M. Langstroth to Miss L. B. McClain, who are now residing in Brooklyn; W. J. Shivers to Miss Garwood, who have found a home at Haddonfield, N. J.; George A. Paulhamus, a well-known broker operator, to Miss Louisa G. Flurer; Joseph Benjamin, manager of the Broad street and Columbia avenue office, to Miss Bertha Goldberg. Numerous and costly gifts were made to each of the contracting parties.

PITTSBURG, PA.

Telegraphers are "queer," and more especially as regards their "mills". You want that "easy, gliding movement" which we have studied for your benefit. Let us rig you out with an excellent Second Hand Typewriter. Big stock for sale or rent. The Typewriter Exchange, 432 Diamond St., Pittsburg, Pa.

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. Be sure to mention TELEGRAPH AGE.

SOMETHING NEW—no operator should be without. The Eacutt-Cawthern Typewriter Cleaner is a simple little brush; can be inserted in machine in two seconds, type thoroughly cleaned in 30 seconds without soiling fingers. Formerly required 15 minutes, and soiled and inkstained fingers. Price 50 cents, postpaid. Agents wanted. Eacutt and Cawthern, Room 704, 86 La Salle St., Chicago, Ill.

POSTAL.

A new afternoon and evening trick from 3.30 to 11 P. M. was recently made. F. B. Otto, J. Conklin, Fred Hans and Mr. Seaman being placed thereon.

Mr. W. G. Phillips, formerly of this office, is now manager for a brokerage firm at Palestine, Tex., and sends his "73" to his numerous friends here.

Mr. Agnaw, who worked here last summer, has returned to town, after a siege of sickness.

Among new arrivals are Messrs. Carter, O'Neill, Dorsey, Lewis, Fred Smith and Miss Paesler.

Everyone is putting in a good word for TELEGRAPH AGE, on account of its improved appearance and contents.

Both baseball teams at the Board of Trade office played their last game of the season on October 20. The series being a tie up to that date. A good game was played, which was finally won by the "Westerners" by a score of 9 to 7. The "Easterners" played well, and did not give up till the last man was out. The standing for the season being "Westerners" won nine, lost eight; "Easterners" won eight and lost nine. Manager Griffiths umpired the majority of the games and displayed a thorough knowledge of the National game.

Here are the names of the players:

Westerners: E. P. Hearn, E. S. Williams, J. J. Brosnan, G. C. Williams, H. Ginsburg, G. Harding, J. Ebbs, T. McCauley and J. E. Patrick.

Easterners: C. E. Meserve, G. Smallbone, P. Shane, M. Adams, T. S. Gillette, F. Goulden, A. Bassett, J. Duffy and V. Cralle.

WESTERN UNION.

John Foster sustained a severe injury to his knee cap, caused by a fall, but is able to be about as usual, save walking with a slight limp.

A. Z. Parker has been transferred from the ninth to the tenth floor; Mrs. Farron goes to ninth floor in his place.

Dr. Beebe has purchased a practice at McHenry, Ill., where he has gone. We wish him success.

Frank Chana has our sympathy in the death of his sister.

Robert Haight bids fair to become a good wire man, as he is studiously perusing the columns of TELEGRAPH AGE.

A son has been born to Division Chief B. F. McKee.

J. A. Hefferman underwent recently a very severe surgical operation, and has been at the hospital for a month.

Mrs. Lewis, of the Lafayette, Ind., local is on a vacation.

James T. B. Nealon and William Atherton, both of whom have been sick for several weeks, reported recently for work.

The Messrs. Crittenden reunited with their regiment in which they served during the Civil War, at Charlotte, Mich., recently, and where they met Wesley Hounsten, formerly of the Chicago force.

T. C. Brandon, of this office, quite a familiar character to the telegraph profession, and well-known throughout the United States and Mexico as "Flying Ogallala," left on November 1 for Mexico and the South.

A cordial invitation is extended to Chicago telegraphers to be present at the complimentary ball given by the Signal Corps, Illinois National Guard, Friday evening, December 6, at the Armory, Washington Boulevard and Curtis street. This organization being composed almost exclusively of "Knights of the Key," it is expected a large representation of the fraternity will help make the evening one of pleasure and success.

Messrs. Deacon, McNeal and Cosgrove will be pleased to furnish tickets to any who may request them.

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.

Col. R. C. Clowry, vice-president and general superintendent, Chicago, has been in this city.

Fred Moe, formerly with the Western Union in New York city, but who is now with The Associated Press at Mobile, Ala., is visiting friends in this city.

Seymour, youngest son of Lorange Boone, assistant chief operator, died on October 28, after a very short illness. Mr. Boone has the sympathy of the entire force.

Miss Teresa Grimes, one of our most popular lady operators, died, Monday, October 21, of typhoid fever.

Alexander Burch has returned to work after an enforced vacation of several weeks, caused by breaking the bones of his ankle joint while alighting from a moving street car.

Charles Jost has resigned the agency of Telegraph Age, and Alexander Frazier has been appointed as his successor.

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.

The father of H. A. Holensworth, a well-known New York telegrapher, died at Truro, Nova Scotia, October 22.

Mr. L. F. Brannon, one of the finest operators on the day force, leaves for Birmingham, Alabama, December 1. Mr. Brannon made a wonderful record for himself election night sending the greater part of the returns on the bulletin "Merry-go-round" without a single break.

Miss Grace, the daughter of Willis H. Jones, our expert electrician, was married to H. Wellington Doyle, October 30, at St. John's church, Hasbrouck Heights, N. J. The happy couple were the recipients of numerous and costly presents.

The annual entertainment of the New York Telegraphers' Aid Society will take place Friday evening, December 6th, at the Lexington Opera House and Terrace Garden, Fifty-eighth street and Third avenue, New York. These vaudeville entertainments are strictly first-class in character and the society this year has arranged a particularly pleasing program. It will be remembered that the proceeds of these annual entertainments are placed to the credit of the relief fund of the Aid Society. This fund is drawn upon by members of the profession when in need, whether they belong to the Aid Society or not. The general admission to the entertainment is 50 cents; reserved, seats, 75 cents.

The sympathy of all is extended to Bronson C. Edwards in the death of his son, aged four, and to Leslie F. Miller for the death of his daughter, aged thirteen.

Appointments: W. H. Perrin, J. A. Halpin, L. J. Walsh, W. C. Ward.

Resignations: W. L. Forrester, P. G. Fonville, T. M. Wilson, R. I. Courtenay.

Mr. T. A. Brooks, the genial time keeper, has returned from a vacation.

PRESENTATION.

Miss Katharine E. Donovan, for years past chief operator on the Long Island switch, at 195 Broadway, has resigned her position with the Western Union Telegraph Company, and said "good-bye" to the telegraph. The departure of Miss Donovan was an occasion of much regret to the management, and to her many friends. Her fine intelligence, and the zealous and efficient performance of the arduous duties of wire chief on the Long Island Division, subject as it is, to frequent and unusual interruptions by storms that come in from the sea, rendered her an always respected and valued employe of the company.

Those directly associated with her, while pleased to know that she will have more leisure, and be relieved of much responsibility, nevertheless deeply feel the severing of the long and friendly relations. The women of the office particularly, will miss her wise and sympathetic counsel, and the friendly helpfulness which they never sought in vain.

Upon her return from luncheon on Friday, October 15, the last day of her service, she found a small package lying upon the switch. Investigation disclosed a card, bearing the inscription, "To Miss K. E. Donovan, with best wishes of friends

at 195," and a handsome Tiffany brooch, set with a fine diamond.

Miss Donovan acknowledged the souvenir in the following letter:

Mount Vernon, Oct. 21, 1901.

My Dear Miss Vatet:

In looking back over the events of the last days of my life and work at 195 Broadway, I am more than deeply impressed with the kindness extended to me by those with whom I have been so long and so happily associated. My heart is full of pleasant memories of each and every one connected with me at the post which I had the honor and pleasure to fill so long, and which I have left with very grateful sentiments toward my companions there. You have all been most kind, and the lovely parting gift I have received I shall always treasure, not only for its beauty, but above all others, it will be to me a souvenir of kindly interest from my friends of Auld Lang Syne.

With many kind wishes for you all, I remain, very truly yours,

KATHARINE E. DONOVAN.

POSTAL.

Election over, the force has settled down to the handling of an increased business; the health of the force is very good, but few being absent on account of illness. Election returns were handled promptly and satisfactorily, as they always are, to all concerned. Since the last issue there have been no arrivals or departures, everybody seemingly settled down for the winter.

THE ASSOCIATED PRESS.—J. A. Hosey has been transferred from New Bedford to Lawrence, Mass.; G. H. S. Keene has been appointed to fill the vacancy at New Bedford, Mass.; E. A. Goshert has been transferred from the New York to the Philadelphia bureau, vice E. A. Walker; Mr. E. M. Fisher, chief operator of the Boston bureau, has resigned, Mr. C. G. Rogers acting in his place, Mr. H. F. Wood being night operator of the same bureau. J. Keating has been transferred from New Haven to Boston; P. S. Goddard has been transferred from Norwich to New Haven, Conn, vice Keating; G. W. Wood has been appointed to Norwich, vice Goddard; J. F. Maloney has been appointed to Manchester, N. H., vice E. J. Neil, who has been transferred to a day position.

The force of the New York bureau consists of the following: H. R. Clark, day chief; W. S. Campbell, J. S. Strachan, P. O'Sullivan, W. L. Waugh and James Uncles, days; C. L. Morris, night chief; W. F. A. Hasson, W. B. McMahon, J. P. Stillwell, A. M. Routt, W. Goodwin Jones.

New York Visitors.

Mrs. J. J. Dickey, wife of Col. J. J. Dickey, superintendent of the Western Union Telegraph Company, Omaha, Neb. Mrs. Dickey was accompanied by her sister.

Mr. J. C. Shaw, manager of the Boston, Mass., office of the Direct United States Cable Company. Mr. Shaw had just returned from England, where he spent a vacation of three months. His friends in the cable service, who are legion, were glad to see him.

Cuban Telegraph Concessions.

Secretary Root has instructed Governor General Wood to restore all telegraph concessions and contracts as they were before the Spanish war. The question came up on complaints made by the International Telegraph Company against the French Cable Company and by the Cuban Submarine Cable Company protesting against the transmission of private messages over the military cable lines between certain points in Cuba. The International Company, operating in conjunction with the Western Union, claimed that messages sent from the United States by way of San Domingo, Haiti and Santiago violated their concession. The Secretary denies this contention, holding that messages were so transmitted under rights acquired from Spain when she had sovereignty over Cuba.

The decision of the Secretary is also in favor of the Cuban Submarine Company, and holds that messages between Havana, Cienfuegos, Batabano and Santiago, and from one of these points to any one of the other of these points, cannot be transmitted over the military lines, but under the concessions must be sent by the Submarine Company.

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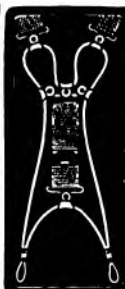
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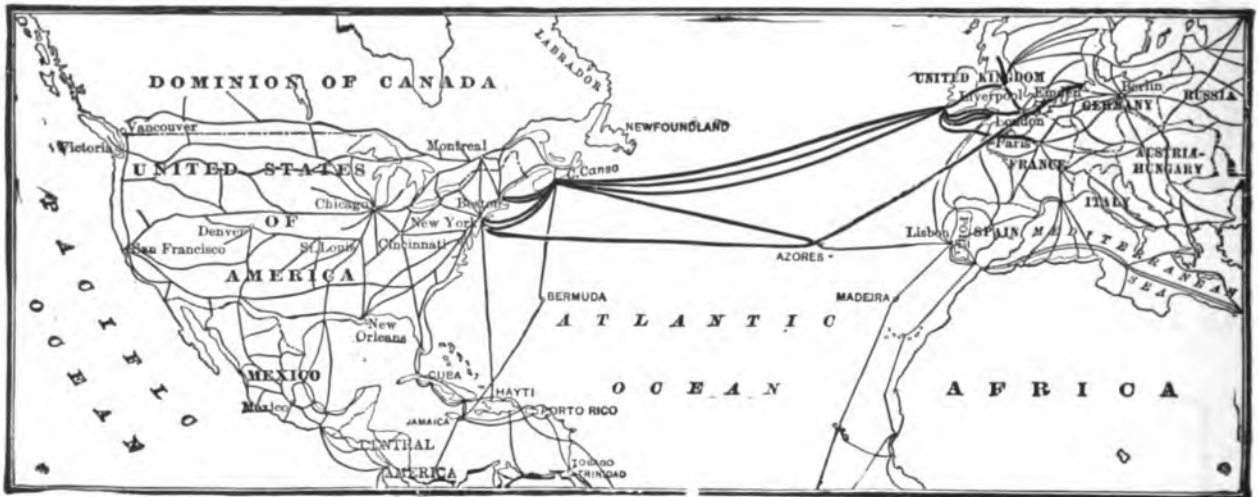


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