

TELEGRAPH AGE.

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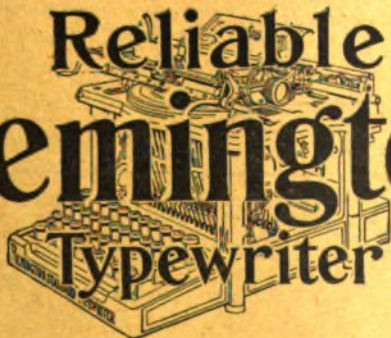
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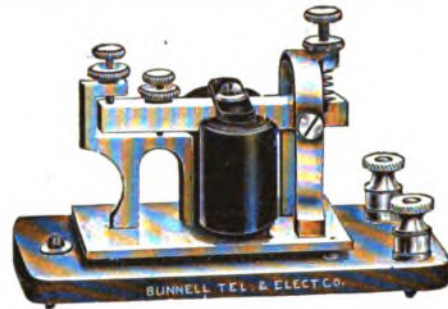
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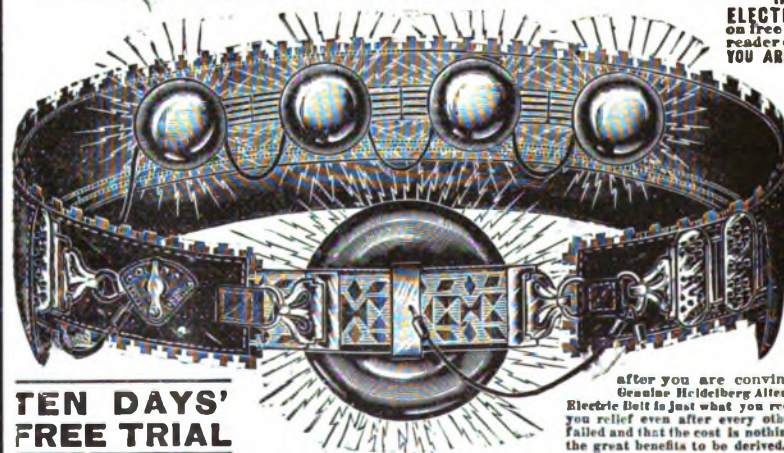
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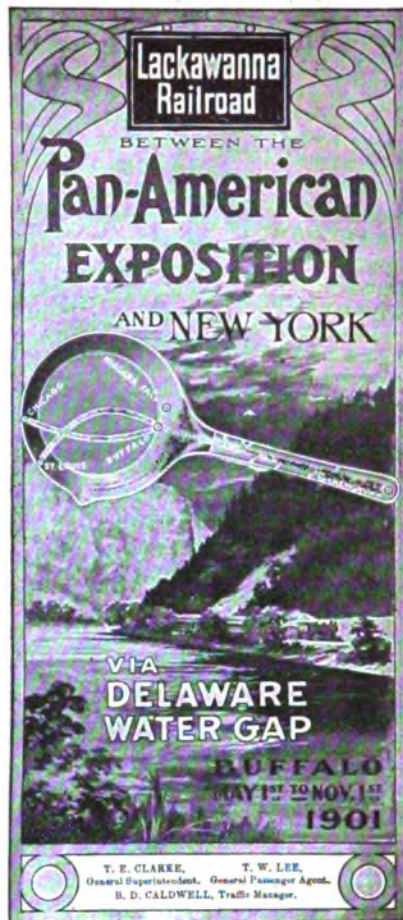


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No. 11.

NEW YORK, JUNE 1, 1901.

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SOME POINTS ON ELECTRICITY.

BY WILLIS H. JONES.

Something New in the Magneto Line.

Everyone is so familiar with the old term "magneto current" that when the subject is mentioned the mind immediately conjures up an innumerable lot of toy-like apparatus more or less elementary in principle, which are, with a few exceptions, quite useless except for experimental purposes and the performance of comparatively feeble and indifferent work; yet from the beginning it has been universally admitted that such currents, in their way, are capable of producing most powerful effects.

Until quite recently the current-producing strength of such devices has been almost totally wasted through lack of a means which would insure the necessary time for its proper development in the wire.

To make this point clear let us take an ordinary telephone bell ringer for illustration. It consists of a coil of wire, or armature, which is caused to revolve rapidly between the poles of a permanent steel magnet by means of a crank turned by hand. In other words, it is simply a little dynamo which generates an alternating current of great electromotive force, but insignificant in quantity for the following reason: When one end of the coil of wire on the armature touches the brush connected to the external wire at the moment it has completed just half of a revolution it sends out, say, a positive impulse, while the next half revolution making similar contact with the opposite end of the coil discharges a negative impulse. Now, if these separate impulses could be stopped suddenly for a brief interval of time on each half revolution, the value of the current developed in the line would follow ohms law; that is to

say, $E \div R = C$, because it would then have time to fully develop. But such is not the case with the ordinary magneto apparatus. When the armature is revolved rapidly the two impulses crowd each other into and out of the conductor so rapidly that neither has time to accomplish more than a fractional part of its work. If an electro-magnet were placed in an alternating current electric light conductor where the revolutions are exceedingly high, practically no magnetism at all would be developed, but if the speed be greatly reduced a feeble amount of magnetism would at once be noticed in the core of the instrument. It is because of the comparatively slow revolutions of the armature in the telephone ringer that the apparatus is enabled to perform its allotted duty at all.

On account of this drawback to the development of the most useful phase of a magneto current, the practical application of the latter has been confined to a somewhat limited field, especially when employed for signaling purposes, which latter are at best mere "buzzers" on comparatively short circuits.

Quite recently, however, there has been a wonderful advance made in the development and control of magneto generator currents, an improvement over the old way so great that it bids fair to open an unlimited field of usefulness. The writer has thoroughly investigated the matter and seen the erst-while youth suddenly develop to the full strength of manhood and perform feats heretofore requiring the aid of powerful batteries. Now, all of this has been accomplished by means of a device owned and patented by the Magneto Electric Company, New York, which causes the armature of an ordinary magneto generator to stop suddenly on each half revolution and discharge an impulse of great electromotive force into the conductor. The half revolutions are controlled by an ordinary Morse telegraph key. Depressing the key releases the armature for half a turn, causing, say, a positive impulse to go out, while releasing the key completes the revolution and delivers a negative impulse. By inserting polarized relays in the circuit it will be seen that a perfect means of operating polarized instruments on single line circuits is secured, something that has never been heretofore satisfactorily accomplished, and all without the aid of a cell of main line battery.

With the crude experimental apparatus at hand the writer has telegraphed with ease through 800 miles of wire, each end of the circuit being grounded. Signals were also readable through 10,000 ohms resistance with the same apparatus.

The writer was somewhat surprised to find that "induction" from other parallel circuits in the twenty-five or more miles of aerial cable and long pole line in circuit, did not cause the armature of the receiving apparatus to vibrate, but there was apparently no such effect, probably due to the fact that the

polarized relay coil was of comparatively low resistance.

The above-named company, we understand, is a comparatively new concern, and has already applied the principle just described in a great number of signaling devices, among them being a superior system of fire and burglar alarm, hotel annunciator call bell, the Morse telegraph, and last but not least, the operation of semaphores on a railroad. In fact, the new device may be successfully substituted for battery power wherever the latter is at present required for signaling purposes.

From an economical standpoint the new system should have few rivals. There being no current on the line except during the actual process of turning in a signal, there can be no waste of battery material; and on account of the penetrating character of the magneto current, iron instead of copper conductors may be employed in constructing new plants. Neither should the weather have any particularly detrimental effect on the apparatus, as there is neither "escape" on a "dead" wire nor retractile spring on the apparatus to adjust; while ordinary line resistance plays so unimportant a part that the same apparatus will deliver its signal with equal certainty through a one mile or a twenty mile circuit.

Should any reader taking any interest in the subject visit the Pan-American Exposition at Buffalo this summer he will have an opportunity to witness the various signaling devices by calling at the Electrical Building, where the apparatus will be on exhibition.

Business Notices.

So many inquiries have been received asking for the name of the inventor of the Twentieth Century Telegraph Key, described in these columns in the issue of May 1, that we desire to say that the gentleman having the honor of this invention is Mr. Charles Shirley, manager of the main office of the Postal Telegraph-Cable Company, New York. It is reliably stated that the demand for this key is very great on account of the relief afforded the operator and by the solidity of the signals transmitted, as well as by those who are suffering from overstrain, and that it is being used on a number of heavy press circuits going out of New York.

The Smith Premier Typewriter Company, of Syracuse, N. Y., has issued from its London office one of the most unique brochures that has lately come under our notice, entitled "Souvenir of the Siege of Mafeking." It appears that the machines manufactured by this company have been largely used in the British army in South Africa during the Boer war. The booklet opens with an apt introduction of historic interest written by the war correspondent of the London Daily Mail, following which the pages are filled with fac-simile reproductions written on the Smith Premier typewriter, of some of the most interesting general orders issued to the garrison of Mafeking by General Baden-Powell during the siege.

It is an astonishing fact that in this age of labor-saving appliances, the old-fashioned washboard is

still used in the great majority of homes. If there is anything in the world which needs labor and time saving machinery, it is the washing of clothes, an operation which upsets every household fifty-two times a year. There is such a thing as an effective way of reducing labor, time and expense by the adoption of new methods and appliances. Among the many recent inventions, none deserves so much praise as the 1900 Washing Machine, manufactured and sold by the 1900 Washer Co., of Binghamton, N. Y. It must be a very good machine, for the manufacturers send it to any one, freight paid, on a thirty days' trial. They will also pay the freight back if the machine does not prove satisfactory.

The Signal Corps Telegraph in the Philippines.

A problem will confront General Greely, Chief Signal Officer, when he invades the Philippine archipelago in July. His force of officers will be cut in twain at that time, and his struggle will be, after inspecting the situation with his own eyes, to map out the remaining work of the Signal Corps so that fifteen officers can perform the duties hitherto distributed among thirty. The red lines on the official map of the Philippine Islands show a system of land wires and submarine cables stretching between extremes about a thousand miles apart, but so ramified as to compose a total length of between 4,200 and 4,300 miles, or enough to make a line from San Francisco to New York and back to Chicago. Over this system there pass an average of 10,000 Government messages a day, these messages averaging at least 100 words, so that, in round numbers, it may be said that 1,000,000 words are transmitted daily by telegraph on Government business. This is almost a necessity of the situation, in view of the absence of any proper postal facilities. It is the only efficient means of communication between the military and other functionaries of the Government. The abundant use of the wire, indeed, has given rise to a witticism by one of the signal officers, speaking of his army brethren at a certain headquarters: "They never send any dispatches; they merely file letters." It is natural that they do, if we reflect that the news of the first operations of our forces in Mindanao did not reach Manila for three weeks, whereas the same points on the same island can communicate with the capital now in 15 minutes.

Coming Conventions.

The Train Dispatchers' Association of America at San Francisco, Cal., June 11, 12.

The Association of Railway Telegraph Superintendents, at Buffalo, N. Y., June 19, 20, 21.

The International Association of Municipal Electricians, at Niagara Falls, N. Y., September 2, 3, 4.

The Old Time Telegraphers' Association and the United States Military Telegraph Corps (jointly), at Montreal, Quebec, September 11, 12, 13.

The German Government is experimenting with the Rowland Printing Telegraph System.

The Edison Storage Battery.

The new Edison storage battery, which is at the present time creating such a sensation in electrical circles, is the invention of that veteran inventor, Thomas A. Edison. It consists of iron and nickel-oxide plates in a solution of potash—whereby the weight-efficiency of the accumulator has been increased two and one-half times. And this method has been almost under the hands of investigators for twenty years, yet has remained undiscovered! This means that for the same weight the new storage battery should do two and one-half times as much work as present types. In addition to this signal achievement the veteran inventor has also announced a battery having a high discharge rate, an insignificant depreciation and a low first cost.

Mr. Edison has produced no invention of broader utility in the electrical field since incandescent lighting was evolved from the busy brain of the same pioneer of industry. It is hard to foresee all the meaning of this improvement.

In his library at the laboratory building in West Orange, N. J., Mr. Thomas A. Edison the other day consented to talk with a representative of the *Electrical Review* a little about the new storage battery, which has just been described by Dr. A. E. Kennelly at the meeting of the American Institute of Electrical Engineers.

"About the new battery? Why, I think that the curious phenomenon known as the 'passive state' has concealed the operation of this form of cell from scientific men for a generation. You know that if you put a piece of iron in strong nitric acid it goes into what is called the passive state and no action takes place. Nothing happens at all. The magnetic metals, iron, nickel and cobalt, are unique in this respect. Now that was a good place to start experimental work. It is a curious phenomenon and unique, and I believe the passive state has preserved this thing for me while all the others were looking in other directions for it.

"Why did I go back to electrical work? I have had a hankering after chemistry for many years and have turned to it for pleasure. Most of my reading for a long time has been in connection with this science, and I have found it very interesting. You know I never invent anything if I can help it that is not wanted. I knew that there was nothing better to work on than this storage battery problem. I took it up first about two years ago, working at it off and on, so to speak, but last August I buckled down to it exclusively."

Mr. Edison was asked how many experiments he had conducted before arriving at the successful conclusion.

"How many experiments? We have made about 10,000 different tests. Of course, you understand that as many as 60 to 80 of these were going on at once. It was a rather discouraging thing to undertake to make iron serve in the storage battery, and that passive-state feature made it look like a mighty hard wall to climb, but we coaxed it and coaxed it until at last it was found out how to make iron take in and give out oxygen the way we wanted it.

"The nearest thing I can suggest as to analogy to the way these iron and nickel salts behave in taking in oxygen is the cementing process by which malleable iron is made. The outside layer of iron takes up oxygen and the next layer seems to abstract this, and so on until the oxygen permeates the mass. It is too much solidified by pressure, I think, for ions actually to travel into the mass, and I think something like this cementation process actually goes on."

Talking of the commercial side of the subject and the utility of the new iron-nickel-potash cell, Mr. Edison said: "The normal discharge-rate of these cells is about three and one-half hours. That means actually that they will give out current without over-discharge faster than an automobile can take it. Then, again, we have over-charged the cells in one case so rapidly that we had to keep them in cold water to prevent their boiling; we have over-discharged them, and even turned them around and charged them backwards without doing any damage to them whatever. We have pulled the active element out of the solution and laid it out here in the yard for a week to dry, and found that it was all right when we put it back in the electrolyte."

As to the commercial side of the matter, it was learned that machinery has already been ordered to begin the manufacture of these cells on a large scale. The business will be conducted without affiliation with other corporations as an independent manufacturing concern. It is believed by Mr. Edison and his associates that commercial quantities of these batteries will be ready for delivery early in the autumn of this year.

Recent Telegraph Patents.

A patent for a multiple telegraph device has been granted to Samuel T. Foster, Jr., of Laredo, Tex.

A patent for a printing telegraph instrument has been granted to Louis M. Casella, of London, England.

A patent for an apparatus for use in wireless telegraphy has been granted to John Burry, of Fort Lee, N. J.

A patent for a long-distance typewriting telegraph device has been granted to Arthur J. Farmer, of Detroit, Mich.

Excellent Cuban Telegraph Service.

In general orders relieving Colonel Henry H. C. Dunwoody, General Wood highly compliments him upon the services he has rendered to Cuba, for the high efficiency of the telegraph service. "At the time of the intervention," said the Governor-General, "the telegraphic conditions were chaotic. Now there is a system from one end of the island to the other equal to that in the United States.

The Mortimer D. Shaw Monument Fund subscription having been closed, the total amount of money raised being \$158.90, it was expected that the shaft would be finished and probably erected by Decoration Day, May 30.

Personal Mention.

Mrs. J. D. Reid, wife of the late James D. Reid, sailed for Europe May 21. She will reside in future in Edinburgh, Scotland.

Mr. Charles Bradbury, superintendent of Government telegraphs at Sandakan, Borneo, has resigned, and is now at Northampton, England.

Mr. Arthur C. Frost, superintendent of the Direct United States Cable Company, New York, left for England on June 1 for a three months' holiday. A large number of friends assembled at the pier to bid him bon voyage.

Mr. C. W. Lundy, superintendent of the Direct United States Cable Company, Halifax, N. S., was in New York a few days since en route home from Bermuda, where he has been recuperating from pneumonia. Mr. Lundy was a member of the expedition that laid the first Atlantic cable, and he was also a member of the electrical staff on board of the Great Eastern when she laid the second Atlantic cable.

Obituary.

W. H. Apgar, an operator at High Bridge, N. J., died on May 10, aged 43 years.

Philo S. Dilworth, a Western Union operator, died at his home in Ingram, Pa., on May 20, aged 48 years.

J. E. Ferris, of late an operator in a New York broker's office, a native of Kansas City, Mo., died at Liberty, N. Y., May 13, aged 30 years.

Merritt H. Thompson, a Western Union Telegraph operator, who has seen service in various parts of the country, died at his home in Hornellsville, N. Y., on May 14, aged 44 years.

H. Fondersmith, a member of the Old Time Telegraphers' Association and division operator on the Philadelphia division of the Pennsylvania Railroad, with headquarters at West Philadelphia, died suddenly of apoplexy at Wynnewood, Pa., on May 26. He was born at Doe Run, Pa., June 14, 1846, and learning telegraphy entered the service of the Pennsylvania Railroad in 1863, remaining constantly in the employ of that company throughout his life.

New York Visitors.

Mr. Charles E. Yetman, the telegraph inventor, of Ilion, N. Y.

Col. William B. Wilson, of Philadelphia, Pa., president of the United States Military Telegraph Corps.

Mr. E. A. Smith, superintendent of the Fitchburg Division of the Boston and Maine Railroad, Boston, Mass.

Mr. H. J. Pettingill, vice-president of the Erie Telephone Company, Boston, Mass., and formerly superintendent of the Postal Telegraph-Cable Company in that city.

Miscellaneous Items.

Born to Mr. and Mrs. A. V. Hartley, of Rich Valley, Minn., on May 18, a son. The father has promised to subscribe for TELEGRAPH AGE for the young man when he shall be old enough to read.

Fire recently destroyed 100,000 cedar telegraph poles belonging to the Western Union Telegraph Company on the west bank of the Rouge River at Delray, Mich. The poles were valued at about \$150,000.

C. F. Sweeney, operator at the Western Union telegraph office at Montpelier, Vt., has written a poem which he has dedicated to the hat he wore during the Cuban campaign. It tells of the trials and troubles which the hat has had in the campaign, and, in fact, after the campaign was over. The poem has been put on pasteboard and nailed on the wall underneath the hat. The poem is entitled "The Fighting Hat."

Mr. Robert Magrane, formerly of the New York Herald telegraph night force and who was a student at the Pratt Institute, Brooklyn, at the same time, won a one year scholarship in Harvard University. During that term there he has won additional scholarships, thereby extending his term over the entire University course of four years. The dean of Harvard states that Mr. Magrane is among the first fifty in over 5,000 students.

Mr. Frank M. Raab, manager for the Western Union office and electrician at the State Hospital, Toledo, Ohio, has been granted a patent on a telegraph key, which, to say the least, is unique and a radical departure from the old style. This key can be attached to any ordinary key by means of a short cord, which is secured between the platinum points by screwing the lever down. The device consists of a rubber bulb, which, when squeezed, forces a plunger in and out of the socket, thus closing and opening the circuit, forming dots and dashes. The transmitting is effected in this novel manner. It is said that it will afford relief to anyone suffering from operator's cramp. Mr. Raab designed this key for his own use, and has used it for nearly two years, sending good Morse with it, something he was not able to do before.

To get in on the "ground floor" of the New York Stock Exchange is a costly undertaking, from almost every point of view. This is shown by the fact that the Western Union Telegraph Company for its future quarters in the new Exchange building, to be completed about a year hence, will pay therefor a rental at the rate of \$25,000 a year for a period of twenty-one years. A lease to this effect was recorded on May 15.

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

A "Standard" in Handwriting.

A letter has been printed in the Richmond (Va.) Dispatch, of a recent date, which we think railroad telegraph superintendents ought to consider. The article is contributed by a person signing himself "J. E. H.," and is as follows:

"You have written several articles on 'Pleasing Penmanship,' etc. I enclose one written by Mr. L. C. Hall, chief operator for the Western Union Telegraph Company, at Norfolk, Va., which I think would solve the problem so far as it can be solved.

"Mr. Hall is well known in telegraph circles, and is well thought of by the Western Union people, and others.

"I think more would be accomplished if the railroads were to adopt a standard of penmanship, and have it placed in the back of their schedules, and books of rules and regulations (which they could easily do, with suggestions to their employees to adopt it), than would be done if the telegraph companies should adopt one. Because of the perfect adaptability of the typewriter to telegraph work, and for other reasons, I doubt if the telegraph companies ever will act in the matter. It is not so with railroads; much of their work cannot be done on the typewriter. Much of your mail comes from railway employees, whose writing would be improved by this method.

"An effort of this kind on the part of the railroads would have an educational effect on the public generally. Years ago, when I was on the Chesapeake & Ohio Railroad, the writing of E. T. Smith and M. B. Leonard, both now dead, was imitated so closely by several men in my office, that it could scarcely be distinguished from the writing of those gentlemen, and this without suggestions from any one. This proves the correctness of Mr. Hall's idea.

"Railroads have adopted a standard for everything mechanical, why not adopt a standard penmanship? In 1882 four men were killed, and much property destroyed, just west of Quinnimont, W. Va., by one crew misreading a badly written order—reading the word 'four' as 'five'—and I have heard of other accidents due to poor writing."

The letter of Mr. Hall, referred to above, which was recently published in TELEGRAPH AGE, seems so apropos at this time that we reprint it:

"In looking over the telegraphic service, with a view of seeking out and remedying its weak points, one cannot fail to be struck by the fact that the handwriting of a great number of operators is very poor. In the case of nearly all the small offices, where, as a matter of course, the less proficient operators are employed, the poor quality of chirography turned out very often amounts to almost positive ineligibility, and the impression made upon the users of the wires—the local and traveling public—is that the service generally is performed in a slipshod and careless manner. As far back as I can remember, the difficulty in deciphering a telegram has been a subject of adverse comment and jest. There can be no doubt that this criticism is

justified in no small degree, and that it reflects no credit upon our profession. Of course, in the larger offices this cause of complaint has been very generally removed by the introduction of the typewriter, but in the small branch offices and the thousands of small railway stations not much regard, as a general thing, is paid to legibility and neatness in the copies delivered to patrons. In very many instances the blank is not properly filled out, the time is omitted, the date left off, and, in short, the condition in which the message reaches the addressee is anything else than business-like and creditable.

"Now, for a long time I have thought that something might be done for the benefit and credit of the service in this regard, and believing that it would cost nothing to try it, I venture to offer a suggestion.

"It is a well known fact that a telegram written in a clean, pretty hand is always an object of lively interest to the less proficient telegraphers. When such a 'copy' passes through their hands they admire it, examine it, and study it critically, and never fail to envy the man who can turn out such work. More than that, they analyze the chirography and are seized with an instant desire to imitate its style, especially where specimens of the admired copy are constantly before them. Every observer has noted the effect made upon an office full of young operators by the advent of a single gilt-edged telegrapher among them. And what is true of one office is true of the service as a whole. If a plan can be adopted whereby specimens of the best telegraphic copies can be kept constantly before the embryo operator, he will soon be found copying a style that he most admires, and the result will soon show itself in the class of work he turns out. As it is from the beginners, thus influenced, that the ranks of the first-class talent must finally be recruited, it is of the utmost importance that they be started right. How to carry out such a plan effectively and inexpensively is the question.

"My idea is that the telegraph companies and journals ought to take the matter up and push it along. Let each company cause to be bound in every tariff book sent out fac-similes of 'copies' from the pens of the best operators, and let the journals devoted to the interest of the telegraphers print reproductions of messages copied in the best style of telegraphic handwriting. A half-dozen such copies inserted in the tariff books and telegraph papers, and kept there month after month, would exert an educational influence that would spread over the whole country and elevate the standard of telegraphic work everywhere. There is nothing like a good object lesson for teaching the idea, and particularly the young idea, how to shoot."

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

Telegraphs by Static Electricity.

William A. Eddy, the famous kite-flying expert, of Bayonne, N. J., whose experiments in investigating meteorological and electrical conditions in the upper strata of the atmosphere have in the past few years gained him an international reputation, has just concluded a series of experiments on atmospheric electricity, the results of which promise to be of interest and value to electricians the world over. In response to a recent request from a newspaper, Mr. Eddy describes these experiments in the following article:

"At Bayonne, N. J., on Saturday, while experimenting with my kite-sustained steel wire, I proved practically beyond a doubt for the first time that atmospheric electricity can be used as a means of telegraphic communication, thus doing away with the battery, dynamo, Morse sounder or magnet, and almost entirely without other apparatus than iron rods driven into the ground, by means of which the perpetually charged wire from the upper air is silenced until a new charge instantly collects. I found that one wire running east and west, and up into the air through a ring aloft, when brought into connection with another high wire running north and south, caused, when one of the terminals was grounded, a slight excess of atmospheric electric action in the wire extending east and west, and across the line of the earth's magnetic pole, which extends nearly north and south.

"The three steel wires were raised in the form of an immense church spire outline, with a very broad base about 300 feet across. One edge of this upward-reaching triangle was formed by the steel wire kite cable, which went on up beyond the apex of the wire spire to a height of about 1,000 feet, maintained aloft by two mammoth kites. Telegraphic signals were transmitted from any one station on the ground simultaneously to the two others by simply grounding the wire at any one station, when the power to draw half-inch sparks at the other stations instantly vanished, except on the wire running east and west, where sparks one-sixteenth of an inch in length continued. By detaching the iron rod the sparking power was instantly restored at the other stations. It was like shutting on and off a light in army signaling, and so making dots and dashes.

"A prominent telegraph manager tells me that the dot and dash Morse signal for A has been often filled in by stray currents and made to sound like L, and that this is particularly likely to happen on the western wire from New York and Philadelphia to Pittsburg. This line is known to the operators as a 'heavy wire,' but the operators become used to it and automatically correct these and other dot and dash errors. I believe that while the iron mines of Pennsylvania have some magnetic action on the wires, yet that most of the effect arises from atmospheric electricity. While little if any magnetic effect is produced on the short wires used by me at Bayonne, yet on a line 500 miles long, extending to a high point in the mountains, atmospheric electrical disturbances of the wire are certainly caused. I have double proof of this fact. A lineman with

whom I talked, who has repaired lines in the mountains, tells me that the wires there sometimes become so highly charged that gloves are no protection, and that the work at times has to be abandoned.

"I have since 1892 given up all attempts to handle kite-sustained steel wire at Bayonne, except by the use of air spaces and dry pine sticks more than a foot in length, finding the shock all the greater when the charge breaks its way through the gloves, which allow additional accumulation of electric force until the shock comes.

"I believe that this at present unmanageable static electric force from the air could be collected at a high point in the mountains on large copper insulated disks, without kites, and used to electrify the line to the west from New York, and that static attraction and repulsion might be used with delicate instruments and without magnetism.

"While Professor Dolbear planned at one time to telegraph by means of frictional static electricity, yet I believe this is the first successful use of electricity from the sky for telegraphic purposes. It all depends upon the spark-gap system devised in Philadelphia in 1752 by that great statesman, patriot and savant, Benjamin Franklin."

Telegraphy in the Philippines.

When Manila fell there were practically no telegraph or cable connections anywhere in the Philippines. The system of land wires connecting the principal towns, and the cable between Manila and Iloilo, and Iloilo and Cebu, had been sealed and abandoned by the owners, the Eastern Extension, Australasia and China Cable Company, which announced that it would not open until the United States could assure protection for its employees and property.

Immediately upon the occupation of Manila the question of wires assumed a serious phase. Indeed the trouble began at the capture of the place, and the destruction of our wires was the first hostile act of the insurgents. Upon Aguinaldo's taking the war path it became useless to stretch a line unless it was defended by a patrol close enough together to shout a message along. The system abandoned by the Eastern Extension Company fell into his hands. He opened, repaired, improved and untwisted wire rope, and always managing to destroy the portions in the territory he was forced from time to time to yield. The insurgents knew the value of wires and at every opportunity a few men would slip by our lines or between them and haul away as much as they could conveniently carry.

Cable, though far more costly and requiring more time to lay, could be maintained in the Philippines: for the Filipinos had no "picking-up gear," nor grappling and cutting utensils. The war department decided to establish a complete cable system, with alternates, as soon as possible. Contracts were placed, the work was rushed and the Hooker, the first Philippine cable ship was dispatched post haste, taking on part of her equipment, which was procured in England, at Gibraltar.

The problem of securing a satisfactory force had been by no means an easy one, for the business of

cable laying is a new one in the United States. The services of Mr. Otto Strubel, an engineer of the French Cable Company, were secured, and those of Mr. Henry Winter, an officer of the Anglo-American cable ship *Minia*. But three men of the Hooker's crew had had experience in cable work. An expert jointer of rubber cable was enlisted in New York, but he deserted the expedition a few days before it left. Care had been taken, though, to have two sergeants of the signal corps instructed by him in the art, in case of such an emergency.

After arriving in Manila the Hooker was sent to Hong Kong to coal, struck an outlying reef off Corregidor Island, and after all, down went the cable to the bottom of the sea. Of course, that was its ultimate destination, but not in a lump. The ship was a total loss, but most of the cable and machinery, though somewhat damaged, was recovered and taken back to Manila. Then the *Romulus* was chartered and equipped with the recovered paraphernalia.

For the work in rivers and other shallow bodies of water, barges were equipped and towed by small gunboats. The gunboats could repel disturbers and the same exposure was not necessary in reeling out the cable from the barges as was required to stretch land lines. About every five miles, stops would be made to test what had been laid. The small military force that accompanied these expeditions when in hostile country, was deployed as pickets when the electricians landed to make the tests. For the actual work of establishing the lines, it was necessary to employ natives. It takes three natives to do the work of one American workman, but the native asks only \$5 per month salary, and his accustomed fare of rice, dried fish, etc. He loves to squat when reeling the cables and he works with as little effort as possible.

The first work was done by the army, but subsequently contracts were let for the entire work, laying as well as furnishing the cable. The Government furnishes the cable ship, the necessary military protection and an officer as director and inspector. Within the past twelve months the United States Government has fitted up the steamer *Burnside* as a cable ship, and this vessel with Mr. E. Winter, commanding and Mr. F. A. Hamilton, a cable engineer of international reputation, as electrician, has accomplished effective cable work. More than 2,000 miles have now been laid, almost enough to reach from Honolulu to San Francisco. All the principal cities and every island of any size are connected. To be more explicit, cables connect Manila and Cavite, Tagulug and Calamba, Aagulg and Binang, Calamba and Los Banos, Los Banos and Santa Cruz, Liloan and Ormoc, Cebu and Liloan, Leyte and Tacloban and Samar, Naic and Corregidor, Guinayangan and Pasaco, and other points from the islands of Cebu to Bahol, Negros to Cebu, Cebu to Mindanao, Jolo to Mindanao, and also connecting points on the islands of Mindanao, where land wires cannot yet be maintained. Most of the work has thus been accomplished in the past twelve months, and little

trouble is being experienced from intentional interruption.

Very often ships weighing anchor in the harbors, find the flukes entangled with the cables, and to save a few minutes' time, cut the cable instead of disengaging it. Nine out of ten of the breaks are due to this cause.

A few days prior to the opening of the war, under an emergency contract with the Spanish Government, stimulated by the approach of hostilities, the company extended its Hong Kong cable, which landed on Luzon, at Balinao, to Manila. Admiral Dewey endeavored in vain to obtain a neutralization of this cable; the Spanish officers refused to permit him to use it. He, therefore, cut it. Five days after Manila fell he dispatched a vessel to the point of rupture, about two miles off Cavite, where the cable lay in about ten fathoms. The wave action had carried the ends about 200 feet apart, to the full length of a stout rope that had joined them to facilitate recovery. There was no regular cable to be had, and the repair was accomplished by splicing in a piece of insulated field wire with such an allowance of slack that the stay rope, which was left on, should bear the strain. Hong Kong was called only to find that to avoid complications, the company had sealed the cable; and after all the grappling and improvising the dispatch boat had to be continued. It was sometime after the protocol was signed that the Spaniards and the company's officers decided to break the seal. The use of a cable for exchange of messages in place of the slow service of the dispatch boat at this time would have been of inestimable value to this Government, but the British company took no note of that, and now it will probably cost them dear.

This Government is not in the International Telegraph Union, which practically eliminates our voice from the conduct of the great cables, and in case of emergency gives other countries—those in the union—prior right to the use of them. The Philippine system is America's first step in cables.

Publishers' Press.

The annual meeting of the Publishers' Press was held in New York on May 14. There was a fair attendance of members, and from the reading of the reports of the president, treasurer and secretary the association was shown to be in a flourishing condition, and that forty-nine new papers had become members during the year past. There was a morning and evening session, and the old board of officers and directors were unanimously re-elected for the coming year. These are as follows: J. B. Shale, of the Philadelphia Item, president; Andrew McLean, of the Brooklyn Citizen, vice-president; William Cullen Bryant, of the Brooklyn Times, treasurer; T. J. Keenan, of Pittsburg, secretary. Directors: The above and C. J. Bellamy, of Springfield, Mass., and W. P. Atkinson, of Erie, Pa. The Publishers' Press possesses quite an extensive leased wire telegraph system.

Subscribe for TELEGRAPH AGE, \$1.50 per year.

Relvented a Repeater.

Editor TELEGRAPH AGE:

With reference to the diagram and description of quadruplex repeaters sent you by Mr. J. C. Langley, of Dallas, Tex., published in TELEGRAPH AGE May 1, 1901, it may be of interest to note that this repeater was used with excellent results on the circuits of the Baltimore and Ohio Telegraph Co. as early as 1887, having been devised and patented by the writer about that time. A full description and a diagram (Fig. 191) of this repeater may be found in "American Telegraphy," in the chapter on Duplex and Quadruplex Repeaters. WM. MAVER, JR.

New York, May 17, 1901.

The Revenue Stamp Law.

The War Revenue Law requiring a one cent documentary revenue stamp affixed to each telegram has been repealed, to take effect July 1, 1901. Therefore, on and after that date, it will not be necessary to affix a revenue stamp to telegrams, with the exception of affixing a stamp to money transfers drawn in the United States but payable out of the United States. The sender of a money transfer drawn in the United States, and payable out of the United States, must attach to his application therefor a two cent documentary stamp for each one hundred dollars or fraction of one hundred dollars transferred.

The summary of the above is therefore as follows:

On all telegrams a revenue stamp need not be attached.

On all money transfers drawn in, and payable in the United States, a revenue stamp need not be attached.

On all money transfers drawn in the United States, and payable out of the United States, a two cent documentary stamp must be attached for each one hundred dollars or fraction thereof.

In Favor of the Western Union.

Judge Kohlsaot, of Chicago, in the United States Circuit Court, granted an injunction a few days since in the case of the Western Union Telegraph Company against the National Telegraph News Company and others, restraining the latter from publishing, selling or transmitting through their tickers or otherwise, news, quotations or other information which may hereafter be collected, formulated and transmitted by the Western Union Telegraph Company through its tickers. The prohibition holds good until the lapse of fully 60 minutes from the time such news items are first printed and appear upon the ticker tape. Judge Kohlsaot held that the Western Union Telegraph Company has a right of property in the news and information collected by it.

T. M. B. Association assessment No. 379 has been levied by the Telegraphers' Mutual Benefit Association of New York, to meet the claims arising from the deaths of Leander D. Parker at Chicago, Ill.; George Cowen at Providence, R. I.; Henry B. Tannatt at Springfield, Mass.; Wm. H. Clark at Washington, D. C., and Mercator Jessup at El Paso, Tex.

Publications.

"PHILLIPS' CODE," by Walter P. Phillips, 9th edition, 69 pages. This unique and efficient guide for the transmission of press reports still maintains its great popularity; bound in flexible leather; price, \$1.

"THE QUADRUPLEX," by Wm. Maver, Jr., and Minor M. Davis, 128 pages, 63 diagrams and other illustrations; treats of the technical side of telegraphy in a manner at once simple, comprehensive and easily understood; bound in cloth; price, \$1.50.

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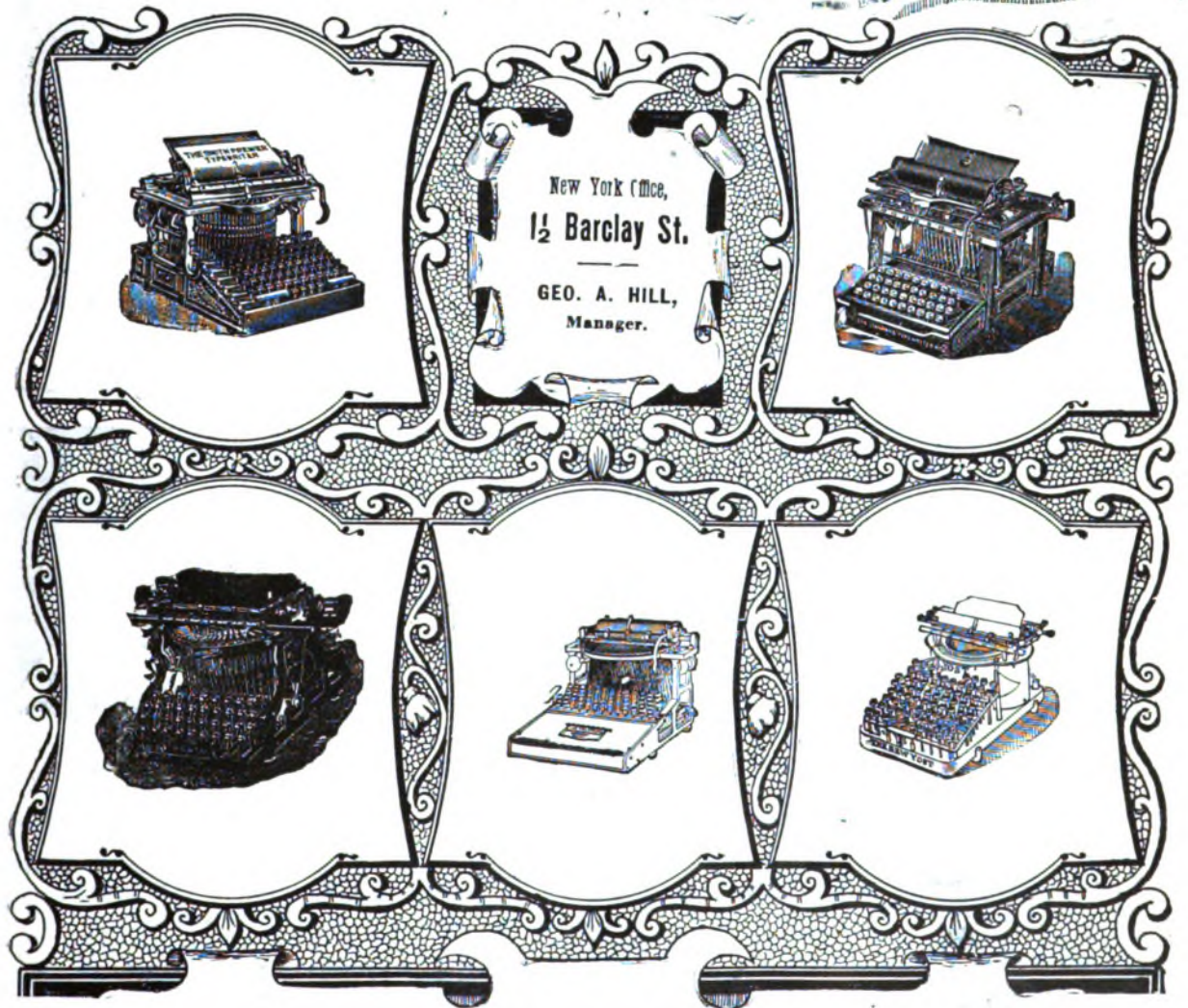
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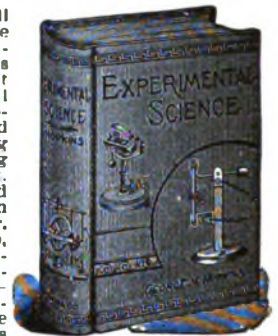
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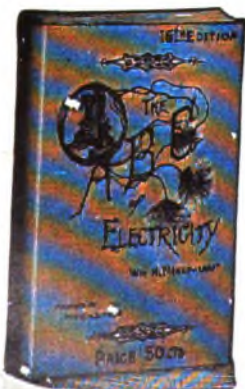
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NEW YORK, June 1, 1901.

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.

Telegraph Users Should Pay the Charges.

The dawning realization that, after all, it is not the people, for whom the plea of lower telegraph charges has been made, but rather the business community who use the wires, and who, therefore, should pay for the service, puts in a new light the equities of the case between private and Government ownership. It has been claimed in some quarters that if the English system of Government telegraph control, with its lower rates, was introduced in this country, even with its attendant losses, the final results would be advantageous, inasmuch as the people would receive the benefit. The fact that the general public do not use the telegraph, except in a very limited degree, appears hitherto to have been lost sight of by those who have been clamoring for a change. It should be remembered that the great bulk of the telegraphic business is occasioned by the requirements of the business world, who very properly should pay for such service. The payment of a tax by the public at large in order to meet a telegraphic deficit, for which the people are not re-

sponsible and which would inevitably follow Government control of the telegraph and lower rates, is too grotesque a proposition to be worthy of consideration. Let those who use the telegraph pay for it.

The Latest.

Wireless telegraphy employed as a method of illustrating certain spiritual similitudes by a clergyman in his church in a suburb of New York city, on a recent Sunday, marks at least a novel, if not an elevating, advance in this latest addition to electrical science. The clergyman stood in his pulpit surrounded by batteries and other electrical appliances, comprising a complete set of apparatus similar to that used by Marconi. The receiving instruments were mounted on a table. Extending in the air from each instrument was a bamboo pole which collected the electrical waves. Messages were sent and received by wireless telegraphy, the system was explained to the congregation, and deductions made therefrom in support of Bible truths. A "side show" in the shape of a miniature trolley car to be run from one end of the church to the other, doubtless up and down one of the aisles, was to have been introduced, but this idea was abandoned. What spiritual truths were to be evolved out of a trolley car does not appear. Possibly the reverend gentleman had taken his stand at the entrance to the Brooklyn Bridge during rush hours, and after a contemplation of the scene, wisely abandoned all effort to evolve any theory relating to the development of spiritual mindedness out of what he saw at that point of intense observation. New Yorkers, it may be remarked, are not in the habit of looking upon such phenomena for inspiration calculated to influence higher spiritual manifestations.

Against Postal Telegraphy.

The press of New Orleans was formerly very outspoken in its advocacy of Postal Telegraphy in the United States. Hardly a week would pass that we did not receive marked copies of papers published in the Crescent City containing articles urgently calling upon the Government to take over and operate the telegraph lines. Latterly, however, a wholesome reaction of judgment regarding the subject appears to have taken place, as the facts as to the futility of Government control of the telegraphs, from every point of view, has been repeatedly demonstrated. The States, of New Orleans, in a recent issue has this to say:

"The advocates of the fad of Government ownership of quasi public corporations have received a severe blow by the announcement of the recent disastrous losses of the British Government in its experiments with the ownership of the telegraph system of that country. It was once the fashion in many respectable quarters in this country to point to the example of European monarchies as proofs of the fact that the Government can successfully and profitably own and operate railroads and telegraphs, and the alleged success of these Government ventures has been set forth as an unanswerable argument in

favor of the absorption of these franchises by the Government of the United States. It must be a severe blow to the assurance of the propagators of these centralizing policies to read of the admissions made by Sir Michael Hicks-Beach, in the British House of Commons lately, that the annual loss sustained by the Government in the operation of its telegraphic service had been \$3,500,000 annually, or \$41,500,000 since the Government took charge of the service.

"It must be remembered, in this connection, that the experiment made by the British Government was undertaken under conditions the most favorable imaginable for the success of the experiment, but the result of several year's trial is not a little surprising. It is perfectly natural and proper that under a monarchical form of Government many enterprises should be absorbed and conducted by the crown, which would be incompatible with the governmental function in a system where the least possible interference with private enterprise and individual activity is the motto. Monopoly is of the essence of monarchy, but the basis of free government is the individual liberty of the citizen, and his indefeasible right to enter into full and unrestricted competition with all the world in all industrial and commercial enterprises.

"It is true, that the right resides in the Government to protect the citizen from oppression and extortion by great corporations, as well as by private individuals, and for this reason the right and duty of the Government to regulate the dealings of great public corporations, like telegraphs, railroads, etc., has never been denied.

"But among a great many people the regulation of the conduct of such corporations has not been considered sufficient, but their ownership and control by the Government has been vehemently insisted upon. Such sentiment has been particularly strong upon the part of the ill-informed, who are wont to favor drastic remedies to prevent distresses, without ever stopping to consider how far the principle advocated might operate in the creation of evils more serious than the one sought to be remedied. They see only the current distress and would remedy it by amputating the diseased member, which a little judicious treatment would thoroughly heal and restore in full vigor to its necessary functions.

"In addition to this clamor of the thoughtless and hasty for Government ownership of these great corporations, it is beginning to be more than suspected that another powerful and dangerous contingent is arising which is covertly looking to the same end. This contingent is no other than the owners of the corporations in question themselves. We have seen how, in recent days, one or two powerful syndicates have entered the field and consolidated most of the great railway systems of the country under a single ownership and management. It is interesting to observe that these great consolidations have been effected without the exchanges of cash in anywise proportionate to the magnitude of the transactions involved. The great bulk of the interests purchased has been secured by the issuance of additional stock based upon a business already largely over-capital-

ized, and this new stock—the principal constituent of which is water—constituted the greater portion of the consideration upon which the deal was effected. A little adroit manipulation and stirring up of a sentiment already existing in favor of government ownership might result in the unloading of all these fictitious assets upon the Government, and then who would be the loser? Would it be a great hardship for Mr. Morgan, for instance, to part, at a good round figure, with stock which he had paid for principally in wind, and the face value of which, by manipulating and consolidating, he had doubled and trebled and quadrupled? By the clever manipulation of the bellows Mr. Morgan and his associates have put themselves in a position where they can most profitably talk to the people of the United States on the subject of Government ownership of railways, and we should not be surprised to see this become a prominent public issue in the near future.

"To merely part title with those big blocks of wind at the fancy figures they have now attained, would, perhaps, be a very displeasing prospect to those financial aeronauts: more particularly as they would then not only continue to control the roads, but in addition, they would have a pretty firm hold on the Government as well.

"England secured the telegraph system of Great Britain upon reasonable terms and operated it under conditions the most favorable imaginable for such an experiment. The result has been a continuous and appalling loss, and a correspondingly heavy burden upon the British taxpayers. What would have resulted had she attempted to handle such commodities as Morgan & Co. now seem to have in soak for this Government? There is a lesson in this for the Government ownership advocates in the United States."

President McKinley and the Pacific Cable.

President McKinley in his speech at San Francisco, May 18, on the occasion of the launching of battleship Ohio, said: "There is nothing in the world that brings people so close together as commerce. . . . The nations are close together now. The powers of the earth are tied together. We have overcome distance. We not only want a commercial line, but we want a cable line from here to the Philippines. We want it to be an American cable that cannot be cut by any power in the world. It is said trade follows the flag. The telegraph must follow trade."

Telegraph Wires Laid on Snow.

Consul-General Guenther, of Frankfort, April 13, 1901, says that, according to experiments conducted by Mr. H. Janssen on Mont Blanc, it is not necessary to erect poles for stringing telephone and telegraph wires in snow-covered countries. If the snow is several inches thick, it serves as a good insulator; the wires can simply be laid down and be ready for transmission of messages. The consul-general adds that similar experiments with equally favorable results were made out on Mount Aetna.

TIM MURPHY'S GHOST.

BY BEN C. WILKENS.

It was in the early seventies, before the advent of the double track and the double train order system in the West, that I was installed as night dispatcher in a certain town of Iowa, on one of the great overland routes, that connects the Atlantic with the Pacific coast, by ribbons of steel. Although I was rated a good operator, I had had little experience as a train dispatcher, and accepted the position under protest, merely to satisfy a whim of the superintendent, who thought he recognized in me certain qualifications which would eventually develop into the making of a "bang up" dispatcher—as he expressed it.

Everything went well for a while—trains all on time, and the train sheets resembling stereotype plates, when I turned them over to the man on the day trick. But for all that, I was constantly pursued by that grim specter which forever haunts the man who has the handling of trains, bearing human freight; and it was not long before I attempted a feat, never yet accomplished by man, although hundreds and hundreds have tried it before me—and failed—that of passing two trains on the same track, going in opposite directions.

The result was the loss of several thousands of dollars to the railroad company, twenty-three box and flat cars in the ditch, smashed to smithereens, the track torn up for several rods, over one hundred dead hogs, and enough wheat strewn along the track to seed down the entire State of Iowa; and, lastly, a sufficient number of threshing machines, piled one on top of the other, to thresh the whole crop when harvested. The two engines were standing on end, locked in each other's arms, as if engaged in mortal combat. No human lives were lost, however, for which I went down on my knees and thanked God.

Of course, after this episode, I was held in ill repute among the railroad officials—a black sheep, as it were, and pointed out to such as did not already know me, as the "kid" who caused the awful wreck down at "Coon Hollow."

Needless to say I was discharged, and unable to obtain work again, even as a common operator, without money and without friends—for a man's friends generally desert him in the time of need—I started West, where I hoped to lose my identity, and commence life anew.

After a month of tramping, stealing rides on freight trains, sleeping in box cars and haystacks, I drifted into Denver one chilly morning in April, and presented myself before the superintendent of a certain road, under the name of "Jones."

In those days an operator was not obliged to provide himself with a passport, clearance papers or certificate of character, as the custom now requires; but if a man was a fair telegrapher, that was about the only passport necessary.

"We haven't anything very desirable," was the reply I received, in answer to my application for a position, as the superintendent tipped back in his chair and looked me over, "but we have been

wanting an operator up at 'Dead Man's Gulch,'" he added, "for several months. There isn't much of a town there—in fact no town at all—nothing but the station house, which consists of two rooms, —waiting room and office. Of course, you will have to do your own cooking, but the duties required of you are very easy.

"There are only four trains a day—two each way—one a freight and the other the fast express, called the 'Mountain Flyer,' which does not stop there, but goes through at a forty-mile gait. It will be your special duty to see that the switch lights are out and kept burning, also that the switches are correctly thrown and securely locked. The salary is—is—how much did we pay the last man we had at 'Dead Man's Gulch?'" he asked, turning to his clerk.

"You mean Tim Murphy, I presume—the man who was murdered," was the rejoinder.

"Ah, yes. You see, Mr. Jones, the last operator we had there was mysteriously shot one Saturday night, and since then we have been unable to find a man for his place. It is so lonely and isolated, and—well, some say Murphy's ghost is seen sitting at his desk near the window, every Saturday night; he was shot on a Saturday night, you know, just after he had reported the Flyer 'on time.'

"The pay," he continued, "we will make seventy-five dollars, and I think it will be the easiest way of earning seventy-five dollars of anything you have coupled onto. You will be allowed to visit Denver twice a month for supplies, and to renew your acquaintance with the world."

"Seventy-five dollars a month!" I mused to myself. "That is more money than I have seen in six months."

"I accept the position," I replied. "I don't care how many men have been shot there, or how often I am visited by Murphy's ghost. I do not believe in ghosts or goblins, and I am ready to start at once, but would like a good revolver. I presume that in this western country you provide your men with weapons of defense, the same as the express companies do."

"Certainly," he replied. "Here is poor Murphy's revolver, all loaded just as it was found on his person, after he was shot, with every chamber filled, which fact dispelled every suspicion of suicide. It was a cold blooded murder, and we have had detectives working on the case for months. There is a standing reward of \$5,000 offered jointly by the Territory of Colorado and this company. We intend this case to be a lesson to the lawless people of the West—and this company will spare no pains in ferreting out and punishing all such violators of the law."

An hour later I was aboard the up-freight, with a week's supply of groceries and a pint of what these Westerners term "Mountain Dew"; but in Iowa, I distinctly remember that the same grade of goods was sold under the name of "Kentucky Rye."

"This is Saturday night," I thought to myself, "and to-night Murphy's ghost is supposed to make its weekly visit."

I do not consider myself a coward, neither am I superstitious to any great extent. Nevertheless, while I am not afraid of any man in the flesh, the thought that within a few hours I would be up in the mountains, twenty miles from any human being, with the recent stories I had heard of "Murphy's ghost," still fresh in my mind, and the possibility before me of meeting Murphy's fate, caused the chills to creep up my spine, till my teeth chattered and my courage began to ebb.

When the conductor took up my pass, and noticed my destination, I well remember the look of astonishment that crept over his face. Taking a second look at me, he leaned back against the seat and said:

"So they have found an operator at last, have they, for the Gulch? Ever been there?"

"No," I replied.

"Ever heard about the last operator who worked there?"

"Yes, the superintendent kindly told me all about him."

"He did, did he? Well, I'll bet he never told you about Tim's ghost; wly, old Dad Spencer, who pulls the 'Flyer' says that every Saturday night since the murder—and that was six months ago—Tim's ghost sits at the desk in the window, and waves its hand at Dad, just as Tim used to do. Why, I wouldn't spend a night alone in that office for all the gold in these here mountains."

"Nor I," chimed in the brakeman. "The blood stains on the floor have been scrubbed out several times, and still they return every Sunday morning, just as fresh as the morning when we found Murphy dead on the floor, with the stove poker in his hand. Whether he was just going to stir the fire, or had seized the poker as a weapon of defense, we never knew; and it looks to me he never knew who or what killed him."

Our train had now left the plains, and was snorting and puffing up the canyon, first on one side of the turbulent Platte, and then on the other, wherever there was room to lay the rails; and where there was not room, a pathway had been chiseled out of the side of the mountains.

"We are going to have a bad night of it," remarked the conductor. "There is every indication of a cloudburst, and if you have never witnessed a storm in the mountains, you have missed one of the most thrilling events of a lifetime."

The canyon seemed to narrow as we crept up it, till we were walled in on both sides by high mountains, whose summits were lost in the low hanging clouds. It was quite dark when I reached my destination, for the darkness comes quickly and early in these great canyons, where the sun is discernible only a few hours of the day. The rain was falling in great drops, and the wind moaned down the gorge like a human being in distress.

"Goodby," shouted the conductor, from the rear of the caboose. "We'll stop and take you back to Denver in the morning—dead or alive."

The train passed from view, around the sharp curve, and the last vestige of my courage went with

it. The place was the most lonely, wild and desolate of anything imagination can picture, yet romantic to the highest degree; set down between two mountains, whose summits were not now visible, the little river boiling and bubbling along over the rocks five hundred feet below—shut out from the world, not a house or human being probably within twenty miles.

Unlocking the door, I entered, and a feeling came over me which I cannot describe—a feeling that I was not alone in the little station house; and still the place was as deserted—yea, deserted and uncanny as the grave. My first duty was to light the lamps, cut the telegraph instruments in on the wire, and report my arrival to the dispatcher at Denver, who replied,

"Ha! good for you. Now keep your nerve, and don't think anything about Murphy's ghost, for it is all a josh, in my estimation."

I labored hard to think so myself, but in all my movements I was conscious of someone at my side, though unseen. I built a fire in the cookstove, unpacked my box of groceries, made coffee, smoked and tried hard to keep my mind fully occupied with everything except the one object that concerned me most.

For a couple of hours I busied myself looking over the records of the office, and listening to the click of the instruments. The storm had now broken in all its fury; the wind whistled down through the gulch, like steam escaping from a Mississippi steamboat. The rain pattered against the windows like hail, and now and then, above the roar of the storm, I could hear the wolves wrangling over the carcass of a dead steer which had fallen over the cliff the day before. I was lonesome, and if it had not been so infernally stormy, I should have locked up the office, and started back to Denver afoot. I tried to sing as a diversion, but my voice was strange, unnatural, and startled me. Occasionally I could hear the crash of falling trees up on the mountain side, where the storm must have been terrific. At last, I lay down on the bunk, pulling a blanket over my face to shut out the awful lightning.

I fell asleep and must have slept several hours, when I was startled by the shrill whistle of the "Flyer." I raised up on my elbow, and looked towards the window, and there was the headlight just rounding the curve, swaying from side to side from the fearful momentum of the train. And—my God! was I dreaming? at the telegraph table, with one hand on the key, and the other shading his eyes as he peered out at the train, was the ghost of Tim Murphy!

While the rumble of the on-rushing train was still audible down the canyon, the apparition—or ghost, whichever you choose to call it,—arose from the chair, stretched leisurely, came over to the stove, and stooping down, picked up the poker. My blood seemed to be freezing in my veins, my brain was burning up, and the cold perspiration fell in great drops from my forehead.

What was that? Stealthily, there appeared at the ticket window, a dark, low-browed, murderous

face. There was a flash and report of a revolver—what happened after that, I never knew.

The down-freight in the morning stopped to inquire how I got along with the ghost and found me unconscious on the floor. They took me back to Denver, and I immediately reported to the superintendent, and tendered my resignation. He listened to my story with the keenest interest, congratulated me on my pluck, and paid me a full month's salary.

"Just one moment," said he, as I thanked him, and turned to leave. "Do you think you would know that face again if you were to see it? the face in the ticket window, I mean?"

"Most assuredly," I replied. "It is burned into my memory like the brand on a Texas steer. I can never forget it—it is constantly before me. I could pick it out among ten thousand."

"After a few minutes of silence, he continued: "We have our suspicion who killed Tim Murphy, but are lacking substantial evidence. If you will report here to-night, at 10 o'clock, I will have our detective, Mr. Perkins, on hand, and he will conduct you through every gambling house and hell hole in the city. And if, among any of the people you meet, you chance to recognize that face, say nothing, but report to me in the morning where you saw it. Note the location carefully, and do nothing to create suspicion."

Perkins met me as agreed, and by midnight we had made the rounds of a dozen gambling houses. I had carefully scrutinized the faces of at least two hundred gamblers and toughs, but that face was not among them. By 2 o'clock we had added a dozen more resorts to our list, and still the face was not found. Then Perkins suggested that we visit a highly fashionable dive two miles out on the plains.

We summoned a hack for this trip, and as we entered, I found another passenger, evidently bound for the same place. It was a dark night, and although there were lights on the hack, I had not yet caught a glimpse of the stranger's face.

We pulled up at our destination, under the glaring light of a lamp post, and as I sat nearest the door, I was the first to alight, the stranger following next. As he stepped out, the light fell full on his face, and—my God! It was the face I had seen in my vision—the face in the ticket window. I know that I must have turned pale and trembled, for Perkins grasped my arm, saying:

"Why, what's the matter? Are you sick?"

We entered a brilliantly lighted and gaudy dance hall, and stepping up to the bar, I ordered a whiskey cocktail, to prevent my entire collapse. The stranger had entered ahead of us, and going behind the bar, hung up his coat and hat, from which I judged that he was, perhaps, the proprietor of the place; which I soon learned from the bartender, was a fact.

The next evening he was arrested, but as was expected, he was game to the last. He was conveyed to the city hospital, mortally wounded, and lived less than twenty-four hours. He confessed to Tim's murder, in my presence, and related all of the details just as I had seen them in my vision.

The reward of \$5,000 was divided equally between Perkins and myself, and the Territory of Colorado was well rid of one of the most desperate characters of the day—Black Bart.

Features of the Late Wall Street Flurry.

During the recent exciting days on Wall street, when the common stock of Northern Pacific was being contended for, the volume of business reached enormous proportions, and the telegraph, cable and messenger companies were taxed to their utmost to meet the demands made upon them. The American District Telegraph Company, of which Mr. M. W. Rayens is superintendent, usually employs about 150 boys in its Exchange Court office in the financial district. During a period of about two weeks this number was more than doubled; and on Thursday, May 9, the date when Northern Pacific sold up to \$1,000, requisitions for messengers were made upon every available source of supply, including even clerks, linemen, drivers of repair wagons and others, until a force of over 500 were actively employed, so great was the demand.

At the Postal Telegraph and the Commercial Cable Company's Broad street office an extra force of 100 messengers were received early in the day. The Bankers' and Brokers' Messenger Exchange on New street, which makes a specialty of furnishing messengers for the Stock Exchange, had 500 boys at work.

An estimate places the total number of messengers employed in the financial district during that eventful day as approximating 3,000.

A unique feature in the dispatch of the day's business, resorted to in order to save time, was the employment of electric automobiles by a dozen or more brokerage firms to carry messengers with orders to and from the Stock Exchange, now located temporarily in the Produce Exchange building, quite a distance from most of the larger offices.

One Helps the Other.

Mr. S. A. Duncan, assistant general superintendent of the Postal Telegraph-Cable Company at Atlanta, Ga., was recently interviewed by a New Orleans journal. He gave utterance to these very sensible remarks, which others who think the telegraph gone to the eternal bow-wows through the rapid increase of the local telephone service might well give heed. When asked whether the telephone business interfered with the telegraph in any way, he said:

"Not at all. The two are mutually beneficial to each other. The use of quick methods of communication is a matter of habit, and the constant user of the telephone is also generally a constant user of the telegraph, and people who have never used either to any extent, when they once become accustomed to the use of the telephone for short distances, are not satisfied with the slow processes of the mails for long distances, but use the telegraph, so each plays into each other's hand."

A subscription to TELEGRAPH AGE is regarded as a good investment.

EXECUTIVE HEAD OF THE CUBAN TELEGRAPH.

MR. S. J. BLOODWORTH.

Mr. S. J. Bloodworth, whose portrait appears herewith, is the manager of the Central Telegraph office, Havana, Cuba, a position to which he was appointed on December 1, 1900, when he succeeded Paul Freeman, resigned. By virtue of this office Mr. Bloodworth has entire charge of the military telegraph lines of the Island of Cuba, acting under the immediate direction of the chief signal officer of that department.

Mr. Bloodworth is a native of Montgomery, Ala., and in the early eighties worked as a press operator at Nashville, Tenn., and at Selma and Montgomery, Ala. He took an active part in the great telegraph strike of 1883, after which he went to Galveston, Texas, where in May, 1884, he accepted employment with the Mexican Cable Company.



MR. S. J. BLOODWORTH.

After an engagement of fourteen months with that concern he went to Yucatan as superintendent of the American Telegraph and Telephone Company. Here he remained for three years, resigning to enter other business. In his ventures he was successful, and subsequently became interested in mining in Northern Mexico. Love for the dots and dashes, however, so difficult to overcome by all operators, took him once more into the telegraph field, this time seeking the service of the United States Signal Corps. The quick recognition of his well known executive ability and proficiency as an operator, gained for him promotion to the position of Administrator of the United States Signal Corps in the Province of Puerto-Principe, Cuba. And this advance was also speedily followed by a further promotion to the office he now holds. Many of our older readers will recall Mr. Bloodworth as a former agent and contributor to TELEGRAPH AGE, the time of such association dating back to a period of about sixteen years ago.

Dinner of the Morse Club.

The sixth annual dinner of the Morse Club was held at the Sturtevant House, New York, on Friday evening, May 24, to celebrate the fifty-sixth anniversary of the transmission of the first telegraphic message.

At the conclusion of the dinner, President Walter C. Burton called the assemblage to order and delivered a short address relative to the history and object of the club. This was followed by brief addresses from Col. A. B. DeFrece and Messrs. F. W. Jones, Gardner Irving, W. A. Van Orden, M. F. O'Brien and others.

At this point Prof. David Bimberg performed several fine selections on the violin, after which Mr. Marion H. Kerner entertained the company with some reminiscent remarks on the progress of the telegraph. His talk was illustrated with stereopticon views, many of which were of a humorous character.

The feature of the evening, however, was Mr. Kerner's presentation of what he terms "An Album of Familiar Faces." This consisted of the throwing of a number of faces of well-known telegraphers on a screen within a handsome oval-shaped frame, and which were received with much merriment. Among those thus shown were: Walter C. Burton, George J. Gould, James D. Reid, Andrew Carnegie, Thos. A. Edison, Gen. T. T. Eckert, Col. A. B. Chandler, Chas. A. Tinker, Jas. Merrihew, W. C. Humstone, W. J. Dealy, F. W. Jones, Edward C. Cockey, Henry Rogers, A. E. Sink, Thos. Brennan, Gardner Irving, Chas. L. Chase, M. H. Redding, D. B. Mitchell, Frank Smith, M. F. Gaffney, Geo. Leveene, E. P. Griffith, Col. A. B. DeFrece, W. A. Van Orden, J. B. Taltavall, John Brant, M. F. O'Brien, R. C. McDonald, F. T. Meyer, J. F. Shorey, M. H. Kerner, W. L. Ives, Walter Stillman.

At the conclusion of this part of the entertainment there was thrown upon the screen the words of the "Ode to Morse," which was sung by the entire company accompanied by Professor Bimberg on the violin and Mr. Larue, pianist.

The following officers were elected to serve the ensuing year: Gardner Irving, president; M. F. O'Brien, vice-president; M. F. Gaffney, treasurer; M. H. Kerner, secretary; W. A. Van Orden, historian. Governing committee: F. T. Meyer, F. W. Jones, W. C. Burton.

The proposition to merge the Morse Club into that of another, having been fully considered, it was unanimously determined that the distinctive character of this organization must be maintained, and from now on new life be installed into the club and an effort made to enlist the support of all telegraphers of both sexes and regardless of age. The amendments recently made to the by-laws renders it easily possible for every operator to bear the modest expense of membership.

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

Association of Railway Telegraph Superintendents.

The twentieth annual convention of the Association of Railway Telegraph Superintendents, as previously noted in these columns, will be held at Buffalo, N. Y., meeting at Statler's Pan-American Hotel, on Wednesday, Thursday and Friday, June 19, 20, 21, respectively.

In completing the second decade of its existence, this organization seems to grow in vigor, and its meetings, while lately attracting increasing numbers, have also become marked with a greater earnestness of purpose. This is reflected especially in the thoughtful, suggestive and ampler breadth of statement shown in the various papers submitted for consideration and discussion before the meetings. The benefits to be derived from intelligent association of this kind are incalculable. The association certainly has been the means of accomplishing a vast amount of good in the educatory influences exerted, and reflected in the improved methods employed in the telegraphic departments of the railroads.

A number of valuable papers to be brought before the next meeting have already been prepared. While the list, with the names of the authors, is not yet fully completed, it will be substantially as follows, little, if any, changes being probable:

"Importance in Telegraphy of Apparent Little Things," by Thomas D. Lockwood, electrical engineer of the Bell Telephone Company, Boston, Mass.; "Rapid Telegraphy," by Walter P. Phillips, of Bridgeport, Conn., former general manager of the late United Press; "Storage Batteries," by W. E. Athearn, electrical engineer Western Union Telegraph Company, New York; "Cipher Code for Railroad Telegraphing," by C. S. Rhoads, of Indianapolis, Ind., superintendent of telegraph, Cleveland, Cincinnati, Chicago and St. Louis Railway Company; "Railroading by Telephone," by F. P. Valentine, of Boston, Mass., superintendent of telephones, New York, New Haven and Hartford Railroad Company; "Construction of Telegraph Relay from a Scientific Standpoint," by Prof. C. E. Freeman, of the Armour Institute, Chicago; "Line Construction," by C. H. Bristol, general superintendent of construction Western Union Telegraph Company, Chicago; "Crossing Alarms," by U. J. Fry, of Milwaukee, Wis., superintendent of telegraph, Chicago, Milwaukee and St. Paul Railway Company. Mr. William Maver, Jr., of New York, author and electrical expert, will lecture on "Automatic Telephone Exchanges," and Mr. George M. Dugan, of Chicago, superintendent of telegraph of the Illinois Central Railroad Company, will be prepared to be interrogated on the subject of "Underground Office Connections." It will be seen from the foregoing that the topics named cover a wide and interesting range of thought.

The meeting will be marked by the annual election of officers, the places to be filled being those of president, vice-president, and secretary and treasurer, now held respectively by W. F. Williams, of Portsmouth, Va., superintendent of telegraph of the Seaboard Air Line Railway; C. F. Annett, of Chicago, assistant superintendent of telegraph of the Illinois Central Railroad; and P. W. Drew, of Milwaukee,

superintendent of telegraph of the Wisconsin Central Railroad.

Election of Officers.

At the annual meeting of the American Institute of Electrical Engineers, held in New York, May 21, the following officers were elected: President, Charles Proteus Steinmetz, Schenectady, N. Y. Vice-presidents, Prof. Samuel Sheldon, Brooklyn Polytechnic Institute; Prof. George F. Sever, Columbia University; Prof. M. I. Pupin, Columbia University. Managers, Prof. W. E. Goldsborough, Purdue University; Charles F. Scott, Pittsburg, Pa.; John W. Lieb, Jr., New York city; Capt. Samuel Reber, U. S. Army. Secretary, Ralph W. Pope, New York city. Treasurer, George A. Hamilton, New York city.

International Association of Municipal Electricians.

Mr. Frank P. Foster, secretary of the International Association of Municipal Electricians, is sending out a circular showing a list of hotels at Niagara Falls, together with their daily rates of board, that will be available to members at the next convention of the association, which meets at that point on September 2, 3, 4, next. Mr. W. G. Green, 473 Second street, and Mr. M. J. Donohue, superintendent of fire telegraph at Niagara Falls, will secure accommodations for all who require them to do so. Mr. Frank C. Mason, superintendent of Police Telegraph, 16 Smith street, Brooklyn, N. Y., has made special arrangements whereby all delegates and visitors to the convention can secure reduced railroad fare who go via New York city. Those wishing to take advantage of this opportunity should write to Mr. Mason and give the number they expect to have in their party.

J. P. Morgan Didn't Lease a Cable.

Managers of several of the cable companies in New York said recently that the report from Paris that Mr. J. P. Morgan, in consequence of his interest in affairs in Wall Street, on Friday, May 10, had leased an Atlantic cable for that day for his own private use, was a mistake. There wasn't much doubt in their minds, they said, that some cable had been used by Mr. Morgan, but they declared it to be impossible for any one to hire a cable for his own exclusive use for even an hour, let alone a day. An official of the French Cables Company said:

"No individual, and the same applies to a firm or company, could have hired a cable for private use for several reasons. One is an agreement entered into by the cable companies at an international convention at Berne several years ago, to the effect that they should not lease a cable to any private individual firm or company, and that with the exception of times when lines might be required for Government use they should always be kept open to the public. Another reason is that as he was in Paris Mr. Morgan would have had to use a telegraph line to either Brest or Havre to reach any cable, and as is well known the land lines are operated by the Government, which would not, under any consideration, lease one of its lines to a private individual.

One report from Paris said that Mr. Morgan did get a line from the Government running to Brest, but you may take my word for it that he didn't. What he might have done and what he probably did do, provided his interest in affairs over here was as great as is believed, was to make an arrangement whereby the Government and the cable company agreed to send his messages right along, without letting other business interfere, until the number he filed at one time was all sent. When they had all been sent the company was bound to take anything that came along, and Mr. Morgan would have to wait his turn if he wanted any more sent. The only way he could have had a line to this country all day for himself was to have had part of the Bible sent or Pilgrim's Progress or some other such thing when he didn't have a message to send, and I guess he didn't do that. What would it have cost to do that all day? Oh, about half a million or so, or whatever the day's receipts of a cable are. There have been no instances of that being done, and I guess it wasn't done by Mr. Morgan or any one else."

At the offices of the Commercial Cable Company and the Western Union lines practically the same thing was said. It was also said that Mr. Morgan had not made use of their lines to any great extent on the day that he was reported to have leased a cable.

A Young Manager.

Shirley Errett is the name of a bright-eyed little miss of thirteen years who is acting manager for the Postal Telegraph-Cable Company in the marine office, Detroit, Mich. She is a little telegraphic wonder. She has entire charge of the office from 7 o'clock in the morning until 6.15 in the evening, and it is said she handles with ease two or three hundred messages a day.

A large part of the business goes through the main office, and the uptown operators say that Miss Shirley's "Morse" comes in with the precision and finish of an old timer. She is said to be capable of handling messages at the speed of forty words a minute.

Miss Olive Errett formerly had charge of the office, and Miss Shirley started in about a year ago to help her older sister. The younger sister soon learned telegraphy.

Miss Olive Errett was promoted to the uptown office the first of May, and she asked the manager to allow her sister the opportunity of filling her former position. He at first demurred, on account of Miss Shirley's age, but when he found his patrons along the river front had confidence in her ability to fill the position, he gave the girl the chance for which she had been longing.

Another novel feature of the office is that the "messenger boys" are girls. This is the only office in Detroit having such a service, and probably the only one in Michigan. The two young messenger girls are hustlers, and in their strict attention to business, they can give the messenger boys of Detroit many points in the quick delivery of messages.

If every "bull" had horns, there would be no women in the telegraph business.

New Responsibilities for Telegraph Companies.

A special decision handed down by District Judge Hawley in the United States Circuit Court of Appeals, at San Francisco, Cal., on May 15, adds another authority to those already quoted as placing telegraph companies in a position of peculiar responsibility regarding unauthorized acts of subordinates. The opinion was in reference to the suit growing out of the Bank of Palo Alto having been defrauded of \$840 on Dec. 27, 1898, through a forged telegraphic order devised and transmitted by a San Francisco telegraph operator, then employed in one of the main offices in that city, to the bank in question.

The order purported to be signed by the Farmers' & Merchants' Bank, and by collusion another man called at the bank, and, representing himself as Harry L. Cator, the name mentioned in the order, obtained the money, identification having been waived in the telegram.

The Circuit Court gave judgment to the bank in its suit against the telegraph company, not only for the \$840, but for \$250 counsel fees and other expenses incurred in tracing the criminal.

In its decision the Appellate Court affirms this decision as far as the return of the money out of which the bank was defrauded, but sends the cause back for rehearing in the matter of the expenses incurred, that being no part of any fraud for which the telegraph company was responsible. The opinion refers to the peculiar position of telegraph operators which admits of such frauds, and states that for that reason the company must protect the public against wrongful acts of its servants, even though such acts are not within the line of their duties.

Meeting of the Telegraphic Historical Society.

At the annual meeting of the Telegraphic Historical Society of North America, held May 22 in New York, the proposition of consolidation with the Old Time Telegraphers' Association came up for discussion, and the officers of the society were instructed to make overtures to the latter with that end in view. After transacting routine business the meeting was adjourned, subject to the call of the president, to await the action of the old time telegraphers.

The Telegraph in Porto Rico.

It seems that the Porto Rican system will have to receive some form of Government support or be abandoned. The people there do not telegraph enough to support it. This is another proof that the island cannot be treated exactly like the rest of the United States.

On January 1, of this year, the United States Signal Service, which had up to that time operated the telegraph, turned the entire system over to the Insular Government.

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

LETTERS FROM OUR AGENTS.

To Our Correspondents.

While we are desirous to receive from our agents letters for publication respecting their various offices and of their personnel, for all efforts of this character are appreciated, we would earnestly request that such communications be confined strictly within the limits of the subject, and not so much space be devoted to hunting and fishing items and other extraneous matter, as is frequently the case. We wish to make the department of "Letters from our Agents" an attractive one, but if we were to publish all that comes to us in the shape of irrelevant matter, of no possible interest to the general reader, it would frequently require us to surrender a number of additional pages to contain it all. The current information of any office will, if carefully chronicled, furnish a welcome digest of news that will be read with pleasure and satisfaction by thousands, and this limit should be the legitimate contents of all letters. And we wish that our correspondents would avoid the too frequent habit, at all times a bad one, of abbreviating words in writing. This is a peculiarity among telegraphers, we know, but what may be plain to the writer, and for local interpretation, is usually a mystery to the editor, and is apt to lead to error in the printed statement.

The Telegraph in Alaska.

Juneau, Alaska.—Work of construction of the telegraph line down the Yukon River and across the cut-off from Kaltag to Nome has been resumed. The work is all being done by soldiers. That portion of the line across the cut-off is probably now completed.

A recent arrival from Nome states: "I left Nome February 19, and not many days after was over the portage. The soldiers had then resumed work on the line across the portage and had twenty miles more to build on this end. It is eighty miles across the portage. When we reached Tanana, or more properly Fort Gibbon, a party of soldiers there were preparing to leave for Kaltag, to build the line from there up the river. They were to get away about March 21. The wire has already been strung at various intervals along the river. It is not used yet for telegraphing. The policy seems to be to build at unbroken intervals and to connect the break later.

"The wire between St. Michael and Nome was prostrated over the land stretch when we came out. The wind had blown down the poles. All the poles were of iron and about as big as stovepipes. From St. Michael to Port Safety a cable is laid. It connects Port Safety with the land wire to Nome. I understand construction has been resumed on the line between Eagle and Valdes.

"There is scarcely any food except game on the trail between Nome and Tanana. We brought from Nome an outfit weighing 300 pounds, including largely food. It was well for us we did. Only seven or eight parties were met en route to Nome.

"The mail service below Tanana is poor and from

Kaltag to Nome it has been almost a total failure this winter. Only one mail from the outside world has reached Nome this winter, up to the time we left. The mail got there February 6. It brought the first news of the election of McKinley."

NEW YORK, POSTAL.

Mr. J. B. Driscoll, the night piecework star of the first Boston circuit, has broken all previous records made with the new Twentieth Century Key. On May 20 he sent 272 messages in four consecutive hours, as they came, long and short, a rate of 68 per hour. Mr. J. J. McGarty at the Boston end was the receiving operator.

Miss Eleanor Spear, formerly check girl in Eastern Division, has been appointed as operator in City Department.

Resignations: H. A. Yoell, Hugh O'Rourke, Miss Maggie Conroy and C. A. Sherr, the latter returning to Ashcroft, B. C.

The refinishing of the operating tables and the placing of new instruments thereon has been completed, giving them the appearance of being entirely new, a reminder of the day the operating room was first opened.

Miss McEntee has been transferred to the city department, Mr. W. J. Shannon from city to eastern division, Mr. A. E. Whitaker has been assigned to the Philadelphia bonus wire, and Mr. C. P. West to the Chicago bonus wire. Mr. Thos. Tierney, of the newspaper locals, has returned after an absence of two weeks at his home in Lisbon Falls, Me., where he went to attend the burial of a brother.

Arrivals: Messrs. J. P. Jandorf, from Baltimore; R. W. Stiniers, from Chicago; Geo. J. Burmeister, from Western Union, Chicago; E. C. Peck, from Syracuse, N. Y.; F. Fernandez, from Signal Corps, Cuba; C. E. McCall, M. B. Moore, J. G. Good, C. D. Petry, E. N. Canedy, P. O'Donnell, J. T. Ewing, W. C. Wilson, G. Lehne, Liston; the Misses A. L. Hogan, H. Svenson.

AUGUSTA, GA., POSTAL.

We have comparatively a new set of men now, owing to the fact that some of our force have gone off for the summer, some have been promoted, and some have resigned.

Mr. W. G. Sale is now with the Western Union Company at Wilmington, N. C.

Mr. J. Knox Thrower has gone to New York, with the Western Union.

Mr. G. F. Rogers has gone to Savannah, Ga.

Arrivals: Mr. J. M. Sapp, formerly of Birmingham, Ala.; Mr. L. J. Perry and Mr. J. A. Finch, formerly of the Central of Georgia Railroad; Mr. F. W. Cameron, formerly of Los Angeles, Cal.; Mr. Geo. E. Delano, formerly of Wilmington, N. C., Western Union; Mr. J. S. Hayden, formerly of Dallas, Tex.

The men who still remain are: Messrs. J. Herrick, F. A. Luck, Jr., F. L. Wood, C. F. Wood, T. F. Cridler, J. H. Barnwell, W. H. Hughes, R. M. Cameron, W. A. Stewart, S. Perrin, E. B. Faust, W. S. Cannon, W. H. Conner, J. W. Plowden. Mr. M. H. H. Duvall is the chief operator; Mr. J. P. Edwards, assistant chief operator; Mr. W. J. Lenz, all night chief; Mr. J. D. McLelland, traffic chief.

Mr. W. S. Daniel is chief clerk in the office of Superintendent T. R. Rusk, and Mr. R. R. Goodwin is his assistant.

The checks are Messrs. McAllister and Wallace. Mr. R. D. Andrews is day counter clerk; Mr. D. H. Kanaly, night clerk.

AUGUSTA, GA., WESTERN UNION.

The personnel of this office is as follows: Mr. J. A. Brenner, superintendent; Mr. W. L. Brenner, assistant superintendent, and Miss Nellie Brenner, clerk. Judge John M. Crowley is manager; Mr. J. Roy Atkinson, bookkeeper; Mr. P. McLaughlin, clerk, days; Mr. Joseph Thomas, clerk, nights. Miss Rosa Bland has charge of the telephone department.

The operating room is in charge of Jno. W. Brown, chief operator and electrician; A. Potter, assistant chief operator; J. L. Laney, traffic chief; W. E. Seward, night chief operator; T. B. Yarboro, all night chief operator; Miss Smith, W. E. Norrell, L. B. Wilson, C. W. Bland, B. H. Rosson, J. L. Mounce, J. B. Dobson, G. M. Pike, H. R. Roediger, H. L. Pierce, V. E. Fourcher, G. W. Hammell, J. D. Thomas, St. C. Williams, B. Howell, J. O. Ewing, J. H. Norrell, F. L. Walters, L. B. Carlton, C. R. Hooton, F. A. Lynam.

Mr. W. D. Hill has charge of the gold and stock interests.

Clerks in the operating rooms are: Miss Minnie Walsh and Messrs. W. B. Tinsley, Irvine Milton, and John D. Heffernan.

Mr. L. B. Herring left us for a few months' sojourn in his old home at Wilmington, N. C.

Messrs. Harry Heard, Charles Smith and W. F. Ewing, old members of our force, are working this summer in New York.

Mr. Daniel Brown, from the New York office, was with us a few weeks, but has now returned.

Jacksonville, Fla., called on us for assistance at the time of the late conflagration; we loaned them two of our best operators, Messrs. Herman Roediger and John B. Dobson.

The Georgia Railroad, which connects Augusta, Macon and Atlanta, has the following competent telegraph force: Mr. J. H. Chapman, chief dispatcher, assisted by Messrs. R. B. Heath, first trick, J. S. Stovall, second, and Joseph L. Norman, third. Messrs. J. T. Stovall and J. T. Neal are at the yard office. Mr. J. E. Arno is operator in the superintendent's office.

Mr. E. A. McDonald, manager at Thomson, Ga., recently paid us a pleasant visit.

KANSAS CITY, MO., WESTERN UNION.

Arthur F. Kelleck has been added to the day force at the switchboard, and John H. Vogan is filling the place of night way chief. As both have grown up from check boys, and are thoroughly conversant with the inner workings of the office and surrounding territory, it is safe to predict a brilliant success for them.

Miss Edna Fuller has returned from Arizona, very much improved in health, and has resumed her duties in the Wheatstone department.

Mr. W. E. Allen has been added to the extra force. He has been working for several months at Nashville, Tenn.

Departures: Richard Wagstaff, for Muskogee, Indian Territory; Harry S. Lesen, for Chicago.

Michael S. Higgins, of this office, died on May 19. He was born at Columbus, Pa., August 8, 1863. He began his telegraphic career in a railroad office at Corry, Pa., and after passing through the student period, worked for the Nickel Plate Railway at Conneaut and Bellevue, Ohio. Coming West in 1885, he entered the employ of the Western Union Telegraph Co., in whose service he has since continually labored. Being a zealous worker and possessed of marked ability, he soon came in the line of promotion and filled the positions of night way, traffic, and wire chief, successively. The latter place he held until a year ago, when, owing to failing health and the nervous strain, he gave up the position and resumed the duties of way chief, to which he attended until a week previous to his death.

MONTREAL, QUE., CANADIAN PACIFIC.

One of the Twentieth Century telegraph keys has been placed on the Vancouver wire.

The new key will no doubt be a great boon to the sufferer from "lost grip" as well as to the "light weights."

Mr. Jas. D. McDonough, of the general manager's office, has accepted a position as secretary to Sir Charles Ross, bart., and will accompany him for a trip around the world.

Miss M. Duncan, who for the past three or four years manipulated the Ottawa circuit here, has been appointed agent for this company's office at Calgary, N. W. T. She has the best wishes of her Montreal friends, many of whom were at the station to bid her adieu as she departed for her new field.

It has just transpired that Mr. Walter Wright of the receiving department has become a benedict, and that his associates presented him with a handsome purse previous to his departure on his honeymoon.

Arrivals: Messrs. G. A. McBain, J. J. Irwin, M. P. Kernan, L. Van Every, W. Fraser, W. Vailancourt, H. W. McLaren, D. P. McLaren, and J. Ellis.

Mr. H. Hodge has been transferred to the St. Catharine street East branch, and Master J. W. Ross has been promoted to the city wire department. Mr. H. Keating has resigned.

Mr. J. F. Skirrow, assistant manager of the Postal Telegraph-Cable Company, of New York, spent a few days here recently.

We are still doing business at the temporary offices, pending the completion of the new building, which will in all probability be ready for occupancy about the first of September next.

INDIANAPOLIS, IND., WESTERN UNION.

New arrivals: Messrs. E. C. Cotter, J. F. Davis and C. F. Freeman.

Departures: Messrs. L. S. Abrams and A. G. Knowles.

Mr. William Broden has been transferred from a branch to the main office.

Mr. Arthur Hamilton, who has been severely ill, is again able for duty.

We are glad to hear from Mr. S. R. Fulton, assistant chief operator, who has been in Arizona with his family for several months on account of his wife's health, that the latter is being greatly benefited.

Mr. John Looney, chief operator of the Postal, mourns the death of his mother, who passed away May 12. The fraternity extends to him their heartfelt sympathy in his great loss.

ALBUQUERQUE, N. M., POSTAL.

Mr. J. A. Forehand, manager of this office during the past year and a half, has resigned and returned to Seattle, Wash., on account of his wife's health. He is now chief operator of that office, the position he held before coming to this place.

We regret to learn that Mrs. Forehand died shortly after her return to Seattle.

Mr. Forehand, during his stay here, has proved himself a gentleman of the highest type. He has won the sincere wishes of his associates for his future welfare. He was relieved by Mr. J. S. Creagan.

R. H. Hawkins is day repeater chief, W. K. Rawlins late night repeater chief, P. E. Drawver, operator. The first night trick being vacant at present, Mr. Rawlins is filling in.

CHICAGO, ILL., WESTERN UNION.

Messrs. Chas. Fuhrman, Harley Clark, and Peter Berresheim are absent on sick leave.

Frank Abbott is up and around on his crutches, and says he feels much better.

Thos. Chilton, ex-delivery clerk of the Western Union Telegraph Co., at Indianapolis, Ind., but now of Minneapolis, Minn., called at this office recently, renewing acquaintances among former Indianapolis operators, who are quite numerous in Chicago.

Mrs. Frank Dye returned to this office May 20, her coming being a surprise to all. She was assigned to her old wire, the Galesburg quad. All are glad to have her with us once more after some years' absence.

Mr. Frank Burdick is doing jury duty for a couple of weeks. He thinks it is all a joke.

For examples of courtesy and hustle, Messrs. Case and Schwartz, chiefs of Illinois division nights, are unexcelled. These gentlemen are athletic and are always in fine trim. Great strength makes good nature and perfect health. Their advice to their friends is: "Exercise, and success will be yours."

DALLAS, TEX., WESTERN UNION.

Our assistant day chief, Mr. Jas. C. Langley, has been appointed manager at Beaumont, Tex.; assistant night chief, Mr. W. W. Hoskins, succeeds Mr. Langley, and traffic chief, Mr. Geo. M. Hodges, succeeds Mr. Hoskins. Mr. W. S. Strawbridge has been promoted to be traffic chief.

Departures: Mr. Edward Davis, for his home in Ohio; Mr. Ralph Briggs, for Chicago; Mr. W. J. Wilhoite, for Houston, Tex.

Resignations: Mr. Samuel Moore, who is now

with the Postal here, and Mr. T. L. Heston, who has gone to Muskogee, I. T., to work in a broker's office.

Assistant Superintendent G. C. Felton and his clerk, Mr. W. B. Kendall, and Mr. Al. Lucas have returned from Beaumont, Tex.

Mr. Frank Vaughan has left for Corsicana, Tex.

The operators of this office are as follows: R. B. Allender, C. S. Aycock, W. J. Clark, James R. Harman, D. H. Hawley, E. E. Jackson, Roy Montgomery, H. A. Mansfield, James McLemore, W. H. Mugford, John Sandford, C. C. Forrest, A. L. Adair, G. P. Brinkley, R. W. Carlton, P. D. Mathis, John Bogan, L. A. Ott, W. G. Stansbury, Elmer Cox, Harry Johnson, J. B. Hardy, C. A. Work, John W. Woodland, C. B. Yost, Edward Fox, Thomas Campbell, P. M. Wilson, A. H. Hickerson, B. A. Clark, W. C. Long, F. C. Tigner, P. L. Bradley, N. P. Warren, W. G. Jamison, George Littlejohn, George Hutton, C. M. Rapp, C. C. Cook, H. Hopkins, W. H. McKinney and T. G. Crowder.

NEW BEDFORD, MASS., NOTES.

Oscar Bowen, formerly with the Western Union Telegraph Company at Providence, R. I., but for the past year electrician and general superintendent of the Automatic Telephone Co., of New Bedford, Mass., has accepted a similar position with the Fall River Automatic Telephone Co. On the day of Mr. Bowen's departure for Fall River he was presented on behalf of the company and employees a handsome gold watch and chain. The inscription on the watch bespeaks the high esteem in which he was held by his former associates.

Mr. Joseph T. Winslow, formerly with the Western Union Telegraph Company at New Bedford, Mass., has been appointed manager of the Vineyard Haven, Mass., office of the Martha's Vineyard Telegraph Co.

Hyannis, Mass., until recently the telegraph headquarters of the consolidated railroad and its branches south of Middleboro, Mass., has been deserted (telegraphically), the train dispatcher's office having been moved to Buzzard's Bay, Mass. Mr. E. E. Field, for many years with the railroad, remains at Hyannis with the Western Union. At Buzzard's

STATE OF OHIO, CITY OF TOLEDO, } ss. LUCAS COUNTY.

FRANK J. CHENEY makes oath that he is senior partner of the firm of F. J. CHENEY & Co., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of CATARRH that cannot be cured by the use of HALL'S CATARRH CURE.

FRANK J. CHENEY.

Sworn to before me and subscribed in my presence, this 6th day of December, A. D., 1886.

{ SEAL }

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Notary Public.

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Bay J. N. Smith is chief dispatcher, with W. A. Perry night chief. The assistants are J. Wood, Will Hart and Anna Smith. The French Cable Company's test office here is in charge of Mrs. Wm. A. Gidley.

Some one has dared send a congratulatory message outside the stereotyped form. It was a pleasure to hear the following: "On this day of felicity, I congratulate you by electricity"; and still another passed through our hands a few days since: "A pleasant reminder of what happened in May, just twenty-three years ago to-day."

PHILADELPHIA, PA., WESTERN UNION.

Mr. J. B. Hiestand, of this office, was married recently to Miss Lizzie Zendt, of North Wales, Pa. The AGE and many friends extend congratulations and best wishes.

Mr. J. C. Mullin, who has been with us for a number of years, has resigned to go with this company at Pittsburg, Pa.

The strawberry message rush is on us and everybody is on the qui vive.

After a week's sojourn in the South, E. A. Maaske is with us again.

Other arrivals: F. R. Rose, Huntingdon, Pa.; C. E. Mapes, Philadelphia.

Owing to the death of his venerable father, J. S. W. Philips was absent for a week.

The twentieth wedding anniversary of Mr. and Mrs. John H. Sisk occurred May 10. The event was celebrated by them at their residence, where, it was said, Stephan Girard once lived. Mr. Sisk, who has been one of us for many years, is also a prominent politician and has a host of friends. The gathering therefore was a large and noted one. The feature of the evening was the fine singing and playing of Miss and Master Sisk. The concert program was a splendid affair, made up of both professional and amateur talent, which was greatly appreciated. The menu was all that could be desired. Dancing was also arranged for those who cared for that pleasure, while a minstrel orchestra discoursed sweet music on the lawn, which was aglow with light from many colored lanterns. Mr. and Mrs. Sisk were the recipients of many handsome and costly presents. May they celebrate many more such anniversaries.

NEWPORT, R. I., WESTERN UNION.

Mr. Daniel E. Harrington has accepted a position with a broker here.

Mr. Joseph Riley is running the Metropolitan Stock Exchange here with E. F. Sullivan as operator, late with E. L. Doucette.

Night Manager R. R. Rowe has returned from a week's visit to Gettysburg.

PHILADELPHIA, PA., POSTAL.

Chief Operator C. A. Stimpson has evolved another ingenious invention out of his fertile brain. This time he applies instruments to ordinary Morse wires and at once provides an additional circuit without in any way interfering with other signals.

The practicability of the idea has been demonstrated by successful tests on a circuit between Philadelphia and Atlantic City, over which hundreds of

messages were handled in a thoroughly satisfactory manner. Besides being able to transmit and receive Morse characters, the operator is also enabled to use the same circuit for ordinary conversation, after the manner of the telephone, without the use of switches or making any change in the installed set.

Mr. P. V. DeGraw, a popular ex-telegrapher, now with the Columbia Phonograph Co., was a recent visitor who became especially interested in Mr. Stimpson's new invention. Our officials at the New York headquarters were also promptly represented by Mr. M. M. Davis, who quickly recognized its merits and adaptability.

Mr. W. T. McCorkle is now known as the "time-keeper," not, however, of the time-book—he watches the Washington wire and announces time at noon.

Mr. Frank Williams, of the first Chicago, is enjoying the benefits accompanying his new position at a broker's office. Mr. Frank Holloway, his side partner, is likely to be the next favored, judging from the frequent calls made upon him for outside service.

Messrs. Edward Addleton and J. J. McCarty have resigned, the former returning to Hawley, Pa., the latter going to New York.

The night force has lost three very good men, Messrs. James Madden, Albert Weiss and Frank Yhost, all newspaper men, they having taken up new positions with stock brokers.

New faces are much in evidence these days. Among the latest arrivals are Messrs. William Anderson, H. C. Kline, R. Ziegler, J. F. Haughton, Wm. B. Kearney, L. D. Evans and J. J. Horner.

The "roast" in the morning on the berry wires through the Virginia Peninsular is very hot, the busy season being fully on.

This office enjoys the distinction of having the tiniest messenger boy in the city. He is Master Harrison Reidenbach, whose height just reaches the top of a yard stick; but what he lacks in size is made up in tidiness, attention and activeness. He is very popular.

Mr. Jacob Hope, manager of the Eighteenth street and Allegheny avenue branch office is absent on a sick leave.

NEW YORK WESTERN UNION.

Mr. R. H. Morris, mechanical engineer, has moved his office from the rear of the seventh floor to the electrical engineer's office, on the fourth floor, to make room for the Buckingham system, which has become a part of the Wheatstone department.

Mr. Martin Durivan has gone to West End, Long Branch, N. J., to open the summer offices.

Mr. George A. Newton is at the race tracks for the summer.

Captain Kirtland, of the Jerseys, has been on a trip to Hinton, Va., to visit his wife, who is ill at that place.

Mrs. Cora A. Hastings-Mauer, who was injured by a railway collision on the Brooklyn Bridge, May 20, is now in the Memorial Hospital, Brooklyn, and slowly improving.

Mr. Henry W. Sauer, president of the New York

Telegraphers' Aid Society, has, on account of poor health, impaired by too close attention to duty, gone to Sullivan County, N. Y., to recuperate.

Mr. M. F. O'Neill went to Baltimore, Md., to attend the funeral of his mother, who died there May 22. The sympathy of all is his.

Mr. James S. Hunt, of the Western Union, San Francisco, Cal., came East to Bridgeport, Conn., to see his sister, who was ill. She died the day after his arrival. He will remain East for a few weeks.

Mr. Frank Saffel has left for a visit to his old home, Bennings, D. C.

Mr. George S. Brown, who left here a year ago for the benefit of his health, states in a recent letter that he is working at Redlands, Cal., and is doing well.

Appointments to waiting list: D. Brown, J. J. Hope, Thos. P. Murphy, M. Casper, J. J. McDonough. Junior operators: J. E. Brennan, J. F. Fitzpatrick. To regular force from waiting list: L. W. Sittenstatter, W. M. Butte, J. H. King. New appointments: Miss W. H. Heinbecker. Resigned: E. P. Dempsey, F. L. Gerber.

Mr. J. Curley Watts, of the night force, has a son, born May 3.

Mr. Harry B. Rathbone, of the editorial staff of the New York Journal, is the father of a daughter, born May 18.

Mr. Fred Catlin, of the quadruplex department, one of the best known operators in the United States, has resigned, to enter other business.

DES MOINES, IA., NOTES.

Mr. R. G. Williams, operator, has resigned from the Postal, and accepted a position at Oelwein, Iowa, where he is now located with the Chicago Great Western Railway and the Postal Telegraph-Cable Company.

Harry Kern is still in charge of the delivery department of the Postal.

Manager C. F. Ames, of the Western Union, says TELEGRAPH AGE is O. K.

The veteran Thad Schnell, agent for this paper at Des Moines, has just sent in a nice list of subscribers. He says the older the AGE grows the better 'tis.

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 prices—sold \$1.00 per week. B. L. Brannan, 195 Broadway, New York. (Adv.)

CHICAGO, ILL., POSTAL.

Mr. E. R. Sherman has been working at The Associated Press during past few weeks in the absence of Mr. Allen.

Mr. T. H. McMahan has recently returned from Des Moines, Iowa, where he has been taking report for The Associated Press.

Miss Jenny Sanborn returned to-day from Mis-

issippi, where she has been enjoying a few weeks' vacation.

Mr. Harry Dengler, assistant to Mr. Durand in the New York division, has been looking a little worse for wear of late on account of moving.

Mr. George Pierce, for years at the Board of Trade, has been favored with a straight day trick and is working the Pittsburg local, vice J. G. Hoy, who has taken another trick.

Mr. F. B. Otto was assigned to aid Mr. W. F. Lincoln in untangling the loops and the installation of the new card system used on all the city loops, which was adopted after the fire in the terminal room some time ago. Although the duties connected with the work were somewhat disastrous to the hands and face, the instruction gained therefrom will make Mr. Otto a valuable man in that department.

Mr. A. W. Evans has been assigned to the cable wire, vice Mr. Moran, taken a 11.30 split trick.

The "Pump handle" key, as it has been called here, or the twentieth century key, as it is shown on last page of the May 16 issue of the AGE, has been used in this office considerable of late, and among those who recommend it is Mr. John Kenny, who pronounces it a grand success. Wire Chief A. B. Carroll owns the machine, and it is always on exhibition.

Mr. W. E. Blizzard has just returned from a two weeks' vacation in Ohio. He was relieved at the Journal by Mr. Arthur Lassman.

Messrs. Lee Williams, F. C. Williams, Richard Ahlers and Edward Groth have been added to the regular force.

Mrs. Theidie has returned from a short vacation.

Among the new arrivals are: Miss Hulan and Messrs. F. W. Campion, G. B. Guthrie, David Duff, Codd, Tockstein, Sheldon, Combs, McCann, Drummond, Quinn and Diefendorfer.

Departures: Messrs. John Daley, Shrum, Atherton, Arthur Lassman, Arthie Rainey, Harry Ginsburg, Louis Russell and Brierton.

Don't Knock.

Another good thing comes out of Buffalo, a town entitled to exalt its horn. Last week the Commercial Travelers' Association gave a hearing to Mr. Maurice H. Case, supreme president, and Mr. Clarence H. Lavery, supreme secretary and treasurer, of the Order of Don't Knock, which was incorporated March 20. The charter members are Buffalonians. Every person who joins the order solemnly binds himself to pay a fine of one cent every time he is caught "knocking." The proceeds of the fines are to go to charity.

"To knock" is beginning-of-the-century English for "to hackbite," to "speak ill of." It is the purpose of the new society to repress a habit which is altogether too common and springs sometimes from thoughtlessness as much as from malice. Sometimes it seems to be infectious. Let somebody in any company begin to say mean or unkind things of some absent person, and ten to one some-

body else will take up the tale and add spite to spite. It ought to be as easy to speak good as to speak evil of your friends and acquaintances, but notice how a sneer, an unjust criticism, a scandalous story is rolled along from tongue to tongue, gathering venom in its passage. Some cynics say frankly that they don't scruple to "talk about" their friends because they know that their friends don't scruple to "talk about" them. A scurvy plea, as if Tom must be a sneak and a gossip because Dick and Harry are.

The amount of suffering that is caused by tattling, backbiting and "they say," especially in small communities where everybody knows everybody and every word of depreciation or scandal is sure to reach its mark, is incalculable. You can hardly take up a newspaper without finding in it some story of desperate affray or suicide or murder, of somebody done to death by poisoned tongues. But even these positive and palpable results of "knocking" are not so sinister as the effect of it upon the hardened though perhaps unconscious practicer of it. He or she, acquiring the censorious, snooping, backbiting habit, becomes a nuisance and a curse, a mere bag of bile and jaundice, a collector of the offal of ill nature. In some cases "knocking" becomes an incurable disease, but in its earlier stages it yields readily to such treatment as the Don't Knock Order proposes. The objects of the order are thus described in its constitution:

"Section 1—To overcome in its members the deplorable habit of speaking ill of our fellows—otherwise known as 'knocking'—and by precept and example trying to induce others to do the same.

"Section 2—To better the social and moral condition of mankind by a true devotion in its members to the cause of charity in its broadest sense.

"Section 3—To keep the Golden Rule ever in the minds of its members.

"Section 4—To bind its members together in a social and fraternal manner."

And here is a little bit of the healthful creed:

"We believe that the practice of speaking ill of our fellow-men, otherwise 'knocking,' is detestable, unbrotherly and uncharitable.

"We believe it our duty to conceal the imperfections of our fellows (provided their actions are not of great menace to the welfare of the community), and do all we can by precept and example to show them where they err.

"We believe that many lives are ruined daily, that many hearts are made miserable and many

men and women driven to desperation by the despicable practice of 'knocking.'

"We believe that in most instances 'knocking' is done thoughtlessly, and even those who knock maliciously and with evil intent would refrain if they would but give a thought to the possible consequences of the act.

"We believe that a simple little knock unthinkingly made sometimes grows to such proportions as to be more cruel and dangerous than the plunging of a sharp knife into the vitals of the victim.

"We believe that a persistent, deliberate knocker is as vile and as dangerous to the welfare of a community as a murderer.

"We believe that many people judge others by their own standard, and that because they are not tempted or are able to resist doing some particular thing that they consider wrong, they feel themselves warranted in despising and criticizing those who are weaker than themselves or whose opinions differ with their own."

Don't "knock," and don't "rubberneck" to excess.—New York Sun.

Among the telegraphic devices exhibited at the Pan-American Exposition, at Buffalo, N. Y., that contributed by Patrick B. Delany, the electrical engineer and telegraph expert of South Orange, N. J., showing an improved system of high speed automatic telegraphy, is calculated to attract wide attention. This is because of its great inherent possibilities, particularly in regard to its flexibility of operation and the ease with which its manipulation may be acquired by any operator. It is a punching device of modified simplicity in construction, operated by the Morse key, and is capable of recording messages on chemically prepared tape in the usual dot and dash style at a rate as high as 2,000 words a minute, if necessary.

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

Information is desired relative to Joseph D. McDonald, who about six years ago worked for the Postal Telegraph-Cable Company at Boston, Mass.; his whereabouts if alive, and if dead, the place and date of his death. Address J. T. Moran, chief operator, Western Union Telegraph Company, Providence, R. I. (Adv.)

Readers of the TELEGRAPH AGE are referred to the advertisement of the Montauk Cable Company on page two of the front cover. (Adv.)

The Modern Service of Commercial and Railway Telegraphy (8th Edition, revised and enlarged), by J. P. Abernethy. The theory and practice, including railway station and express service. Arranged in questions and answers. 425 pages, 40 illustrations. Price \$2.00, expressage prepaid. Address John B. Taltavall, The Telegraph Age, 263 Broadway New York.

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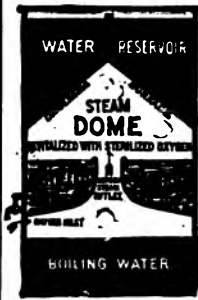
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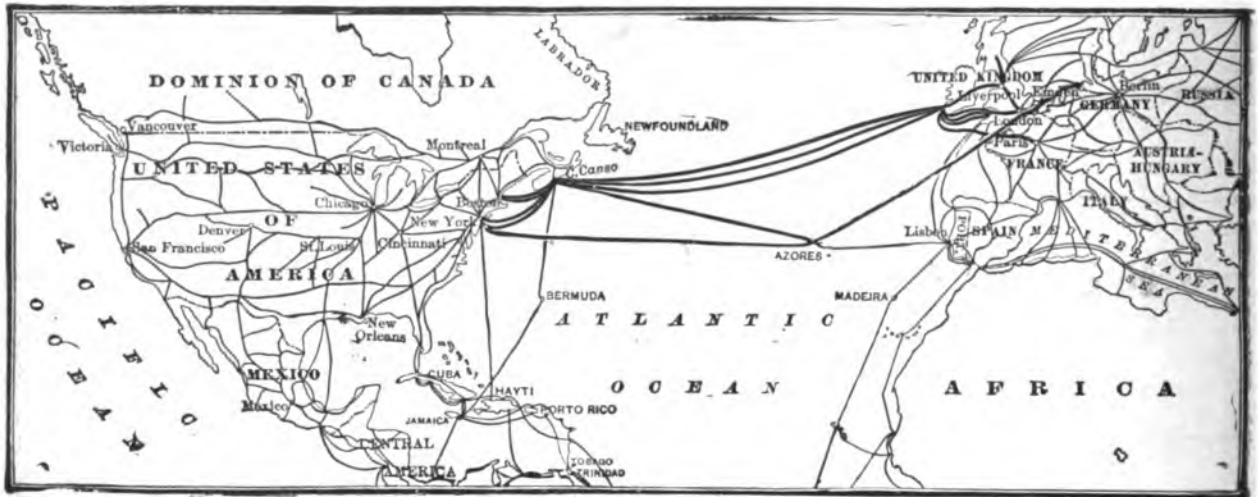


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The officers of the Postal Telegraph-Cable Company and of the Commercial Cable Company deny emphatically that either company is contemplating any such combination and state that the control of the Postal Telegraph-Cable Company and of the Commercial Cable Company is not for sale.

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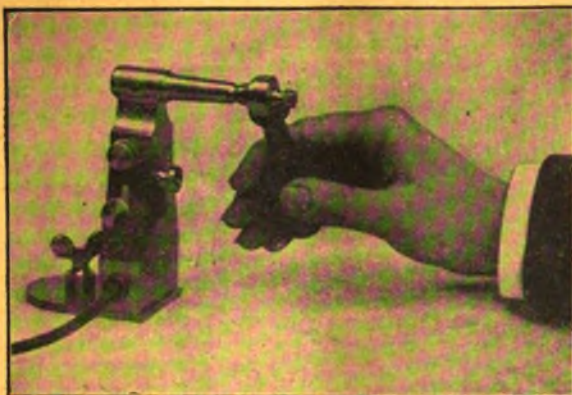
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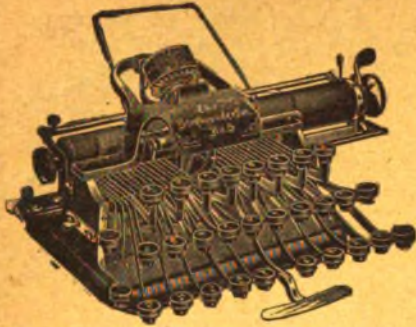
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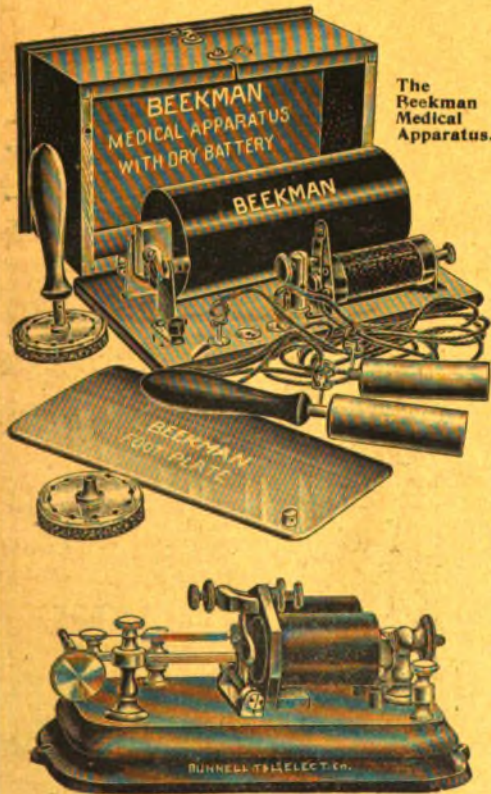
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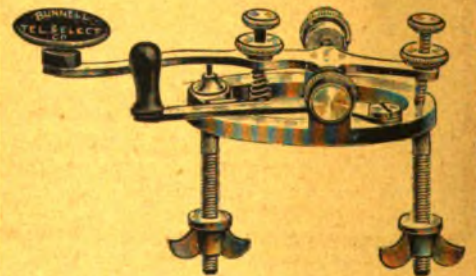
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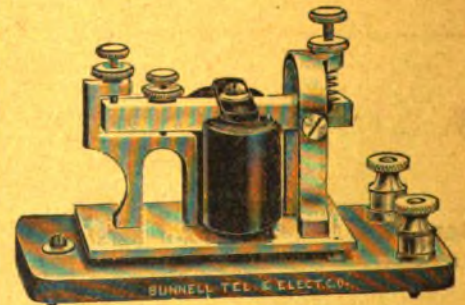
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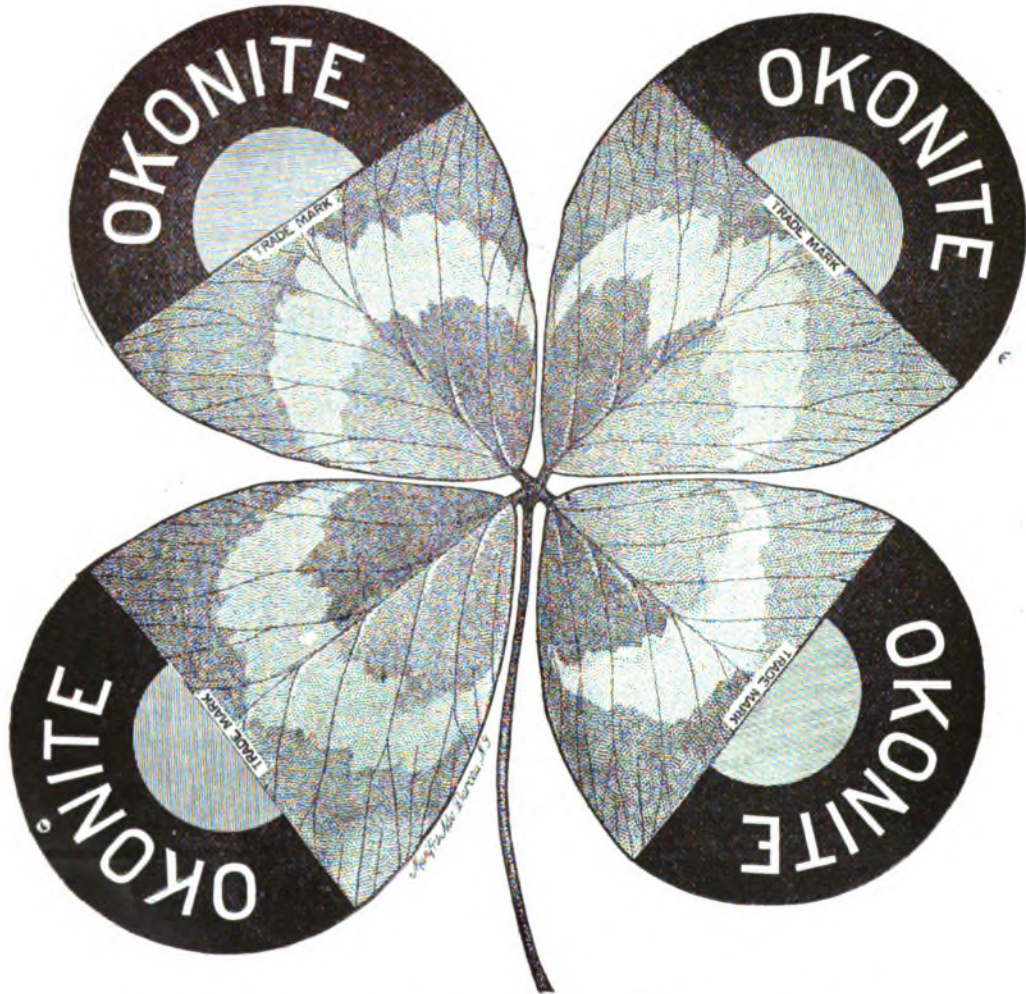
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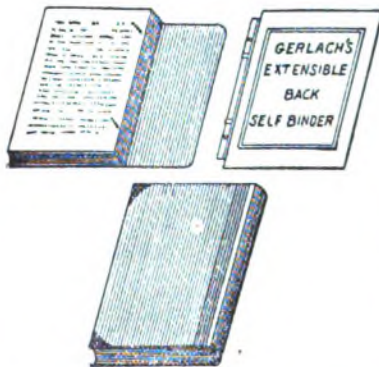
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THE TELEGRAPH AGE.

No. 12.

NEW YORK, JUNE 16, 1901.

VOL. XXIV.

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SOME POINTS ON ELECTRICITY.

BY WILLIS H. JONES.

During the past three months four different writers have requested this journal to state the minimum number of volts required to produce death by electrocution in a human being.

It would be impossible to answer the correspondents satisfactorily with the question put in that form; in fact, no electrician would attempt to give an approximate figure without a thorough knowledge of the physical condition of the victim and the manner in which the electric power is to be applied, and the connections made. Records have been kept which show that death has been caused by as low as 50 volts (probably from fright), while one man actually withstood 2,000 volts for several minutes and recovered.

The fact is that it is current that kills, not voltage, hence although the latter regulates the value of the former in every circuit, it follows that to produce a given strength of current in bodies of different resistances the value of the electromotive force alone must be regulated by Ohm's law, $RXC=E$.

It is generally believed that one-half to one ampere of current flowing through the vital portions of one's body will usually produce almost instant death.

It has been found that the resistance of human bodies of average size, measured lengthwise, varies between 5,000 and 20,000 ohms, according to the thickness, hardness, and moisture of the skin, and other physical conditions at the moment the electric charge is received.

From this it will be seen that it would require four times the voltage to produce a given strength

of current in a person of maximum resistance as it would in the minimum body. Again, as the resistance of any part of a body is less than that in its entirety, it is also evident that if the direction of the charge be across or through the center of the body—say in line of a vital organ—a comparatively small voltage will cause the strength of current in that circuit to be equally as dangerous, as one due to a greater pressure but having the full length of the body to overcome would be in the longer route.

With this explanation the reader will readily understand the "miraculous escapes" (according to newspaper accounts) of persons who were credited with having received the "full charge" of thousands of volts of electricity. The fact is that owing to imperfect contact with the wire due to partial insulation of clothing, dry shoes, or other substance, the total resistance of the circuit through the body was so great that the current resulting from E divided by R was insufficient to prove fatal.

The various explanations which have been offered to decide the exact manner in which electricity causes death show that medical experts differ in opinion to a great degree on many points, but the fact has been pretty well established that a current has a direct disintegrating effect on the brain and nerve tissues. It seems that death by electric shock is due to the fact that the current produces a contraction of the arteries through its influence on the nervous system, which constriction throws in such a mechanical impediment to the flow of blood as the heart cannot overcome.

At Auburn and Sing Sing the electromotive force employed for legal electrocution is but about 1,800 volts, direct current, but it must be remembered that the resistance of the human circuit is greatly reduced by first moistening the skin and seeing that electric contact with the body is perfect.

A peculiar characteristic of electricity is that a current due to the electromotive force of an alternating machine of ordinary commercial frequency is nearly three times as dangerous to life as a direct current of the same amperage would be; yet when the rapidity of such alternations are enormously increased the danger decreases with the rise until a point is reached where the effect upon the human tissues is harmless.

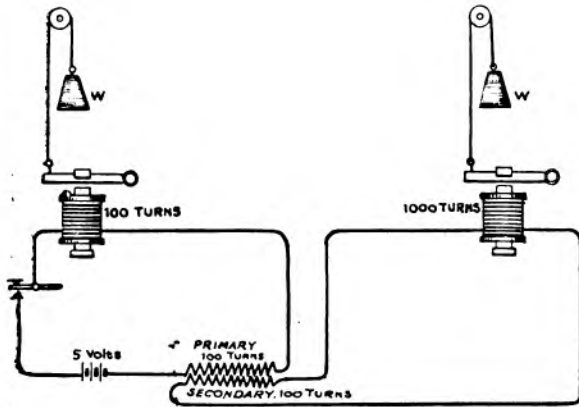
A correspondent signing "W. H. A." asks the following question:

"If a primary circuit with five volts and one hundred turns of wire on the magnet has a lifting power of five pounds, will a magnet of 1,000 turns in a secondary circuit have a greater or less lifting power? How much and why?"

Arranged as per diagram, the lifting power of the magnet in the secondary circuit would be very insignificant compared with that in the primary,

because the current in the former circuit flows but momentarily, while that in the primary is sustained so long as the key remains closed.

The inquirer evidently has in mind the action of an alternate current in the secondary of a transformer circuit. Here the effect and strength of the current in each circuit would be approximately the same provided the size of wire and number of convolutions of copper in the primary and secondary coils are identical, that is to say, five volts e. m. f. would feed each circuit.



The strength of a magnet is found by multiplying the current flowing in the circuit by the number of convolutions of wire in its coil. Our correspondent has not mentioned the resistance of either magnet coil, but assuming that all coils are of the same gage wire and that each coil offers one ohm resistance (disregard transformer resistance to simplify the figuring), then the exciting current in the primary circuit magnet will be $\frac{5 E}{100} \times 100$ turns = 5 amperes.

In the secondary circuit magnet it will be approximately the same $\frac{5 E}{1,000} \times 1,000$ turns = 5 amperes.

Of course we can never get quite as much out of a secondary circuit as we put in the primary on account of the heat loss due to the operation of the transformer, but it should not exceed five or ten per cent.

Coming Conventions.

The Association of Railway Telegraph Superintendents, at Buffalo, N. Y., June 19, 20, 21.

The International Association of Municipal Electricians, at Niagara Falls, N. Y., September 2, 3, 4.

The Old Time Telegraphers' Association and the United States Military Telegraph Corps (jointly), at Montreal, Quebec, September 11, 12, 13.

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The New Edison Storage Battery.*

BY DR. ARTHUR E. KENNELLY.

It is well known that the history of the storage cell is essentially that of the lead cell discovered by Plante in 1860, in which lead peroxide is the depolarizing substance. An enormous amount of labor has, in the aggregate, been expended upon the improvement of this cell in the hands of experimentalists. As a result of that labor, the storage battery has at last become a recognized adjunct to direct-current central stations, but it has limitations that seem to withstand further attempts toward improvement. Of recent years, hardly any success has been met with in the direction of reducing its weight for a given energy-storing capacity, without detriment to endurance, and this weight is the great drawback of the storage battery in electric storage traction, and has been the principal obstacle to its advance in this direction for the past twenty years.

In practice the storage energy per unit mass of the modern lead battery, is from four to six watt-hours per pound of battery (8.8 to 13.23 watt-hours per kilogramme). Expressed in another way, a battery weighs from 124.5 to 186.5 lbs. per horsepower-hour at its terminals (75.5 to 113.4 kilos per kilowatt-hour); or, if its stored energy available at terminals were all expended in gravitational work, a battery could raise its own weight through a vertical distance of from two to three miles (3.2 to 4.8 kilometers).

While it is possible to increase the energy per unit mass by making the electrodes very light, yet this is always found to be followed by a very heavy deterioration.

Many attempts have also been made to perfect storage cells of the alkaline-zincate type, but the great difficulty of depositing zinc in coherent form from the solution, as well as the lack of a depolarizer that shall be insoluble in the electrolyte, has stood in the way of this cell's success.

Mr. Thomas A. Edison set himself the task of finding a cell which should possess the following advantages:

1. Absence of deterioration by work.
2. Large storage capacity per unit of mass.
3. Capability of being rapidly charged and discharged.
4. Capability of withstanding careless treatment.
5. Inexpensiveness.

He believes that the cell here shown may claim these advantages in a very satisfactory degree. The negative pole, or positive element, corresponding to the zinc of a primary cell, or the spongy lead of a secondary cell, is iron. The positive pole or negative element, corresponding to the carbon of a primary cell, or lead peroxide of a secondary cell, is a superoxide of nickel believed to have the formula NiO_2 . The cell is therefore a nickel-iron cell, a name which suggests the structure.

*A paper presented at the Eighteenth Annual Meeting of the American Institute of Electrical Engineers, New York, May 21, 1901.

ural material—nickel-steel. The electrolyte is potash; viz., an aqueous solution containing from 10 to 40 per cent by weight, but preferably 20 per cent of potassium hydroxide, the freezing temperature of which is 20 degs. below zero F. or—30 degs. C. The initial voltage of discharge after recent charge is1.5 volts
 The mean voltage of full discharge is approximately.....1.1 volts
 The normal discharging current rate per unit area of active element (positive or negative) is60 $\frac{\text{milliamperes}}{\text{sq. inch.}}$
 or 8.64 $\frac{\text{amperes}}{\text{sq. foot.}}$
 or 0.93 $\frac{\text{amperes}}{\text{sq. decimeter.}}$
 The storage capacity or the cell per unit of total mass of the cell is 14 watt-hours per pound of battery.
 or.....30.85 watt-hours per kilo
 Expressing the same statement in another way, the weight of battery per unit of electric energy at terminals is.....53.3 lbs per e. h. p. hour
 or.....32.4 kilos per kilowatt-hour
 Or the battery gives energy at its terminals sufficient to lift its own weight through a vertical distance of approximately,

7 miles or 11.26 kilometers.

The mean normal discharging power-rate per unit mass of total cell is.....
4 watts per pound or 8.82 watts per kilo
 Corresponding to a normal discharge period of3½ hours
 The cell may, however, be discharged at a relatively high rate, in approximately..... hour
 Corresponding to a discharging power rate per unit of total cell mass of.....
12 watts per pound or 26.46 watts per kilo.

Charging and discharging rates are alike. That is to say, the cell may be charged at the normal rate in 3½ hours; or, it may be charged at a relatively high rate in one hour, with no apparent detriment beyond a somewhat lowered electrical charge efficiency. In other words, the cell does not appear to be injured by overcharging or discharging, and only suffers in electrical efficiency under such treatment.

The positive and negative plates are mechanically alike, and can scarcely be distinguished by the eye. They differ only in the chemical contents of their pockets. The samples here exhibited, which are intended for automobile batteries, illustrate the construction. Each plate is formed of a comparatively thin sheet of steel, 0.024 inch (0.61 mm) in thickness, in which rectangular holes are stamped, so as to leave a grid or frame somewhat resembling a window-frame. In the plate there are three rows of eight rectangular holes or recesses, or 24 recesses in all.

Each opening or recess is filled with a pocket or shallow box containing the active material. These boxes correspond to the panes of glass in the window-frame analogy. The panes instead of being thinner than the frame, as in an actual window, are

thicker than the frame, or project slightly beyond the surface of the steel grid. They are perforated with numerous small holes to admit the electrolyte, but entirely conceal the contained active material from view. All that meets the eye, therefore, in any of the plates, is the steel frame, and its embedded "windows" of perforated steel.

The active material is made in the form of rectangular cakes or briquettes, and one such briquette is lodged in each pocket or "window pane" of the plate. Each of the plates shown, therefore, supports, or contains, 24 briquettes of active material, all in rigid contact with its own substance.

Each briquette is placed in a shallow, closely fitting nickel-plated box of thin perforated crucible steel, cut from a long strip of that material 0.003 inch (0.075 mm.) thick. A cover or lid of the same material is then laid over it, so that the briquette is closely enveloped by the sides and walls of its perforated steel box. The boxes are then placed in the openings or holes in the nickel-plated steel grid, and closely fit the same. The assembled plate is then placed in a hydraulic press, and subjected to a total pressure of about 100 tons. This pressure not only tightly closes the boxes, but it also forces their metal sides over the adjacent sides of the recesses in the steel grid, thus clamping the whole mass into a single solid and rigid steel plate with the hollow "window panes" full of active material. The nickel-plating of both grids and boxes aids in securing good permanent electric connections between them. The finished plate has a grid thickness of 0.024 inch (0.56 mm.), and a "window" or pocket thickness of 0.1 inch (2.5 mm.) This is the maximum thickness of the plate at any point, but being of steel, the plate has ample rigidity.

The positive briquettes (zincs of a primary cell) are made by mixing a finely divided compound of iron obtained by a special chemical process with a nearly equal volume of thin flakes of graphite. The graphite does not enter into any of the chemical actions, but assists the conductivity of the briquettes. The graphite is divided into very thin laminæ by a chemical process, and these are passed through sieves or screens so as to leave a size or area of flake that is much larger than the area of the perforation in the steel windows. The mixture is then pressed into briquettes in a mould, under a hydraulic pressure of about two tons per square inch. The briquettes have a surface area of nearly three inches by one-half inch on each face.

The negative briquette (carbon of a primary cell) is made by similarly mixing a finely divided compound of nickel, obtained by special chemical means, with a nearly equal bulk of fine flakes of graphite and solidifying the mixture in a mould into briquettes of the same size as above.

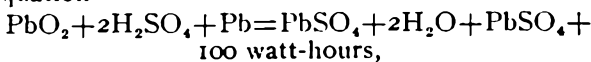
A suitable number of positive and negative plates are assembled together, being separated from one another only by a thin sheet of perforated hard rubber.

The assembled plates are placed in a vessel nickel compound, oxidizing it to the hyperoxide of nickel, Ni O₂, a higher oxide than the peroxide. In other words, the charging current simply carries oxygen

in the opposite direction against the forces of chemical affinity, from the iron to the nickel, and stores the energy in the reduced iron, which is, of course, unaffected and passive in the presence of the potash solution. On discharge, the current passes from the positive pole through the external circuit to the negative pole, and its attached iron or positive plate, and then through the solution to the negative or superoxide plate. In so doing the oxygen moves back against the current and partially reduces the nickel superoxide NiO_2 while oxidizing the spongy iron. The energy of burning of the iron and oxygen which would be developed as heat in the ordinary chemical process is now liberated in the circuit as electrical energy.

The cell is an oxygen-lift. Charging pulls the oxygen away from the iron and delivers it temporarily to the nickel. The condition is then stable, until the circuit of the cell is completed. Discharge then allows the oxygen to fall back from the nickel to the iron with the natural affinity of iron and oxygen.

This action is very different from that which takes place in the lead storage cell. Here, neglecting complications, the action is usually regarded for practical purposes as being represented by the equation



where the left-hand side represents the condition of charge and the right-hand side the condition of discharge. Here oxygen is not simply transferred in discharge from the peroxide to the spongy lead, but the solution is changed (theoretically) from an aqueous solution of sulphuric acid to plain water. Of course, the discharge could not practically be carried to the point of denuding the solution of all sulphuric acid, and a surplusage of acid must be used. The equation gives a mere theoretical outline of admittedly very complex reactions. In other words, the specific gravity of the sulphuric acid solution falls during the discharge, and the solution enters into the chemical combination. Theoretically, for every 445 grammes of active material on both plates, 196 grammes of sulphuric acid are required to effect the combination, or 44 per cent by weight of the active elements, and in practice it is usual to allow a weight of sulphuric acid nearly equal to half the weight of the elements, or about one-quarter of the total weight of the cell.

In the new Edison cell, on the other hand, the theoretical action of the potash solution is merely to provide the proper channel through which the oxygen ions may travel in one direction or the other—positive plate to negative plate in charge, and negative plate to positive plate in discharge. Consequently, the amount of solution needs only to be sufficient to fulfil mechanical requirements. It is believed that the weight of solution will in practice be only about 20 per cent of the plate weight or about 14 per cent of the cell weight. In fact, the cell may be worked in the same manner as the so-called primary "dry-cells." Moreover, if the solution should escape, or be carried away, by gasing in

charging, the only detriment seems to be the loss of the active surface thereby occasioned, and it will only be necessary to fill up the cells to the proper level with water from time to time, as evaporation or gasing may lower the level. For the same reasons the specific gravity of the electrolyte does not appreciably vary during charge and discharge.

The briquettes of active material slightly expand on receiving oxygen, and slightly contract on delivering it; that is to say, the iron briquettes contract and the nickel briquettes expand during charge, while on discharge the iron briquettes expand and the nickel briquettes contract. The level of the solution is in this way scarcely affected. The expansions and contractions of the briquettes appear to be well within the elastic limits of the spring-steel containing boxes, and consequently the electric contact is always secure. The covers or sides of the window pockets merely approach to or recede from each other slightly during charge and discharge. Fortunately, steel is the metal which possesses this mechanical elasticity in a marked degree.

The action of the charging and discharging current upon the briquettes seems to be transferred from their external surfaces inwards in a manner similar to the transfer of carbon and oxygen in the process of making malleable cast iron in the furnace on the principle of cementation. No active material has been found to be ejected from the briquettes through the window perforations, even under the deliberate overcharging and discharging. Such gas as is thereby produced makes its appearance on the external surface of the windows.

If the nickel compound had no affinity for oxygen, so that energy was neither developed nor absorbed in the deoxidation of further oxidation of that substance, then the energy would be entirely that due to the energy of combination of oxygen and iron, stated to be 79.7 watt-hours, and representing an e. m. f., theoretically obtainable, of 1.47 volts. If the combination of oxygen with the nickel compound be exothermic or energy-releasing, then the watt-hours delivered (and the e. m. f.) will be lessened by the energy necessarily paid back to break up the combination.

If, on the other hand, the combination is endothermic or energy-absorbing, then the watt-hours delivered (and the e. m. f.) will be increased by the energy restored on breaking up the combination. Since the superoxide seems not to have been known hitherto, no information concerning its energy of combination is obtainable. The e. m. f. of the cell seems to be so near to that of the union of iron and oxygen as to suggest that the nickel superoxide is not far from being neutral, or that the nickel compound has but little affinity for oxygen, although the superoxide appears to be quite stable in the cell.

The new cell does not seem to be appreciably influenced by changes of temperature, and should stand a very low temperature without detriment. The electrolyte—potash—does not attack any of the ingredients of the cell, nor are any of the in-

redients soluble therein. No local action occurs in the cell so far as has yet been observed since the e. m. f. is below that necessary to decompose water.

The cell may be fully discharged to the practical zero point of e. m. f. without detriment. In fact, a cell has not only been completely discharged, but recharged in the reverse or wrong direction, and after bringing it back to its originally charged state by proper restoration of the direction of charging current, the storage capacity remained unaffected. It would seem, therefore, that the cell should be capable of withstanding much abuse.

Mr. Edison states that the negative plate (nickel) either charged or discharged, can be removed from a working cell, and dried in the air for a week, without appreciably injuring it, and when the plate is finally replaced in the cell its charge is practically undiminished.

The positive (iron) plate, if similarly removed from the cell will be likewise uninjured, but it soon loses its charge by the oxidation of the spongy iron with accompanying liberation of heat and appreciable rise of temperature extending over a period of several hours. On replacing the electrode, however, in the cell the storage capacity is unaffected on recharge.

As regards cost, Mr. Edison believes that after factory facilities now in course of preparation have been completed, he will be able to furnish the cells at a price per kilowatt-hour not greater than the prevailing price of lead cells.

Having now considered the action and properties of the cell, a brief description may be given of the difficulties encountered in developing it.

The phenomenon of passivity has probably kept inventors from finding this cell in the past. Mr. Edison believes that of all the very numerous compounds of iron, and of which he has tried many hundreds, the particular compound which he prepares, is perhaps the only one capable of being used in this way.

If the dried hydrates, or oxides of iron native or artificial, are subjected to electrolytic reducing action in any alkaline solution, they remain inert and unaffected.

On the other hand, if finely divided iron obtained by reducing a compound of iron under the action of a reducing agent, such as hydrogen, or carbon monoxide is subjected to electrolytic oxidation in an alkaline solution it is inert and cannot be oxidized. It assumes the well-known passive state.

The same difficulty of passivity affects the use of nickel or the negative element. Finely divided nickel, reduced from a nickel compound, remains inactive when subjected to electrolytic oxygen in an alkaline solution. The monoxide and the black-oxide or peroxide are also inert. No oxide of nickel is active or can be made active by electrolytic action, and the peroxide does not act as a depolarizer.

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How Wall Street News is Circulated.

Tape, bulletins, and newspapers—these are the principal channels through which flows information of what comes in and goes out with the uncertain tide of Wall Street. Newspapers twice a day, bulletins every ten minutes, tape all the time—thus the money field is irrigated with the news.

The oddest of Wall Street newspapers is printed on presses small enough to be carried in a hat box. These presses are kept in glass cases, like wax flowers, or ship models, or crown jewels, and are known as Tickers. The Tape is issued every business day, and five hours, 10 to 3, are required to print each issue. When the issue is all printed, it is as long as two city blocks, but only as wide as a postage stamp. You can't buy this newspaper on a news stand, but it has subscribers in every state and territory in the Union. Its publication in San Francisco, Tacoma, Jacksonville and intermediate points is simultaneous with its appearance in New York. It is not a yellow journal, for it prints only the truth. Should it "fake," or guess, or get "beaten" on a story, its circulation would fall off instantly.

Each issue of The Tape contains from 3,000 to 4,000 complete short stories, called quotations, representing stock transactions. Its editor is a keen-witted man, Mr. R. L. Bamford, an old-time and well-known telegrapher, and now superintendent of telegraph of the Stock Exchange, and you can't tell Bamford a thing about an active or torpid market, even if you've grown gray and bald "On the Street." His staff consists of twenty-four reporters and telegraphers. Look sharp when you visit the Stock Exchange and you can recognize these Tape reporters—they are the only men on the floor with gold braid on their caps. Each has to report the transactions in from five to twenty stocks, according to their "activity." Sometimes a reporter can "cover" only one stock; as, for instance, on the panic days a few weeks ago, when dealings in Northern and Union Pacifics were simply overwhelming. It took a single reporter's entire time to keep pace with just one of these stocks. Ordinarily, however, he moves from group to group of brokers, listening, watching, noting.

The instant a sale is made he scribbles on a pad something about as unintelligible as a doctor's prescription, tears off the sheet and hands it to the nearest telegrapher. An expert telegrapher—they are all expert telegraphers, reporters included—is stationed at each of the four corners of the Exchange. The same second in which a reporter hands over a memorandum of a sale the operator clicks it off on a Morse instrument, thus transmitting it to a room at the top of the tower of the Produce Exchange—for it must be remembered that the Stock Exchange, while building its new home, is occupying a part of the Produce Exchange floor.

Only two seconds of time have passed and we now have the record of the sale in the tower room. Here nine men are hunched together at the elbows around a T-shaped table. They are a mighty serious lot. No talking is the rule. Here is the silence of a public library and the solemnity of a secret meeting of anarchists. But they are merely telegraph operators

with their ears close to instruments that chant the doings of men on 'Change below.

Here are two instruments for each of the four operators downstairs, each message coming thus over two wires to two men; so that if one receiver misses a transaction, his mate has caught it, and there is no necessity for the operator below to repeat. This accounts for eight of the nine men in that solemn gang in the tower. The ninth sits at a keyboard, a sort of typewriter, and as fast as the Morse receivers hand him the memoranda of sales he presses the keys of his queer-looking typewriter and thus transmits the quotation from his sky-room to the central office in the basement of No. 18 Broadway, and at No. 46 Broad street, a block or so from the Exchange.

Four seconds have passed: two seconds more and the quotation will come out on the tape in the offices of a thousand members of the Stock Exchange. In the central offices a man sits at an electric typewriter corresponding to the one in the tower. The same instant in which he receives a quotation from the tower man the central men press keys or electric buttons, which connect with forty circuits of twenty-five wires each; hence when they press the keys of their typewriters the quotations are printed on a thousand tickers at once. Thus, six seconds after a sale, a bid or an offer on the "floor," the particulars are known, not only in the offices of a thousand members of the Exchange, but in the offices, as well, of a thousand non-members in New York, Brooklyn and Jersey City.

Here is an illustration of the rapidity of the process: A broker on the Exchange makes a sale and rushes toward his 'phone to notify his bookkeeper; but before he can get across the floor the news of the sale appears on The Tape in his office. The whole thing is, perhaps, not quite as quick as saying "Jack Robinson," but, if after bidding 80 for Atchison, you stop to say "Mr.—Jack—Robinson," two thousand city tickers, as you utter the last syllable, will print your bid.

The two thousand tickers are fed thus: One-half by the Stock Exchange, which supplies only members, and only those, moreover, having offices south of Chambers street; the second thousand is supplied by the Gold and Stock Telegraph Company to non-members south of Chambers street and to any subscriber, whether a member or non-member, north of the same street.

In addition to the tickers within the city limits, the telegraph company supplies thousands of other tickers in cities all over the Union, and cables quotations besides to the chief cities of Europe. Each city has its central office, of course, with its electric typewriter, as in New York. Thus, like a lightning flash, the news of each Stock Exchange transaction is spread over two continents in the single continuous column of that remarkable newspaper, The Tape.

The doings of the Consolidated Exchange, the Junior Stock Exchange, so to speak, are recorded in exactly the same way by the Stock Quotation Telegraph Company—only The Tape of the Consolidated has not so general a circulation. The business of the

Produce, Cotton, Coffee, and other exchanges, as well as the trading in leather and petroleum and other markets, is given publicity by the Gold and Stock Telegraph Company.—Collier's Weekly.

Opening of the Hall of Fame.

As a great many of our readers are probably aware, New York University, at University Heights, has had added to it, largely through the generosity of Miss Helen Gould, a Hall of Fame. This structure is a splendid colonnade 500 feet in length and surrounding circularly the beautiful library building of the University. The Hall of Fame is intended to contain memorial tablets and busts of great Americans, and the selections are made by vote, the electors being themselves a chosen few, leaders in every department of intellectual activity. The cost of the Hall of Fame is said to be about \$100,000. Each of the tablets within it is about 10 feet long and 1 foot high, of bronze. The name is carved in large letters, and under each name are a few words of tribute. At the present time the electors have chosen twenty-nine names, and there are, therefore, twenty-nine tablets, which were unveiled on Decoration Day, May 30. Chancellor MacCracken states that the electors will continue to serve, and that according to the terms of the gift, 150 names are to be honored by tablets by the year 2000. The names are divided into seven groups, one of which is called that of scientists, and in this are included the names of Fulton, Morse and Whitney. At the ceremonies on May 30 the Morse tablet was unveiled by Mr. Gano S. Dunn, assisted by Mr. Francis W. Jones, to represent the American Institute of Electrical Engineers, on the nomination of the president of the Institute. The New York Electrical Society was represented by President T. C. Martin and Secretary G. H. Guy, and it is an interesting coincidence that Mr. Jones was the first president of the Electrical Society and Mr. Dunn the president in 1899-1900, so that the society was remarkably well in evidence on this interesting occasion.

The Morse tablet bears this inscription: "Samuel Finley Breese Morse, 1791-1872. I am persuaded that whatever facilitates intercourse between the different portions of the human family will have the effect, under the guidance of sound moral principles, to promote the best interests of men."

Magnetic Club's Summer Outing.

The Magnetic Club, of New York, Francis W. Jones, president, and R. J. Murphy, secretary, will celebrate its regular summer outing on Tuesday, June 25, at Cove Hotel, Livingston station, Staten Island, the festivities of the occasion extending over the afternoon and evening. There will be a dinner served at the hotel, before and after which field and other sports will be indulged in. These affairs, affording such delightful outings to club members, in which good cheer is so abundant and the spirit of jollity and fun enters so largely, have come to be looked forward to with anticipations of much pleasure by all, and no doubt a large number will be present.

Typewriters at the Pan-American.

Delegates to the convention of the Association of Railway Telegraph Superintendents in Buffalo, on June 19 to 21, will enjoy a visit to the Smith Premier Typewriter Company's booth in the southwest corner of the Manufacturers' Building. It is fitted up with the latest models of typewriting machines, and much interesting and unique advertising matter can be found there. All visitors to the booth will be welcome.

The exhibit at the Pan-American Exposition, Buffalo, of the "New Century" typewriter, manufactured by the American Writing Machine Company, of 302 Broadway, New York, will be found in Section 13 of the Manufacturers' Building. It is an attractively arranged display, and this well-known machine is shown to the best advantage by expert operators in attendance. A cordial invitation is extended to the Railway Telegraph Superintendents during the time of their convention to inspect the "New Century" and to more fully acquaint themselves with the merits it possesses.

Messrs. Wyckoff, Seamans & Benedict have placed an exhibit of the Remington typewriter at the Pan-American Exposition, Buffalo, N. Y. It is located in the northwest corner of section OO on the main aisle, in the Manufacturers and Liberal Arts Building, and railroad telegraph superintendents, during their convention, are especially invited to view the display. They will find an expert operator there ready to serve them in matters of correspondence and the demonstration of what the machine will do in connection with railroad telegraph work. In this relation it is of interest to note that the use of the Remington typewriter in connection with telegraphic train orders is increasing daily. One or two of the great trunk lines are experimenting with the use of the machine for this purpose, greatly to the satisfaction of everybody concerned, as it is found that the telegraphic orders are more easily written, especially when manifold copies have to be taken, are more legible and more durable, as they can be written upon a substantial paper, instead of the flimsy tissue usually employed for train orders.

QUADRUPLEX SYSTEM SOLD.—The Roberson quadruplex system, which has been described in these columns, has been purchased by the Western Union Telegraph Company. The inventor is Mr. O. R. Roberson, assistant electrical engineer of the Western Union Telegraph Company, New York. This system utilizes alternating currents in its operation. It has never failed to work as a quadruplex regardless of weather conditions. The system will be adopted generally throughout the Western Union service.

The Chicago & Milwaukee Telegraph Company, whose lines run between those points, is accepting messages between these two cities at the rate of ten cents for ten words, and one cent for each additional word, on business that can be delivered by telephone.

Business Notices.

The desire on the part of many visitors to the Pan-American Exposition at Buffalo to secure lodging places in private families in that city, both because of the quiet so obtained and of the lessening of expense, has become a very pronounced one. We desire to say that the advertisement in another column offering good accommodations of this nature to intending visitors to Buffalo, and requesting communications to be addressed to Postoffice Box 708, that city, is inserted by a gentleman whom we know personally, who is entirely responsible, and who possesses unusual facilities to furnish the kind of quarters desired.

We have been informed by the Ericsson Telephone Co., 206 Broadway, New York, that the Ericsson telephone was awarded first prize at Paris, 1881; Madrid, 1883; Vienna, 1884; Stockholm, 1886; Copenhagen, 1888; Chicago, 1893. Also that their exhibit in Paris in 1900 was from the St. Petersburg, Russia, factory, which was also awarded first prize. This year their exhibit of a 50 subscriber switchboard and a few of their different telephones at the Pan-American Exposition at Buffalo is made in Section S of the Electricity Building, and Mr. W. Jac Marland will have charge of exhibit.

Through us they extend to all their friends and patrons a cordial invitation to see their exhibit and talk over their instruments. They are exhibiting their goods in connection with others in a collective electrical exhibit, which will doubtless prove of interest to many of our readers.

The Life of a Telegraph Pole.

What is the life of a telegraph pole? The answer must be qualified, because there are many kinds of telegraph poles, and there are many ways of planting them. Those mostly used are of chestnut or pine, but there are several ways in which the life of the pole is artificially prolonged. Then, again, the poles are embedded in varying strata, each of which has a different influence on the durability of the pole which it encompasses.

To determine this question the Pennsylvania Railroad has instituted a series of experiments, which, in about three years from now, will give results of a definite character. Forty-two poles have been erected on the railroad line between Rosemont and Villanova. Six of them are of pine, creosoted; six are of chestnut, wood lined; six have been set in broken stone, six in clay, six in the ordinary way and six erected with a drainage passage through which oil may find its way to the sunken portion of the pole. Railroad engineers and telegraph companies are much interested in the experiments initiated by the Pennsylvania Company.

The above was published nearly three years ago. The question involved is an important one, and as the time limit prescribed in which to determine the value of the experiment has about expired, it would be interesting to know the result of the test.

Subscribe for TELEGRAPH AGE, \$1.50 per year.

Mr. W. R. Holligan.

Mr. William R. Holligan, the subject of this sketch, has resigned his position as city superintendent of the Postal Telegraph-Cable Company, at Chicago, Ill., to engage in commercial pursuits. In his retirement the telegraph service loses one of its brightest members, whose career, beginning at the lowest, carried him to one of the highest grades in the gift of the profession.

Mr. Holligan was born at Baltimore, Md., on November 6, 1856. In March of the following year his family removed to Chicago, where he has since continuously resided. In June, 1872, he entered the telegraph service as a messenger for the Western Union Telegraph Company, in whose employ he remained for over twenty-eight years. In his succes-



MR. W. R. HOLLIGAN.

sive and ascending capacities of messenger, check clerk, division chief, assistant night chief, night chief, wire chief at the main office, manager at the Board of Trade office, going thither in October, 1887, and back again to the main office as chief operator in January, 1899, he proved his abilities, and received the confidence of his superior officers. On November 30, 1900, he severed his long connection with the Western Union Telegraph Company to enter that of the Postal Telegraph-Cable Company, also at Chicago, accepting the position as city superintendent. From this place he has recently resigned, the resignation to take effect on June 15, his purpose being to engage in the brokerage and commission business in Chicago.

British Pacific Cable Project "Hung Up."

An unexpected deadlock has arisen between the government of New South Wales and the Dominion Government over the proposed all-British Pacific cable scheme. The Australian colony has granted important concessions to the Eastern Extension Telegraph Company, the competing line. To this Canada strenuously objects, claiming it to be a breach of good faith. The question was referred to the law officers of the crown in Canada, who reported that the action of New South Wales was clearly detrimental to the interests of the Dominion. The British law officers have also reported upon the subject, but in a directly opposite sense, thus causing friction between Britain and Canada as well. In view of the evident gravity of the situation, and the likelihood of a collapse of the whole cable scheme, Sir Wilfrid Laurier, upon the second reading of the cable bill, shortly before the prorogation of Dominion Parliament, reviewed the condition of affairs in respect to the cable project, and added a proviso to the cable bill that it shall not go into effect except upon an order-in-council. This means that, so far as Canada is concerned, the cable project is hung up for the present.

Western Union Office Changes at Cleveland.

The substitution of eighteen motor dynamos for 10,000 cells of gravity battery made it possible for the Western Union Telegraph Company at Cleveland, Ohio, to enlarge its quarters, and move the operating room from the fourth to the third floor of the building. Nearly all the space in two immense rooms was formerly filled with the battery cells. The dynamos economize a great deal of space and leave room for reading and lunch rooms to be installed in the narrow quarters on the fourth floor that for some time have been too small for the operating room.

The move was made June 1. Nothing in the old operating room was disturbed until the last vestige of the new appurtenances had been installed. Some very clever engineering work was done in the reconstruction of this telegraph plant. Mr. L. G. Seibel, chief operator, an expert in such matters, superintending the work.

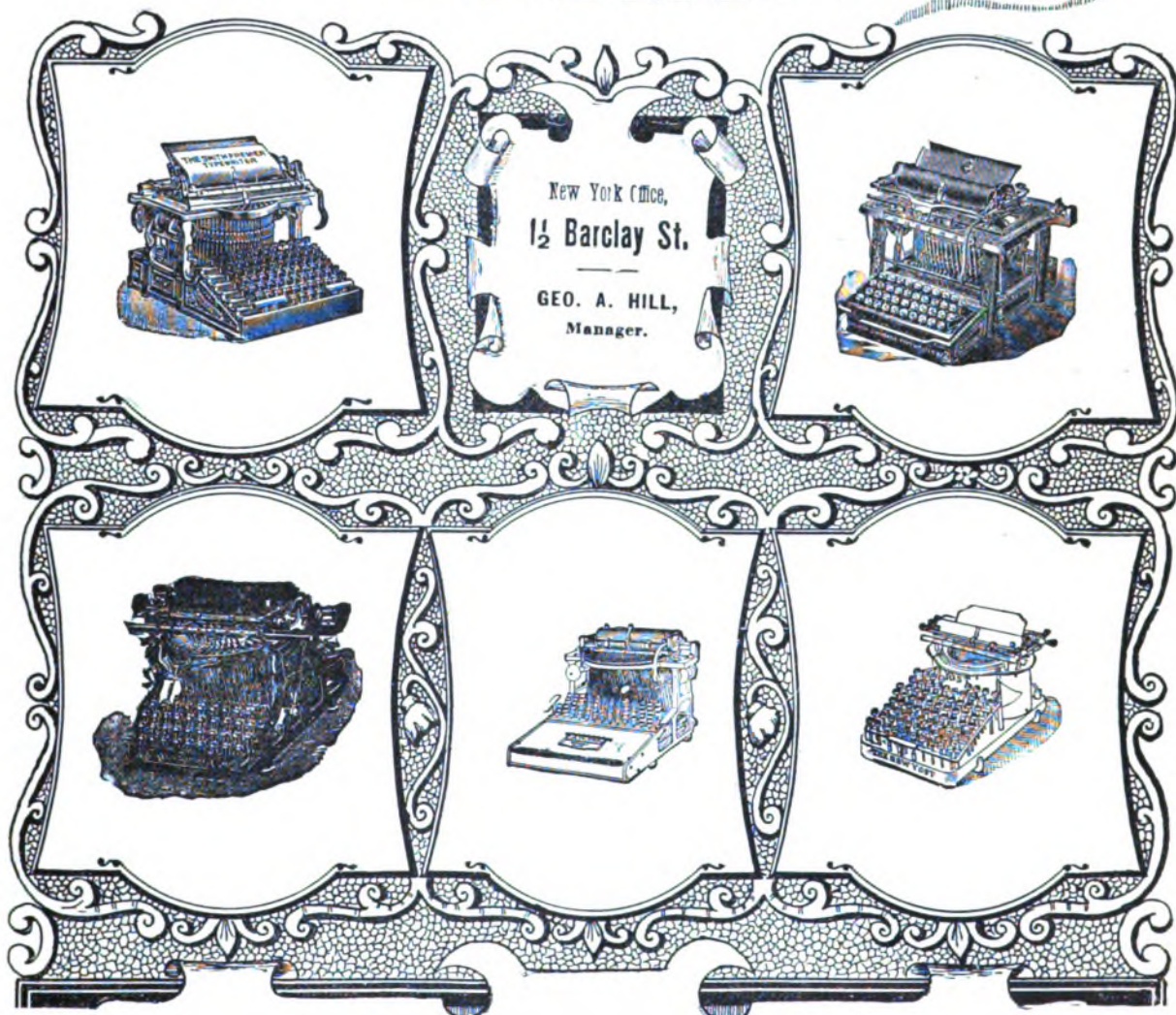
Publishers' Press New Service.

The Publishers' Press of New York will shortly begin the operation of a regular service for morning newspapers. The list of subscribers already embraces some fifty morning papers published in various sections of the country. President J. B. Shale has been feeling his way toward the establishment of a morning service for months past. He believed that there was a demand for such service, and from the large number of applicants for membership already received it would appear that he knew what he was talking about. This will give employment to a number of first-class telegraph operators.

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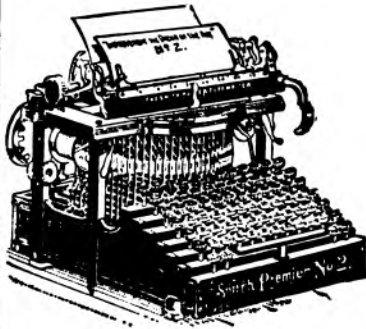
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BALTIMORE—3 W. Baltimore Street.
CHICAGO—124 La Salle Street.

KANSAS CITY—818 Wyandotte Street.
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CHANGES OF ADDRESS.—The address of a subscriber will be changed as often as desired. In ordering a change of address the old as well as the new address must be given.

NEW YORK, June 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.

Mistakes of Writers.

All newspapers have similar experiences regarding the matter submitted by correspondents for publication, and the remarks on the subject by the Washington Post are so apropos that we give them space.

"The old advice about going on the stage—'don't'—applies with equal force to most ambitious young people who try to write for the newspapers and magazines.

"In ninety-nine times out of a hundred the difficulties encountered are insurmountable, mainly because of the inexperience of the writer and the failure to understand the first principles of what is required in the shape of manuscript.

"The principal occupation of the Sunday editor on a big newspaper is returning rejected manuscripts. To be sure, the Sunday editor has to read and revise a few acceptable manuscripts—about 1 per cent. of the mass of matter submitted to a big newspaper—but all of his spare time is occupied by the matter submitted which cannot possibly be used.

"Some newspapers return all manuscripts not available, whether stamps have been inclosed with the article or not; but as this item of expense is considerable in the course of a year, there are few publications which do this, most of them announcing positively that no contributions will be read or returned unless stamps are inclosed.

"In violating this particular rule, the average amateur writer usually loses his manuscript for good and all, though the usual procedure in that case is an indignant letter some weeks later demanding the return of the original manuscript 'or its cash equivalent.'

"Probably the most glaring vital mistake made by amateur writers is the use of the personal pronoun 'I' throughout a story. Some editors have their steadfast rules prohibiting the use of the pronoun. It detracts from the original story by concentrating too much attention upon the story teller; and it requires the use of a signature, which nearly all editors object to strongly, especially in newspaper offices.

"Moreover, careful study of the best writers, and experience likewise, will easily convince any one that a story is better told by being kept in the third person altogether. Newspaper stories should always be written in the third person, unless the writer is so well known that his name lends additional value to the article.

"Another mistake made by the amateur writer is carrying his wares in person to the editor whom he assails. He is actuated by a mistaken theory that personal impression is always more convincing than one made by letter.

"Manuscripts submitted to any editor should be either legibly written or typewritten, and they should be written for some particular publication, after carefully studying the style of the periodical and the class of reading matter found in its columns."

In this connection we desire to call attention to the too frequent expressions some of our correspondents thoughtlessly make use of when referring to local branch offices. Thus to allude to a branch as "F. X.," for instance, a designation understood, doubtless, at the point from which the letter is written, is nevertheless meaningless to all others at a distance, and becomes but little more than a hieroglyphic when incorporated in a letter intended for publication. When we are in receipt of a bunch of ten or twelve such letters, each containing references of this kind, as is frequently the case, the utter grotesqueness of the situation becomes strikingly apparent. The exercise of a little reflection and care in letter writing on the part of our correspondents would enable them to overcome not only this objectionable feature but others of a kindred nature as well.

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

Railway Telegraph Superintendents' Convention.

The twentieth annual convention of the Railway Telegraph Superintendents will meet at Buffalo, Wednesday, Thursday and Friday, June 19, 20 and 21. The place of meeting will be at Statler's Pan-American Hotel, chosen by the committee because of its convenient location, being situated within one block of the main entrance to the Exposition grounds, the great show naturally being the chief objective point for all when the business sessions each day shall have been concluded; and also because the building contains a regularly appointed convention hall with a seating capacity of nearly 500.

No plan of social entertainment for visitors has been adopted, for it was rightly conjectured that the



MR. P. W. DREW, OF MILWAUKEE, WIS.,

Secretary and Treasurer of the Association of Railway Telegraph Superintendents.

Exposition itself, with its vast attractions, would afford all of the recreation possible or desired. The proximity of Niagara Falls, however, will doubtless prompt many to visit that interesting spot, but such excursions or any others that may be made, for which the vicinity of Buffalo offers many opportunities, will be undertaken by individuals and small parties, at times and under conditions to suit their own convenience.

The Committee of Arrangements has been indefatigable in its efforts to promote the success of the convention, and too much praise for faithful work cannot be accorded to Messrs. L. B. Foley, of New York, superintendent of telegraph of the Delaware, Lackawanna and Western Railroad; J. H. Jacoby, of South Bethlehem, Pa., superintendent of telegraph of the Lehigh Valley Railroad, and H. W. Pope, acting general manager of the Bell Telephone Com-

pany, Buffalo, N. Y., whose actions receive the hearty approval of the secretary and treasurer, Mr. P. W. Drew, superintendent of telegraph of the Wisconsin Central Railroad, Milwaukee, Wis.

No one knows who has not served in a similar capacity of the amount of labor involved. Every detail of the general plan has received attention and has been carefully worked out, so that in the final operation of the meeting and of its conduct, its harmony of action and perfect working will be due to the united labor of these gentlemen who have been so enthusiastic in their undertaking.

There appears to be intense interest taken in the papers to be read before the convention, and as the topics include a wide range of thought, many important and timely subjects being brought forward, probably an animated and interesting discussion will follow the presentation of each, thus adding largely to the educatory influence of the meeting. The papers, together with the names of their authors, are given herewith:

"Storage Batteries," by W. E. Athearn, of the electrical engineer's office, Western Union Telegraph Company, New York; "Line Construction," by C. H. Bristol, general superintendent of construction of the Western Union Telegraph Company, Chicago; "Importance in Telegraphy of Apparent Little Things," by Thomas D. Lockwood, electrical engineer of the Bell Telephone Company, Boston, Mass.; "Rapid Telegraphy," by Walter P. Phillips, of Bridgeport, Conn., former general manager of the late United Press; "Cipher Code for Railroad Telegraphing," by C. S. Rhoads, of Indianapolis, Ind., superintendent of telegraph, Cleveland, Cincinnati, Chicago and St. Louis Railway Company; "Railroading by Telephone," by F. P. Valentine, of Boston, Mass., superintendent of telephones, New York, New Haven and Hartford Railroad Company; "Construction of Telegraph Relay from a Scientific Standpoint," by Prof. C. E. Freeman, of the Armour Institute, Chicago; "Crossing Alarms," by U. J. Fry, of Milwaukee, Wis., superintendent of telegraph, Chicago, Milwaukee and St. Paul Railway Company. Mr. William Maver, Jr., of New York, author and electrical expert, will lecture on "Automatic Telephone Exchanges," and Mr. George M. Dugan, of Chicago, superintendent of telegraph of the Illinois Central Railroad Company, will be prepared to be interrogated on the subject of "Underground Office Connections."

In celebrating the twentieth anniversary of the founding of the Association of Railway Telegraph Superintendents it will be of interest to present the names of those who have held office during that time, together with the places and dates of the meetings. Here is the list:

November, 1882—Chicago, Ill.

W. K. Morley.....President
Wm. Kline.....Vice-President
C. S. Jones.....Secretary

June, 1883—Chicago, Ill.

W. K. Morley.....President
Charles Selden.....Vice-President
P. W. Drew.....Secretary and Treasurer

September, 1884—Philadelphia, Pa.

Charles Selden.....President
E. C. Bradley.....Vice-President
P. W. Drew.....Secretary and Treasurer

June, 1885—Cleveland, O.

C. W. Hammond.....President
Geo. L. Lang.....Vice-President
P. W. Drew.....Secretary and Treasurer

June, 1886—St. Paul, Minn.

A. R. Swift.....President
Geo. L. Lang.....Vice-President
P. W. Drew.....Secretary and Treasurer

July, 1887—Boston, Mass.

Geo. L. Lang.....President
Geo. C. Kinsman.....Vice-President
P. W. Drew.....Secretary and Treasurer

July, 1888—New York.

Geo. C. Kinsman.....President
C. A. Darlton.....Vice-President
P. W. Drew.....Secretary and Treasurer

June, 1894—Detroit, Mich.

O. C. Greene.....President
E. R. Adams.....Vice-President
P. W. Drew.....Secretary and Treasurer

June, 1895—Montreal.

M. B. Leonard.....President
J. W. Fortune.....Vice-President
P. W. Drew.....Secretary and Treasurer

June, 1896—Ft. Monroe, Va.

G. M. Dugan.....President
J. W. Lattig.....Vice-President
P. W. Drew.....Secretary and Treasurer

June, 1897—Niagara Falls, N. Y.

J. W. Lattig.....President
W. W. Ryder.....Vice-President
P. W. Drew.....Secretary and Treasurer

June, 1898—Omaha, Neb.

W. W. Ryder.....President
L. B. Foley.....Vice-President
P. W. Drew.....Secretary and Treasurer



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Where the Convention of the Association of Railway Telegraph Superintendents will be held June 19, 20 and 21.

October, 1889—Washington, D. C.

C. A. Darlton.....President
G. T. Williams.....Vice-President
P. W. Drew.....Secretary and Treasurer

June, 1890—Niagara Falls, N. Y.

G. T. Williams.....President
G. M. Dugan.....Vice-President
P. W. Drew.....Secretary and Treasurer

June, 1891—Cincinnati, O.

C. S. Jones.....President
L. H. Korty.....Vice-President
P. W. Drew.....Secretary and Treasurer

June, 1892—Denver, Col.

L. H. Korty.....President
U. J. Fry.....Vice-President
P. W. Drew.....Secretary and Treasurer

June, 1893—Milwaukee, Wis.

U. J. Fry.....President
O. C. Greene.....Vice-President
P. W. Drew.....Secretary and Treasurer

June, 1899—Wilmington, N. C.

L. B. Foley.....President
W. F. Williams.....Vice-President
P. W. Drew.....Secretary and Treasurer

June, 1900—Detroit, Mich.

W. F. Williams.....President
Chas. F. Annett.....Vice-President
P. W. Drew.....Secretary and Treasurer

New York city will send a numerous contingent to the convention, made up of both delegates and visitors, some of the former coming hither from other cities. Among those who have already expressed their intention of going are: William Maver, Jr., W. E. Athearn, E. P. Griffith, W. F. Williams, A. P. Eckert, W. S. Eckert, W. S. Logue, W. E. McLaughlin, John J. Ghegan, J. B. Taltavall, T. R. Taltavall, T. D. Lockwood, L. S. Wells, L. B. Foley, F. P. Valentine, F. H. Bethell, Wendell Baker, H. P. Miller, C. P. Bruch, H. S. Young, Jr., F. J. Blending, A. J. Wise.

The regular membership will be well represented

at Buffalo, those who are expected to attend the convention being as follows, many being accompanied by their wives and other members of the family:

W. F. Williams, Portsmouth, Va.; H. T. Simpson, Richmond, Va.; W. C. Walstrum, Roanoke, Va.; E. Borden, Wilmington, N. C.; J. H. Jacoby, South Bethlehem, Pa.; W. F. Taylor, Altoona, Pa.; H. N. Daniell, Sayre, Pa.; C. M. Lewis, Reading, Pa.; C. A. Darlton, Washington, D. C.; C. P. Adams, Jersey City, N. J.; Joseph Dull, Baldwin, Fla.; L. B. Foley, A. B. Taylor, F. L. Blendinger and L. S. Wells, New York; W. J. Stoneburner, Rochester, N. Y.; Charles Selden, Baltimore, Md.; F. P. Valentine, S. A. D. Forristall and E. A. Smith, Boston, Mass.; M. Magiff, St. Albans, Vt.; J. S. Evans, Cleveland, O.; E. R. Scoville and J. L. Orbison, Cincinnati, O.; J. H. Louy, Lima, O.; George L. Lang, Lexington, Ky.; C. B. Phelps, Louisville, Ky.; K. McKenzie, Jackson, Tenn.; G. B. McCoy, Memphis, Tenn.; C. S. Rhoads, Indianapolis, Ind.; D. H. Caldwell, Fort Wayne, Ind.; E. E. Torrey, Detroit, Mich.; W. W. Ryder, G. M. Dugan, C. F. Annett, A. R. Swift, G. H. Thayer and W. J. Holton, Chicago, Ill.; G. C. Kinsman, Decatur, Ill.; G. M. French, Mattoon, Ill.; G. H. Groce, Flora, Ill.; P. W. Drew and U. J. Fry, Milwaukee, Wis.; O. C. Greene, H. C. Hope, E. J. Little and J. R. Michaels, St. Paul, Minn.; H. A. Tuttle, Minneapolis, Minn.; F. S. Spaford, Cedar Rapids, Ia.; J. P. Boyle, Keokuk, Ia.; E. A. Chenery and C. W. Hammond, St. Louis, Mo.; H. C. Sprague and N. D. Ballantine, Kansas City, Mo.; J. M. Egan, Springfield, Mo.; S. K. Bullard, Sedalia, Mo.; L. H. Korty and W. P. McFarlane, Omaha, Neb.; H. B. Ware, Wymore, Neb.; C. G. Sholes and A. R. Lingafelt, Topeka, Kan.; F. A. C. Ferguson, Wilson, La.; W. L. Bisbee, Houston, Tex.; C. A. Parker, Denver, Col.; J. B. Donner, San Francisco, Cal.

Signal Corps Work in China.

General Chaffee, commanding the American troops in China, makes hash of an article written recently by a war correspondent named Millard, depreciating in many ways the work and equipment of the American troops in China. One passage of General Chaffee's criticism is as follows: "No one objects to the high admiration expressed by Mr. Millard for the Japanese army, its equipment, etc. However, when he says, 'On the march to Peking their field telegraph line prevented the allied army from losing connection with its base; the American Signal Corps, a branch our service is wont to boast of, did manage to string a wire and keep it open at least part of the time, being on all sorts of improvised poles in a treeless country, it naturally fell by the wayside with annoying frequency; not so with the Jap telegraph. It was provided with telescopic metal poles and braces, and when once set stood. An hour after the camp was pitched after a day's march the Japanese field telegraph would open up communication with the next station in the rear'—he is dallying with error. The fact is, the British and American telegraph line, jointly constructed and operated, was the only line brought forward with the troops."

Henry W. Pope.

Mr. Henry W. Pope, of Buffalo, N. Y., acting general manager of the Bell Telephone Company of that city, was born at Great Barrington, Mass., November 2, 1848. He succeeded his brothers, Frank and Ralph, as manager of the telegraph office at that place, at the age of 14. In 1863 Mr. Pope was transferred to the main office of the American Telegraph Company, located at 145 Broadway, New York. He was considered at that time not only the youngest, but in stature, the smallest sound operator in the business. Mr. Pope was located in Boston in 1866 and 1868, and there received the first cablegram from the first successful Atlantic cable. From 1868 to 1879, he was chief operator of the Gold and Stock Telegraph Company and as-



MR. HENRY W. POPE,

Acting General Manager of the Bell Telephone Co., Buffalo, N. Y.

stant general superintendent of the American District Telegraph Company, New York, introducing in the latter company the first telephone service in New York city,—the first adaptation of the simultaneous telephone and telegraph principle, and improvised and constructed in 1877 the first telephone hook switch located in the office of the Roosevelt organ factory in Eighteenth street.

From 1879 to 1882, he was general superintendent of the Bell Telephone Company, and one of the appraisers of the telephone property in New York city, prior to the consolidation of the telephone interests, and was also the organizer and general manager of the Mutual District Messenger Company of New York.

Disposing of his interests in the latter company, Mr. Pope engaged in the organizing and constructing of street railway and electric light plants, in-

stalling a large number, notably the Citizens' Illuminating Company, of Brooklyn, of which he was president—the first company to introduce electric lights in the City of Brooklyn.

In 1895, Mr. Pope again identified himself with the Bell Telephone Company's interest, serving in various official capacities with the American Telephone and Telegraph Company and the Southern Bell Telephone and Telegraph Company, until 1899, when he was appointed acting general manager of the Bell Telephone Company of Buffalo, operating the territory in the western portion of the State of New York.

Mr. Pope always took a lively part in the advancement of electrical interests, organizing the first District Telegraph and Telephone conventions, which for years were the center of interest in electrical circles. Mr. Pope holds advanced ideas and is one of the best posted telephone men in the country. He has probably done more than any other single telephone official in America to advance the popularity of the telephone with the public at large and with business men.

Introducing the Telegraph in Chili.

It is stated by an exchange that when the electric telegraph was introduced into Chili strategy was resorted to in order to guard the poles and wires against the damage on the part of the natives and to maintain the connection between the strongholds on the frontier. There were at the time between forty and fifty captive Indians in the Chilian camp. General Pinto, in command of the operations, called them together and, pointing to the telegraph wires, said:

"Do you see those wires?"

"Yes, General."

"I want you to remember not to go near or touch them, for if you do your hands will be held, and you will be unable to get away."

The Indians smiled incredulously. Then the General made them each in succession take hold of the wire at both ends of an electric battery in full operation, after which he exclaimed:

"I command you to let go the wire!"

"I can't!" cried each Indian.

The battery was then stopped. Not long after the General restored them to liberty, giving them strict instructions to keep the secret. This had the desired effect, for, as might be expected, the experience was related in the strictest confidence to every man in the tribe, and the telegraph remained unmolested.

Time By Cable in the Philippines.

Captain G. O. Squier writes from the U. S. cableship *Burnside*, in the Sulu Archipelago, that they have laid practically all the cable they had on board, and that it is working very successfully. The last link connected up our "feudatory," the Sultan of Jolo. Time is furnished now from the observatory at Manila to all important points throughout the islands as far south as Jolo, and a press bulletin goes free daily to every garrison. The resultant unification is rapid and significant.

High Life in the Yukon.

The building of the Yukon telegraph, with which the name of Charleson seems to be inextricably involved, and which of late has been under investigation, appears to have been attended by practices which, however prevalent they are supposed to be among the unregenerate on this side of the border, we have nevertheless been led to believe could not exist among our Canadian neighbors. But the Toronto Mail, in its analysis of the affair, derived from no less an authority than the report of the Auditor-General of Canada, presents a story which, in its peculiar and extensive detail of expenditures involved, could fairly put to shame the most flagrant American political methods. "Here's richness," as Mr. Squeers would say:

"The Auditor-General's report gives some interesting particulars relative to the Yukon telegraph enterprise, which is under the control of Mr. Israel Tarte. Three years ago a Yukon Telegraph Company was incorporated at Ottawa, and a number of English capitalists took the undertaking up. At the head of the corporation was a well-known member of the Imperial House of Commons. To this gentleman the Government wrote through the Minister of Railways informing him that the Cabinet was much interested in the work, and wished the company to push it through with all convenient speed. The company promptly raised its capital, bought its wire, and was just about to begin when it received notification that the work was to proceed as a Government scheme under Mr. Tarte's supervision. It was supposed at the time that the English company had omitted some necessary formality—a subscription to the campaign fund or the admission of a Canadian politician to the company—and that for this reason it was superseded.

"However this may be, a Quebec politician, Mr. Charleson, was appointed by Mr. Tarte with *carte blanche* to string the wires and set a Government line in working order. Up to the end of June Mr. Charleson had expended \$380,553 in this business. The Auditor-General's report shows that there are five Charlesons engaged in the undertaking. One, J. B., is at the head of the office, with \$4,000 a year and everything found, including bar bills. Three, Alexander, A. J., and E. R., occupy subordinate positions, while another, W. G., a son of J. B., furnishes all the equipment without tender. W. G. was before the Public Accounts Committee with his bills for wire and tools during the recent session. It was while he was giving evidence that Mr. Tarte entered his protest against any inquiry touching the amount of the "rake-off" or commission extorted from contractors by the Government for its campaign funds. The committee, in response to Mr. Tarte's appeal, decided that no such inquiry can be made, the "rake-off" being a private matter. While W. G. was supplying the wire and so forth for the line, J. B. was arranging for the trip. It appears from the Auditor-General's report that nothing was forgotten. One of the first things provided was a Tricolor—\$7. It was necessary to furnish the expedition with Mr. Tarte's "dear flag of France" as a tribute to the head of the Department of Public Works, under

whose auspices the affair was being carried out. Wherever the expedition bivouacked the Tricolor was raised. Everything possible was done for the comfort and happiness of the party. In fact, everybody was clothed. A great stock of underwear was laid in. The bill under this head was \$2,026 for 1,723 suits. Some suits of underwear were purchased at the rate of \$40 per dozen, or of \$3.50 per suit. Others were as low as \$1 per suit. Shirts from \$2 each down were furnished. Of these, 712 were bought, the bill being \$822.75. A fine assortment of socks and stockings was also purchased. There were 1,860 pairs of socks and 284 pairs of stockings—price, \$830.85. Of trousers there were 440 pairs, costing \$788.50. These varied in price from \$2.50 to \$1.50. To preserve the trousers 186 pairs of overalls were bought, for \$155. To keep the trousers and overalls in position 381 pairs of braces were laid in. They cost \$136.60. Coats to the number of 380 were also purchased. Their cost was \$847. Of complete suits, from \$25 each down, 22 were bought for \$321.50. The party had to have handkerchiefs, and 324 were provided and charged to the country, \$95.10. Boots, moccasins, gloves and even hats and caps were added to the bill. Here is the list:

1,722 suits of underwear.....	\$2,026.00
712 shirts	822.75
2,144 pairs socks and stockings.....	830.85
440 pairs of trousers.....	788.50
186 pairs of overalls.....	155.50
381 pairs of braces.....	156.60
380 coats	847.00
22 suits	321.50
324 handkerchiefs	95.10
440 pairs of boots.....	2,138.00
540 pairs of moccasins.....	977.50
1,125 mitts and gloves.....	713.25
145 caps	101.50
186 cowboy hats	519.00
	<hr/>
	\$10,474.05

"This is altogether exclusive of blankets and sheets, pillows, towels, brushes, valises, pocket-knives and pocket combs. The combs, by the way, numbered 120. The sleeping arrangements were excellent, as the following would indicate:

10 eiderdown sleeping robes, at \$25 each..	\$250.00
12 eiderdown sleeping robes, at \$30.....	360.00
2 eiderdown quilts, at \$17.50.....	35.00
6½ doz, eiderdown caps, at \$18.....	120.00
	<hr/>
Total eiderdown outfit.....	\$885.00

"The expedition was not one of the South African type, but, on the contrary, was under Mr. Tarte's influence, and was manned by politicians and not patriots. It was therefore well equipped with et ceteras. Here are a few:

2 cases brandy.....	\$33.50
10 gallons rum, at \$5.25.....	52.50
1 case bitters	17.50
	<hr/>
	\$103.50

Cigars—

3,000 Representative	\$180.00
1,000 Flora Espana	45.00
1,000 El Bondoso	37.50
1,000 Manuel Garcia	75.00

6,000

Tobacco—

105 lbs., at 70c.	\$73.50
70 lbs., at 74c.	51.80
86 lbs., at 68c.	58.48
560 lbs., at 59c.	330.40
1,190 lbs., at 72c.	856.80
301 lbs., at 65c.	195.65
559 lbs., at 68c.	380.12
120 lbs., at 72c.	86.40
107½ lbs., at 67c.	72.03

3,098½ lbs. \$2,105.18

"There was a ton and a half of tobacco, with 684 pipes to smoke it in. The supplies with which the Charleson family started out cost \$60,000 in round figures. They consisted of brandy, rum, bitters, Bovril, effervescent salts, cigars, tobacco, fancy sausages at 60 cents a pound, extract of beef, canned duck and chicken, pickles, marmalade, apricots, peaches and all classes of preserves. There were 864 plates to eat these supplies off, 612 pairs of knives and forks to carve them with, 700 table-spoons, 432 cups and saucers, 288 teaspoons and 72 teapots and coffee pots. It was a regular picnic.

"The Yukon telegraph man occupied an Egyptian tent, price, \$65; he slept in his eiderdown sleeping robe, \$30, and his eiderdown toque; he rose and dressed himself in Government-bought clothes, \$10,474 worth; fed on the delicacies of the season, \$60,000 worth, and over his brandy and rum smoked the 6,000 cigars or the ton and a half of tobacco. Unfortunately the bills are not all in yet. Those so far presented wind up on June 30 of last year. But the instalment we have received show that it is much nicer to be stringing telegraph wires under Tarte than to be fighting for the Empire under Dr. Borden. Tarte's emergency rations for his politicians are far richer than the dog biscuits provided for our soldiers."

All this goes to prove that Government telegraph can be "economically" constructed by politicians.

A Curious Invention.

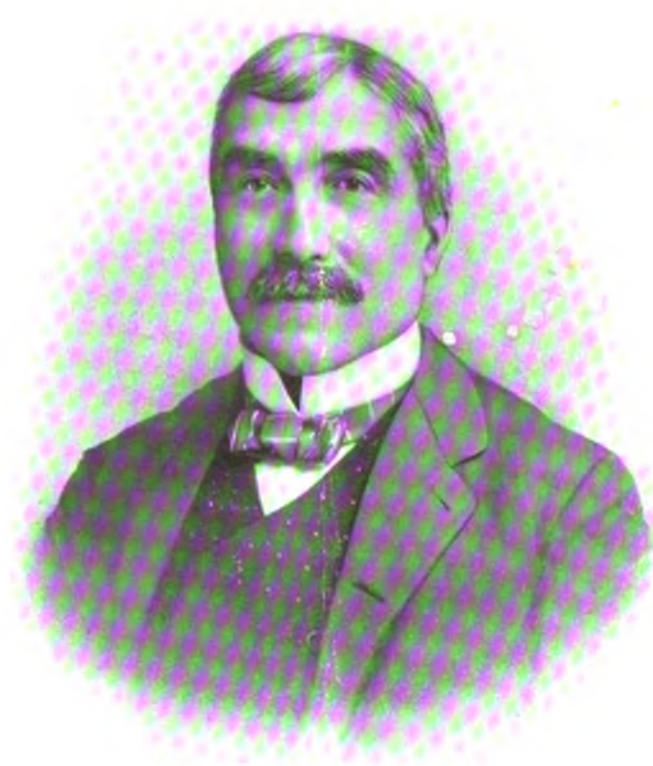
Herr A. Palencsar, residing in Budapest, Austria-Hungary, has been granted a patent in this country on apparatus for collecting electricity from the atmosphere, which is a curiosity of invention. The idea underlying the invention is based on the modern theory of atmospheric electricity, according to which it is produced by the condensation of steam or aqueous vapors, and that the increase of potential is effected by the concentration of the small drops of water into larger ones, as the proportion of the surface of the drops to the volume of same is materially reduced thereby.

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MR. CHARLES F. ANNETT, OF CHICAGO, ILLS.
VICE-PRESIDENT OF THE ASSOCIATION OF RAILWAY TELEGRAPH SUPERINTENDENTS

A NIGHT OPERATOR'S EXPERIENCE.

BY A. C. COSTLEY.

I am an operator and station agent by profession. When I left school to take my first position as operator I was only 17. My experience in being away from home was very much limited and my nerve was not quite developed. An old time operator, "Shorty" Smith, at that time night operator at Burlingame, Kan., took advantage of my youth and inexperience. With a view of posting me as to how I should perform in case of emergencies, he stated that misfortunes were more frequent with a beginner than an old timer, and that it was well to prepare myself for the bitter as well as the sweet. And to thoroughly impress this upon my mind he related a little instance which he claimed took place back in an eastern town.

It was a coal town, and money was expressed once a month to pay off the miners. It so happened at this time that trains were delayed on account of a snow blockade. One passenger train came and went during the day, but one was very late and compelled the day agent to remain on duty until its arrival. The train that had come and gone left a corpse, and as it was not called for that day it was set back in the back part of the telegraph office. There was no night operator at this point, and for the day agent to remain on duty was unusual.

The agent becoming weary turned his lights quite low and climbed up on the ticket counter to rest. He had been in solid comfort but a short while when he heard a queer noise in the corner where the corpse was. Raising on his elbows he beheld the supposed corpse alive and getting up out of the rough box. He never moved, but watched the motions the corpse went through. The uncoffined dead walked to the outer door and unlocked it and let a partner in. They immediately began to drill the safe in order to blow it up.

The agent saw he was up against the real thing. He jumped to the center of the room and getting hold of an iron poker managed to knock one of the ruffians out the first blow and finally overpowered the other, and came out a living hero.

This little tale impressed my mind with a horrifying dread that I might be the victim of such an experience.

It was in the fall of 1885. I was given the position of night operator at Wakarusa, Kan. Many of your readers have possibly passed through this little station, as it is only about 12 miles south of Topeka, on the Santa Fé. The position of night operator at this point is not the most desirable on earth and especially to a boy possessing as little nerve as I did at that time.

I had been working only a few nights when I was informed by the agent one evening that there would be a corpse in on the night train from the East, and that there would be a man from Auburn to receive it and to keep posted the best I could so as to furnish them all the information possible in case the train should be late. About 7 P. M. it began to rain, and about 10 P. M. I noticed several passengers in the

waiting room, who, from their appearance, were people out for other objects than pleasure. The train was on time, as luck would have it, and arrived at 1.50 A. M. I did not relish my lunch that night. The rain made me quite uneasy, as I was afraid the man who was to come for the corpse would not be able to take the little box home that night.

When the train arrived I assisted getting it off the train and soon as practicable made my exit. I had not been in the office long, meditating how fortunate I had been and enjoying the pleasant comforts of solitude, when one of the funeral party came and said they would have to leave the corpse with me until morning. This was a shock which was undescribable. I thought I could feel my blood reverse in my veins when these words were spoken to me. The little instance my friend had been so kind as to relate to me was yet fresh in my mind.

I well knew unless I permitted the storing of the box my job would be a thing of the past, after that night. I concluded to allow them to set it in the ware room, and before I opened the door I took a good look around the two rooms to make sure there was nothing in there that would need letting out to necessitate my transacting any business in that department. I then opened the outside door and instructed the party to set the box in the ware room and to come through my office to go out. They obeyed my instructions and soon went their way.

The rain was pouring in torrents by this time and the night was very dark. This only added to the dreariness of the occasion. I had made up my mind to stay with it, and sat down in my chair and was trying to make myself brave and composed, when, to my bitter surprise, I heard a queer noise in the room where the corpse was. At this I jumped up and began searching for a stove poker, as this was the favorite weapon in cases of this nature. I soon equipped myself with this and awaited my fate. Soon I heard another queer noise in that part of the building, something I considered unusual for a dead person to be making. I stood this until I heard the noise again. This was too much for my nervous system, and I thought best to make a-get-away. I called the train dispatcher at Topeka and told him my troubles, and that I was going to leave the office. He insisted that I should remain, as he wanted to put out orders there soon. He said he would stop "first 212" and they could see what was the trouble.

I made the best of it. Every few minutes I could hear some one charging around in the corpse department, as though he was arranging his toilet and would soon come for me. The first section arrived, and I related my experience to the conductor, who was an unusual good specimen of the male sex. He was conducted to the door which opened into the room that contained the mysterious box, and without giving any countersign gained admission. At the very moment he opened the door out bounded a large shepherd dog, and he did not come out easy, but jumped with all his force. This solved the mystery. I have suffered from nervous prostration ever since, and this is a mere infant to some others I have experienced.

Confederate Military Telegraphers.

No more valuable service was performed during the great war between the states by any branch of the military or naval force than that done by the telegraph. Both contending armies were indebted to it for valuable work and for important information. Heroic deeds were often enacted by the operators, and many of their most self-sacrificing deeds are unrecorded. Almost every expedition of a dangerous nature had one or more telegraph operators in its force to read and translate telegraphic cipher, or to tap wires and transmit news of important movements.

Much has been said in recent years of the heroic act of Sam Davis, the brave young Tennessean, who was executed as a spy, and died when he might have been saved by merely giving the name of a comrade who had imparted valuable information to him. A similar case occurred in Arkansas, of which little publicity has been given. A lad less than 18 years of age, named David O. Dodd, a native of Lavacco county, Tex., was hanged at Little Rock on January 8, 1864, for refusing to reveal the name of his informant describing the fortifications around Little Rock. Young Dodd was not a soldier, but he had studied the dots and dashes of telegraphy. In an attempt to pass out from the city he had been allowed to reach the outpost guard, when marks in his memorandum book were noticed. He was sent back under escort to General Steele, where an operator found that by Morse telegraph characters he had a full description of the military works about the city. He was tried by court-martial and condemned, but General Steele offered to reprieve him on condition of his disclosing the parties who had imparted the information. His kindred made an earnest appeal at the last moment to save his life, but he firmly waved them away, and said he would rather die than betray a friend. A marble shaft recording the date of his birth and death marks his grave in Mount Holly Cemetery, Little Rock, placed there by surviving friends in memory of his bravery.

The late Barney Hughes, of Memphis, was a telegraph operator during the larger part of the Civil War. At the outbreak of hostilities he entered the service as a lieutenant of heavy artillery, and in this service he handled a battery on the river front under the chalk bluffs at Columbus, Ky., when Belmont was fought on the opposite side, November 7, 1861. Later he served as ordnance officer on the staff of General Trudeau at Island No. 10. In the summer of 1862 he was located at Chattanooga, where he sometimes whiled away a leisure hour by sending dispatches to the operators along the front telling them of a scarcity of forage and other supplies, so that he was confidential operator for General Bragg, the leader of one of the great armies of the Confederacy, and he was with him at Ringgold and Catoosa Springs, Ga. At the close of the war he was at Montgomery, Ala., and later he went to the far northwest, where he operated for several years. Then he came to Memphis, entered the railway service, married in 1872, reared a family, won the regard of the people, and died universally regretted by a host of people. A beautiful monument now marks

his resting place at Elmwood, and its inscription records the genial qualities of the man as well as the great esteem in which he was held by his fellow citizens.

The late Henry A. Montgomery, also of Memphis, was noted for his great energy in every enterprise with which he was connected. He was one of the earliest telegraph operators thereabout, and three or four years previous to the war was located at the Commercial Hotel. As general superintendent he built the first telegraph line west from Memphis to Little Rock, and during the war he continued it to Clarksville, which was its eastern terminus. He also built a line from Madison to Helena, Ark., during the war. These lines were moved south as the Confederates were pressed toward the Gulf. There was no telegraph line in Arkansas prior to 1860.

Emmet Howard, the present manager of the Western Union Telegraph Company in Memphis, began his career, both in life as well as in his profession, like Barney Hughes, in Kentucky. Mr. Hughes' first public service was as an acolyte in a church at Louisville, but Mr. Howard first attracted attention by working a wire at the modest little town of Blandville, eighteen miles northwest of Columbus and twelve miles southeast of Cairo. An older friend wished a vacation, and put young Howard on as his substitute. This led to its adoption by him as a profession, and Blandville being an outpost, with Howard an ambitious student of southern sentiments, he was located there for duty. Lines of telegraph led north and south and were in good condition as the war progressed, and for several months communication was not seriously disturbed. During the autumn of 1861 scouts of both armies passed to and fro about Blandville, and Operator Howard told their movements over the wire to General Polk at Columbus. Finally he was driven from the town by the Federals. He located at a mile south in a hollow behind a tree, from whence, by tapping the wires a hundred yards away and catching the passing messages, General Polk was kept informed of what was going on. This is the first recorded instance of wire-tapping in the history of telegraphy, but it proved a dangerous as well as a poor-paying business, the hardships endured, as well as the risk, not being repaid by the results.

Federal forces, under orders from General Grant, took possession of Paducah on September 6, 1861, a few days after the Confederates, under Polk, had occupied Columbus. Six months later, February 6, 1862, Admiral Foote captured Fort Henry, on the Tennessee river, and seven days later General Grant took Fort Donelson, with Buckner and his army. These successes and the Mill Springs disaster on January 19, rendered Columbus untenable to the Confederates, and General Polk marched his army southward during the first days of March, the munitions of war, with 3,000 men, going by river to Island No. 10. Mr. Howard was ordered to Hickman, Ky., a defenseless point nearly midway between Columbus and Island No. 10. Here he was to telegraph the passage of the Federal gunboats southward. Confederate scouts and couriers who were all there were to aid How-

ard, and when the gunboats steamed down on March 6, in a fog, he took up his instrument, mounted a horse, rode to the depot, got on a hand-car, went out two miles and collided with an engine, which threw the hand-car out of the way all broken up. The men on it jumped off in time to save their lives. All hands mounted the engine, which started for Union City, only to run into a body of Federal cavalry. Mr. Howard had attempted a reconnaissance, but was run so close that he barely reached the engine, which caught on the center as it tried to start, and it would not budge until the engineer got off and used his crowbar, moving the driving wheel, the enemy meantime using their rifles at a lively rate.

The engine reached Union City, fourteen miles out, with no one damaged, but Mr. Howard was ordered to return to within a half mile of Hickman, where he tapped the wire and used a crosstie for an office for several days, when he was relieved by two other operators, after which he served at Jackson, Tenn. After this he served at other points, until ordered to locate at Meridian, Miss., where, as telegraph manager, he was at work when General Sherman approached with an army of 23,000 men from Vicksburg, early in February, 1864. Polk opposed Sherman with a small force, but could not check his easterly progress until Forrest hit a column from Memphis, after which Sherman's army retraced their march to Vicksburg. Meantime Howard had to get away from Meridian in a hurry, barely escaping a cavalry column which rode up to the track as the train passed a point three miles to the south of Meridian.

The noted Kentucky cavalry leader, John H. Morgan, had a Canadian operator named George Ellsworth with him during the war. His first exploit was near Horse Cave, Ky., late in July, 1862. By connecting his instrument with the main line he was enabled to receive news of value to his leader and to discomfort his enemies. In several of Morgan's great raids Ellsworth was of very important aid, and throughout the war he did his best for the southern cause. He died a short time since.—Memphis Commercial Appeal.

Odds and Ends.

If you lose your "grip" in the telegraph service you can sometimes get the "grip" by using a telephone, so the germologists claim.

The authorities of Paterson, N. J., are so cautious of their own health that they would not even allow a woman in the smallpox hospital to be married by telephone. The spreading of contagion by wire seems to be more feared than sending it broadcast by their dirty river.

Probably he wanted to be an "immune," for after a country office had sent him a thousand words of special, the city chap, who had received it, said, with all the burning sarcasm that electricity could convey over a wire: "I wish you were small-pox!"

"Why?" asked the sender.

"Because," said the receiver, his acrimony unabating, "then I'd never have you again!"

LETTERS FROM OUR AGENTS.

To Our Correspondents.

While we are desirous to receive from our agents letters for publication respecting their various offices and of their personnel, for all efforts of this character are appreciated, we would earnestly request that such communications be confined strictly within the limits of the subject, and not so much space be devoted to hunting and fishing items and other extraneous matter, as is frequently the case. We wish to make the department of "Letters from our Agents" an attractive one, but if we were to publish all that comes to us in the shape of irrelevant matter, of no possible interest to the general reader, it would frequently require us to surrender a number of additional pages to contain it all. The current information of any office will, if carefully chronicled, furnish a welcome digest of news that will be read with pleasure and satisfaction by thousands, and this limit should be the legitimate contents of all letters. And we wish that our correspondents would avoid the too frequent habit, at all times a bad one, of abbreviating words in writing. This is a peculiarity among telegraphers, we know, but what may be plain to the writer, and for local interpretation, is usually a mystery to the editor, and is apt to lead to error in the printed statement.

MONTREAL, QUE., CANADIAN PACIFIC.

A wedding occurred on the 8th inst., when Miss Josephine Lucas, of this office, was married to Mr. Raoul Bissonette, of this city. Mr. and Mrs. Bissonette left on their bridal tour for Toronto, Hamilton and Buffalo, with the best wishes of their many friends.

Messrs. H. Schraeder, John Cole and J. W. Ross have received their first stripes, and are now manipulating the city wires.

Mr. O. M. Young has resigned and departed for Colorado Springs for the benefit of his health. Messrs. G. A. McBain, A. W. McLaren, J. J. Irwin and J. P. Kernan have also resigned.

Messrs. Janviér A. Fortier and C. Gibeau have been transferred to straight days. Mr. Nelson Noble has accepted a position with L. J. Forget & Co., a brokerage firm of this city. Mr. Herbie Keating has gone over to the Great North Western.

Arrivals: Messrs. R. E. Chapman; S. M. Thurston, from Ottawa, and J. Martyn, from Toronto.

PHILADELPHIA, PA., POSTAL.

The most important recent occurrence was the marriage of Jay A. Thomas to Alice Viola Stonemetz on the 5th instant. The bride and groom immediately took possession of their own new home to begin housekeeping. Congratulations were extended.

Trips to outside points in the Company's interest seem to be the call these days on Chief Operator C. A. Stimpson's time. He had scarcely gotten in from Atlantic City, where he had established a new, handsome and modernly equipped main office, when he took up a Southern trip to Cape Charles, Va., returning northward to locate and

eradicate the trouble on the new line down the Cape. Traffic Chief George W. Dunn, in the meantime, assumed Mr. Stimpson's official duties.

A few days' absence of Mr. John Shindine, chief clerk in the service department, caused it to become very apparent that his services are of an important nature. Miss Jennie Hallman and the Messrs. Wm. H. Butcher and John McLaughlin had their hands full during the time Mr. Shindine was away.

Mr. Joseph Hockery has been transferred from the 7 a. m. trick to be day operator in the North American office.

Mr. G. B. Morris, from The Associated Press, this city, is now with this company at one of the newspaper offices.

The yellow jaundice held our friend Bud Gagen, now employed by a broker, tightly in its clutches for several weeks. He is again at work.

NEW YORK POSTAL.

Mr. R. W. Stimers has resigned to accept a position with the Commercial Cable Co. at 20 Broad street.

Mr. J. T. Needham, assistant wire chief, Eastern division, has returned from a vacation of two weeks spent at his home and at the Pan-American Exposition at Buffalo.

Mr. J. A. McNulty, Eastern wire chief, has moved to his new residence at Ridgewood, N. J., for the summer.

Mr. Glen Newman, quad chief, South and West, is absent on a two weeks' vacation.

The Misses H. Jarmain and E. Heckel are also away on vacation.

Departures: Miss L. A. Howell, to Lenox, Mass., office for the summer; Miss E. Terrill to a Long Branch summer office; Mr. H. Gibson to the Asbury Park office for the summer; Mr. Arthur Banker to his old position at Paul Smith's hotel, Adirondacks, N. Y., and Mr. J. J. Sutphen to the White Face Inn, Adirondacks, N. Y.

Arrivals: Miss M. Cleary, Mr. J. W. Paul from the Herald night force; Messrs Hugh O'Rourke, J. Muir, B. B. Martin.

Transfers: Mr. W. C. Snyder, city department, to South and West; Mr. J. P. Williams from night force to all night trick; Mr. M. E. McKittrick from city department to South and Western division.

NEW ORLEANS, LA., WESTERN UNION.

Two crack baseball teams have been organized in this office. Their first game of thirteen innings resulted in goose eggs both sides. The teams style themselves the "Never Break" and "Never Bull," and are manned as follows:

"Never Break"—Meynier, P.; Serrat, C.; Molony, 1st base; Tognoni, 2d base; Knecht, 3d base; Harper, S. S.; Sullivan, R. F.; Mauberrett, L. F.; Richardson, C. F.

"Never Bull"—Garland, P.; Holthouse, C.; Gallagher, 1st base; McMahan, 2d base; Schraut, 3d base; Bell, S. S.; Carbajal, R. F.; Silver, L. F.; Gowland, C. F.

They would like to hear from the Postal's ball team.

Miss Katie Madison, of Ocean Springs, Miss., and Henry C. Turner, the popular foreman of the local linemen, were married in Ocean Springs, May 29. They were absent on a bridal trip of a week.

The many friends of our esteemed chief, Mr. W. D. West, will be glad to learn that the piney woods of Ponchatoula, La., are restoring his health, and he will soon be with us again.

Arrivals: Messrs. E. E. Woolfero, M. M. Lott, Thomas Watkins, J. G. Davis (late Southern Pacific dispatcher) and J. A. Peterson.

Mr. Urb Mauberrett has left for an eastern trip and Mr. P. A. Moake has resigned to accept a position in the fire alarm office. Superintendent of Telegraph G. M. Dugan, of the Illinois Central Railroad, was in town lately.

Mr. John A. Galbreath, of the operating force, has been appointed to the responsible position of finance clerk in the Post Office in this city. Mr. Galbreath has held many public offices. He was a telegraph operator in the Confederate army, and is a chess player of international reputation.

CHICAGO, ILL., WESTERN UNION.

Do not let us forget our brothers who have strayed away from the fold, and let us extend a friendly greeting and congratulations to Ray F. Finley (son of Assistant Chief Operator C. H. Finley, of this office), now at Kansas City. He was recently promoted to the regular all night force at that point and is surely on the road to promotion. Mr. Finley should not feel lonesome, for there are some other Chicago boys in Kansas City, among them Harry Hall, who is giving a good account of himself.

Chief Operator L. K. Whitcomb and Mrs. Whitcomb were present at the christening of their grandson at Kansas City recently. There were present Louis Kossuth first, second and third.

Mrs. Anna Hutchinson went presumably on a vacation a short time ago, but it in reality proved to be her honeymoon, much to the astonishment of all. She was married to Geo. Fairman, now at Armour's. We all extend congratulations.

Mr. F. A. Peterson and family recently visited their relatives at Sioux City for two weeks. Mr. Peterson reports fine fishing, and his gait is now full of elasticity from the outing.

Mr. A. W. Galloway has returned from a vacation looking much benefited.

Mr. H. C. Bresher is back again after an absence of a month at Burlington, Iowa, where he has been filling in during the sickness of the regular operator.

Dip McCruden, recently of St. Louis, is now in this office. He is a record breaker, having recently sent 95 messages per hour to Kansas City.

Mr. Robert Atkinson has been away on sick leave.

Rev. Father Welaskewicz, formerly Francis Welaskewicz of this office, recently passed through Chicago and was a visitor here on his way to western Nebraska, where he has been assigned as a priest.

Frank Abbott's little baby died on June 3. Mr. Abbott sustained the loss of a portion of his

foot a short time ago, and now his death following so soon awakens especial sympathy for him.

Night Chief Operator Geo. Dunning has the sympathy from all in the death of his sister.

Walter Gilmore, of the St. Paul division, has recently lost by death first his mother-in-law and then his mother.

Mrs. M. E. Farron, sister of Mrs. Anna Hutchinson, is with us. Mrs. Farron at one time worked in the St. Paul office, St. Paul being her home, but for the past two years and a half has been living in Chicago. She is a first-class telegrapher.

Mrs. Maude Wright, late of Cleveland, O., has been assigned to Gallagher's division. She is a genial and refined lady, and we wish her success.

The Chicago Western Union Baseball Club have reorganized for the season of 1901 and would like to hear from other telegraphers' ball clubs, the Milwaukee, Peoria and Cleveland clubs preferred. The players are: Morton, Ruprecht, Danbach, Eichler, Simpson, Snell, Hill, Lewis, Schwartz. Substitutes: Sullivan, Leitch, Ryder, Rube Carlin and Watts. Mr. J. L. Danbach, of the Board of Trade, is manager.

SAN FRANCISCO, CAL., WESTERN UNION.

San Francisco now enjoys a distinction not accorded many points outside of the National Capital; that is, entertaining the President, President's wife and Cabinet for an extended period. The sudden illness of Mrs. McKinley necessitated a stoppage of over a week here, and a temporary office was established at the Scott residence, with Messrs. W. L. Otte and Moore as operators. On the breaking up of the national headquarters, the President presented Messrs. Otte and Moore with a beautiful photograph of himself with his autograph thereon, in appreciation of their untiring services during the eventful days.

Electrician Louis McKisick was dispatched to meet the special bearing the Presidential party, and extend to them the hospitality of the Western Union on the coast, while Messrs. R. W. Whipple and E. Summerl, two of the most rapid senders in the service, were sent to Del Monte, Santa Cruz and San José to transmit press matter, etc.

Manager M. Marcan, of the Washington, D. C., Western Union office, who was in charge of the telegraphing of the Presidential party, was a frequent caller at the office during their stay here.

Arrivals: Mr. G. H. Mellen, from Bakersfield; Miss J. A. Kottinger, from Hanford; Messrs. Brophy, Tomkins, Wulzen, G. A. Mitchell, W. R. Mitchell, and Higgins. Departures: Messrs. Dogge, Hansen and Goodwin. On vacation: Messrs. Weiler, Wade, Blodgett, McCormack, Yoel. Miss Rood is absent on sick leave.

Mr. S. C. Stevenson, of this office, has been transferred to Flagstaff, Ariz., Mr. J. E. Palmer, who has been at Flagstaff for a number of years, having been transferred to Reno, Nev.

Mr. W. H. Wilson has returned from Reno, where he has been attending the overland repeaters the past six months.

Mr. Wm. Williamson, of East Oakland, who has been at Hotel Arlington, Santa Barbara, the past

year, has been transferred to Hotel Del Coronado, Coronado Beach.

Mr. Chas. Berg, formerly of this office, is taking night report at Santa Barbara. Miss Bacon is also now located at Santa Barbara, as day operator.

Mr. E. B. Peppin, for many years a member of the San Francisco force, has accepted a position in the Southern Pacific dispatcher's office at Fourth and Townsend streets.

Mr. W. W. McCandlish has located on a ranch near San José, and is enjoying the life of a gentleman farmer, after many years of service in the telegraph business.

ST. LOUIS, MO., WESTERN UNION.

Miss May Michaels, one of our bright branch office operators, was transferred to the main office recently.

Resignations: Mr. H. G. Thomas, to accept the managership of the Western Union office at Palestine, Tex.; Miss Kate Walsh, to accept an outside position in this city; Miss L. Rahm, on account of poor health.

Visitors: Messrs. C. W. Mayfield and Frank Shiflin, of Hot Springs, Ark.; Mr. B. F. Crockett, agent for the St. Louis, Kennett and Southern Railway at Caruthersville, Mo., on May 17 and 18. Mr. W. J. Costello, of 30 Broad street, New York, made quite an extended visit during May and June.

Mr. Albert J. Merklin, a brother of Miss Anne Merklin, a telegraph operator for the Missouri Pacific Railroad, stationed in St. Louis, returned from the Philippine Islands May 11, where he saw plenty of service with the Thirty-ninth Infantry, U. S. V. Mr. Merklin's probable appointment to a commission in the Regular Army will in no wise surprise his many friends.

Mr. Joseph Barry was added to the race track office force May 4.

Mr. Chas. W. Jost and Chas. Jost, Jr., returned from Chicago June 2, after an absence of four weeks.

Mr. P. A. Moake, manager of the New Orleans Western Union Board of Trade office, and Miss Eunice Wilkinson, of Chester, Ill., were married May 26. They spent part of their honeymoon at St. Louis, and will make their home at New Orleans. They have the best wishes of their many friends.

Beware of Ointments for Catarrh That Contain Mercury,

as mercury will surely destroy the sense of smell and completely derange the whole system when entering it through the mucous surfaces. Such articles should never be used except on prescriptions from reputable physicians, as the damage they will do is tenfold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, O., contains no mercury, and is taken internally, acting directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure you get the genuine. It is taken internally, and made in Toledo, Ohio, by F. J. Cheney & Co. Testimonials free.

Sold by Druggists, price 75c. per bottle.

Hall's Family Pills are the best.

TOPEKA, KAN., NOTES.

The telegraph force at the general office of the Santa Fe Pacific Railroad at this point is as follows: R. S. Statler, manager; R. S. Kersey and W. O. Appleby, Chicago, duplex; C. D. Crotchett and T. J. Farley, Las Vegas, N. M., duplex; W. H. Tandy, Kansas City, duplex; L. A. Laurent, Texas, local; J. L. Hinchman, Denver, local; T. H. Cofer, Newton, Kansas, local; J. F. Noel, Wellington and way; H. Wardenburg, around the room; J. F. Barrie, Chicago, local; night force: W. S. Thomas, operator in charge; W. Wardenburg, W. A. Baldwin, and L. M. Baird, operators.

Western Union: H. L. Bevelle, manager; F. V. Worden, chief operator; Wm. Redfield, operator; H. H. Lee, night chief.

Postal: J. C. Thomas, manager; B. F. McPherson, chief operator, and R. R. Williams, operator.

NEWPORT, R. I., WESTERN UNION.

Mr. Edward C. Austin has been transferred from the Perry House to the more important office on Bellevue avenue. Mr. Arthur C. Noonan, late with the Postal, fills his place at the hotel office.

Mr. J. J. Walsh, of Fall River, has been appointed manager of the Jamestown office, which opened June 3. Mr. Frank D. Sullivan is the delivery and telephone clerk, with James H. Anderson, Jr., as assistant clerk.

A new and handsome writing desk, with chairs to match, has been placed in the outer office for the benefit and pleasure of the public, which Manager Woodle always considers.

Mr. Charles T. Bliss, who has had large experience with the Western Union system of accounts, has been engaged as bookkeeper, the same as last year.

RICH VALLEY, MINN., CHICAGO GREAT WESTERN.

Agent Yale, at Empire, Minn., is taking a fifteen day vacation. He is relieved by Night Operator McElrath, from Rich Valley. F. J. McKinstry fills Mr. McElrath's place at the Valley.

Operator Collins has resigned his position at Sumner, Iowa, and will leave for the west shortly. Mr. J. M. Little succeeds Mr. Collins as day operator at Sumner.

Mr. Wm. E. Moore is now located at West Concord as night operator.

Mr. L. B. Fisk, formerly trick manager at Dubuque, Iowa, now holds down first trick at St. Paul.

Mr. J. P. Houston is once more with us as third trick man at St. Paul.

If some of our local men along the line would study their boards a little and take some good journal like the AGE, it would save our wire chief a lot of "grief."

PHILADELPHIA, PA., WESTERN UNION.

Mr. D. Good wishes to express through the AGE his sincere thanks to many friends for their messages, letters and personal words of sympathy to him in the loss of his mother, who, after a very short illness, departed this life on May 30. She was a good, kind and loving Christian mother, who could say as the apostle Paul said: "For me to live is

Christ and to die is gain." Peace to her ashes; the soul has winged its way to a better world!

Mr. J. F. Hummel has resigned, to accept a position with The Associated Press at Altoona, Pa.

Messrs. D. A. Mahoney and T. J. Clinger, both veterans in the business, are confined to their homes by illness. Mr. Mahoney's condition is somewhat critical. We hope, however, to see them both with us again shortly.

Mr. D. E. McBride, of this office, was married June 12 to Miss M. T. LeGierse, of West Philadelphia. After an extensive wedding tour the young couple will reside at West Philadelphia.

Messrs. P. E. Durnin and C. O. Boggs, both from Washington, D. C., are arrivals.

Mr. Frank Pressel, a well-known old timer and gilt edged operator, now located in the west, was a recent visitor, as was also Mr. Harry McKelway, of Washington, D. C.

Messrs. Langstroth, Burns and Schultz were sent to Princeton, N. J., recently to help out during the commencement rush.

Amos L. Bougher, of Philadelphia, has secured the agency for the celebrated "Alexander" word counter for Philadelphia and vicinity; price, \$3. It needs no recommendation. You simply press the button and it counts. Address orders to him, care Western Union Main Office, Philadelphia, Pa.—Adv.

NEW YORK, WESTERN UNION.

Mr. Henry W. Sauer, of this office, president of the Telegraphers' Aid Society, is rusticated at Loch Sheldrake, N. Y.

Mr. Joseph Gschwind, night eastern division traffic chief, was married June 3 to Miss Theresa M. Hermann, of Wakefield, R. I., the ceremony being performed at Mount Vernon, N. Y. Many congratulations were received by the happy young couple.

Mr. Joseph Meyer, of the eastern division, resigned June 1, to accept a position with the Stock Quotation Telegraph Company, of this city.

Miss Kitty McNally, for many years chief at city line switch, has resigned to go into a broker's office. Miss M. E. Kennedy, traffic chief of city line, takes Miss McNally's place.

Other resignations are: Mr. W. W. Friend, Misses M. M. Dougherty and M. Cleary.

The following have been appointed to the waiting list: Messrs. J. J. McDonough, P. G. Fondille, M. Hogan, I. C. Sickels, W. L. Heptig, F. W. Wolf, I. G. Kelly, J. P. Rohling, J. H. Ryan, R. T. Kerin, M. J. Dixon, E. L. Bloomberg.

Appointments: Messrs. W. J. Dickson, G. R. Benjamin, Miss A. M. Coughlan, E. McBride, R. C. Rattray, J. J. Riley, W. L. Forrester.

Transferred to summer offices: Misses J. V. Carabrine and J. V. O'Brien and Messrs. Howard Smith and A. L. Wright.

Among the many beautiful floral pieces at the funeral of Mrs. E. C. Cockey, was one sent by the Magnetic Club.

Miss Nellie Flynn has been promoted to city line traffic chief, to fill the vacancy caused by the advancement of Miss Kennedy.

Mr. E. E. Brannan, traffic chief of the Jerseys, is on a vacation which he is spending with W. J. Bodell at Fortress Monroe, Va.

Mr. John Rathbone, who had an abscess in his left eye, is in the Ophthalmic Hospital for treatment. It is thought he will be out in a week or two.

Miss Nellie T. Calver has gone to Minersville, Pa., to recuperate.

Messrs. J. F. Paddock and Perry F. Irish have resumed duty after long illness.

Mr. Fred T. Meyer is seriously ill at the Williamsburgh Hospital, Brooklyn.

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 prices—sold \$1.00 per week. B. L. Brannan, 195 Broadway, New York. (Adv.)

Correspondence.

Editor TELEGRAPH AGE:

I have received many inquiries from operators throughout the country, asking to what I attributed my recovered grip.

You will do me a favor if you will publish this in the AGE for the information of those I am unable to directly reach.

My arm gave out after two years of constant and rapid work on the Philadelphia wire, during which time the operator and myself exchanged an average of 640 messages a day. In October, 1899, I was obliged to seek a position where little or no sending was required. From that time until April of the present year, to send was a severe strain to my arm. During the last week of April I tried the Twentieth Century key. In the course of a few days I found I could send on the new key with considerable ease. During working hours I made constant use of the new key when sending, changing the lever to whatever position best suited the tired muscles. When sending on the new key, with the lever at right angles until I felt my hand becoming tired, I changed the lever to a perpendicular position, thereby bringing into action other muscles of the arm. After using the new key about three weeks I sent 63 messages in an hour. Since using the Twentieth Century key I have worked leased press circuits at the Journal, sending continuously for eight hours on the regulation key and handled a large amount of press. I did not feel any strain on my arm after doing this work.

I attribute the recovery of the grip I now possess to one month's constant use of the Twentieth Century key, and by further use of this new key I hope to obtain much better results.

Very truly yours, T. F. KEHOE.

New York, June 5, 1901.

Subscribe for TELEGRAPH AGE, \$1.50 per year.

Personal Mention.

Gen. Thomas T. Eckert, president of the Western Union Telegraph Company, New York, together with his family, has taken up his residence at Long Branch, N. J., for the summer.

Mr. W. D. Sargent, general manager of the New York and New Jersey Telephone Company, New York, an old time telegrapher, sailed for Europe a few days ago on a brief vacation.

Mr. Arthur Hale, of Philadelphia, superintendent of telegraph of the Pennsylvania Railroad, has been appointed assistant general manager of the Baltimore and Ohio Railroad Company.

Kidnappers for some time past have threatened to kidnap the youngest daughter of Mr. Thomas A. Edison, of Orange, N. J., but the veteran of the key has his house closely guarded, and a hot reception awaits any intruders on the premises.

Mr. L. C. Weir, an old time and military telegrapher, now president of the Adams Express Company, New York, was a member of the New York Chamber of Commerce party which lately paid its respects to King Edward of England.

Major R. B. Hoover, until recently manager of the Bell Telephone Company's exchange at Springfield, Ohio, has resigned to accept the position of secretary of the National Magneto Telephone Company, of New York. Mr. Hoover will be succeeded by H. P. Miller, who has been identified with the Bell Company at Chicago. Mr. Hoover is an old time telegrapher.

Capt. William Brophy, formerly of the Boston wire department, has left the service, and of late has been doing expert work for the Boston Edison Company and other parties. As one of the most competent experts in the country in regard to aerial circuits, subways and interior wiring, Captain Brophy should find his services, now happily available, in very general demand.

Mr. George F. Porter, of New York, manager for Mr. W. R. Brixey, manufacturer of the Kerite and Insulated Wires and Cables, has gone to Alaska. It is Mr. Porter's intention to lay the Brixey Kerite cable, for which the Government recently contracted. The cable is 125 miles in length, and is to connect Juneau and Skagway, Alaska. This is the second large order the Government has given for Kerite cables for Alaskan work.

Mr. George C. Ward, vice-president and general manager of the Commercial Cable Company, New York, and a member of the New York Chamber of Commerce, was one of the party of twenty-two delegates from that body, who on June 1 were guests of King Edward at Windsor, England. Mr. Ward said: "When we saw the Queen we could scarcely believe it was she. She looked so young and charming. Both the King and Queen appeared to be in splendid health, and they certainly were in the best of spirits."

Miscellaneous Items.

Mr. J. C. Wheaton, for the past three years in the Government Signal Service at Havana, Cuba, has returned to New York, where he expects to locate.

Out of a party of twenty-two members of the New York Chamber of Commerce, who recently, by invitation, visited the King of England, five of them were representative telegraphers.

Mr. W. Y. Nolley, manager of the Postal Telegraph-Cable Company, Shreveport, La., is off on a month's vacation at Hot Springs, Ark. During his absence Mr. C. C. Hollenback is acting as manager.

Mr. G. C. Zachow, an operator, on account of ill health, severed his connection with the Western Union Telegraph Company, at Milwaukee, Wis., and accepted a mercantile position at Janesville, Wis.

Mr. Arthur H. Brown, lately of the electrical engineer's department, Postal Telegraph-Cable Company, New York, has accepted a position with the Bunnell Telegraphic and Electrical Company, 110-116 Beekman street, this city.

Mr. F. M. McClintic, of Memphis, Tenn., one of the best press operators in the United States, has abandoned the key and gone into the typewriter business in that city. His telegraph friends everywhere wish him abundant success.

Mr. George W. Morris, of New York, has resigned his position with the Long Distance Telephone Company to re-enter the telegraph service. He will have charge of the Gold and Stock Telegraph Company and Commercial News Department interests at Pittsburg, Pa.

J. W. Sampson, a well-known telegrapher, employed by the Western Union Telegraph Company in Washington, was stricken with paralysis on June 8, and is in a critical condition. Mr. Sampson has been in the employ of the Western Union Company for over thirty years, and is well known throughout the country.

Mr. J. A. McClary, of the Postal Telegraph-Cable Co., who, with W. L. Stoddard and R. E. A. Doerr, of the Mail and Express, New York, has just returned from a very enjoyable trout fishing trip to the Adirondacks. Mr. McClary is one of the oldest employees and managers of the Postal Company, and has returned to that company after an absence of seven years engaged in telephone construction and other work.

New York Visitors.

Mr. J. W. Larish, electrician of the Western Union Telegraph Company, Boston, Mass.

Mr. W. S. Logue, of Chicago, Ill., western sales agent of the Edison Manufacturing Company, of New York.

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

Obituary.

William C. Daley, an operator of Baltimore, Md., died on June 3.

Charles J. Eltz, a telegrapher, died at Reading, Pa., June 3, aged 40 years.

Harry C. Bliss, an operator in the Western Union Telegraph office at Bangor, Me., and a son of Charles E. Bliss, the manager, died in that city June 9, aged 45 years. He was an expert operator, well known throughout New England.

James H. O'Donnell, a sergeant in the Signal Corps, in the province of Panay, Philippine Islands, died on May 3. He was a native of Rhode Island, an expert telegrapher, and prior to entering the army was in The Associated Press service in New England.

DEATH OF MRS. EDWARD C. COCKEY.

Mrs. Mary Ann Cockey, wife of Edward Cromwell Cockey, general purchasing agent of the Western Union Telegraph Company, New York, died suddenly at her home, No. 235 West 127th street, New York, on Friday, June 7. The funeral was held at the family residence on Monday evening, June 10, and drew together a large assemblage of friends, very many telegraph officials being present. Mrs. Cockey was particularly well known to the telegraphers of New York, by whom she was held in high esteem, especially since the well remembered meeting of the Old Time Telegraphers held in this city in 1895, when her husband was president of the association and she officiated as chairman of the ladies' entertainment committee. A woman of infinite tact, charm of manner and executive ability, she won enthusiastic praise for her efforts on that occasion, the remembrance of which has never failed. The sympathy of a wide circle of telegraph friends has been most generously extended to Mr. Cockey.

Resignations and Appointments.

Mr. Chas. F. Avery has been appointed acting manager for the Western Union Telegraph Company at El Paso, Tex., versus J. W. Brooks, resigned. Mr. A. R. Zimmerman is acting as chief operator at El Paso.

The United States Navy, through Admiral Bradford, chief of the Navy Bureau of Equipment, has officially adopted, so far as possible, the use of wireless telegraphy and recommended, in the report of the bureau which investigated the question, that the use of homing pigeons be discontinued as soon as wireless telegraphy can be introduced successfully into the navy. No new pigeon cotes will be established.

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

Third Annual Banquet New England Corps of the Associated Press.

The third annual banquet of the New England Telegraph Corps of The Associated Press was held in Boston on June 2. Members and guests were present from all sections of New England, six States being represented. The banquet was held at Hotel Cecil, and the menu was elaborate and handsomely served.

Among the guests present were Mr. J. H. Fahey, New England Correspondent of The Associated Press; H. F. Wood, J. H. Johnson, D. Roy Newcombe and L. C. Wedmore, of Boston; H. C. Bunting, New York; Wm. E. Kettles, Lynn, Mass.; Elmer R. Joy, Haverhill, Mass.; D. E. Hennessy, New London, Conn.; J. A. Hosey, New Bedford, Mass.; J. W. Walsh, Lowell, Mass.; J. W. Taylor, Manchester, N. H.; P. M. Loughlin, Springfield, Mass., and N. E. Stafford, Hartford, Conn.

Mr. Fisher, president of the corps, presided, and gave "toasts" suggestive of incidents happening on the circuits during the past year, the "points" being caught without "breaks" and producing much merriment at the expense of the responding speakers. Good nature and spirits prevailed, and the occasion was the happiest of any previous meetings.

After the fun subsided a business meeting was held. The reports of officers showed the organization in a prosperous condition. The treasury showed a good balance after paying several hundred dollars in sick benefits during the past year. Amendments to the by-laws and constitution were adopted, the tenor of which was to place the organization on firmer business lines. Eight new members were initiated, raising the roster to high-water mark.

The following officers were re-elected: Mr. Ernest M. Fisher, Boston, president; Mr. Park J. Stewart, Manchester, secretary, and Chester G. Rogers, Boston, treasurer. Mr. G. W. S. Burroughs, of Providence, was elected vice-president, succeeding Mr. Robert E. Grandfield, of Fall River.

Among the members present were: C. A. Price, Providence; E. J. McLaughlin, Worcester; G. W. S. Burroughs, Providence; A. M. Stevens and S. P. Nash, Portland; H. C. Bolles, New Bedford; P. J. Stewart, Manchester; J. J. Keating, New Haven; C. F. Whitney, Lowell; P. J. O'Connor, Lewiston; E. J. Neil, Lawrence; R. E. Grandfield, Fall River; G. F. Gannon, Concord; G. S. Bolles, Brockton; P. J. Foley, Biddeford; Wm. E. Nelson and J. F. Maloney, Bangor; S. J. Hegarty, Augusta; W. H. Edworthy and C. G. Rogers, Boston.

The Edison Storage Battery Company.

Mr. Thomas A. Edison has, with Messrs. Herman E. Dick, Walter S. Mallory and William E. Gilmore, of Orange, N. J., organized a company to manufacture his new storage battery. It is thought that the new company, which has a capital stock of \$1,000,000, will be the parent or controlling body of a number of similar organizations to be organized later for the same purpose.

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"TALES OF THE SIERRAS," by J. W. Hayes, 136 pages, illustrated. This volume, full of laughable incident, presents a collection of original and well told telegraph sketches, partaking in character largely of the former wild life of the frontier. The fun in the book, which never descends to vulgarity, is accentuated by droll illustrations by John L. Cassidy; bound in cloth, \$1.10.

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The Municipal Electricians.

At a meeting of the Executive Committee of the International Association of Municipal Electricians, held in Philadelphia, Pa., June 3, the following topics of papers to be read at the sixth annual convention of the association, which will be held at Niagara Falls, N. Y., September 2, 3, 4, were selected and assigned:

"The Need and Value of a Set of Rules for Outside Construction," P. H. Trout, Jr., Lynchburg, Va.; "Underground Electrical Construction from a Municipal Standpoint," Edward F. Schurig, Omaha, Neb.; "The Protection of Fire and Police Telegraph Wires from High Tension Currents and Lightning," W. M. Petty, Rutherford, N. J.; "Improved Storage Battery for Municipal Purposes," J. W. Aydon, Wilmington, Del.

A paper will also be read by a well-known electrical engineer dealing with the advisability of placing high and low potential conductors in the same conduits and man-holes.

The committee consists of Morris W. Mead, president, of Pittsburg, Pa.; John W. Aydon, of Wilmington, Del.; Adam Bosch, of Newark, N. J.; Frank P. Foster, of Corning, N. Y., and Frank C. Mason, of Brooklyn, N. Y.

After adjournment the committee, by invitation, called on Chief Walker, of the Electrical Bureau of Philadelphia, and secured from him a partial promise to appear at the coming meeting of the association and give the members a talk on "The Lights and Shadows of Municipal Experiences from a Municipal Standpoint." Chief Walker introduced the committee to his successor, John C. Sager, who was already known to the leading members of the association, and were entertained by him later at the Hotel Stratford.

The Municipal Electricians now have representatives in 110 American and Canadian cities, and are in a growing and flourishing condition. Special arrangements for transportation have been made by all the leading railroads, which will permit the members of the association, their families and friends, to attend the association meeting and at the same time visit the Pan-American Exposition at Buffalo. Special arrangements for their entertainment have been made by Mayor Butler, of Niagara Falls, and Chairman Donohue, of the executive committee of the association.

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

A Suggestion.

Editor TELEGRAPH AGE:

The success of The Telegraphers' Mutual Benefit Association, The Gold and Stock Life Insurance Association, the many aid societies, the equally numerous building and loan associations, proves that telegraphers possess the necessary qualifications to be successful business men. The existence of these societies also proves that a "Community of Interest" exists and is being fostered in and by the craft. There is but one link missing in this "Community of Interest" phase, to wit, a layman's voice in the management of the telegraph industries. There is certainly a "Community of Interest" between Capital and Labor. If the invested capital could be brought to realize that a practical telegrapher on the board of directors would be of greater service to the capitalist than an association of rich men not entirely familiar with the telegraph and its wants, perhaps this object might be achieved. True, there are some practical telegraphers in the directory, but there are not enough. Maybe at this very moment some director, seeing the logic of this statement, would like to give it a trial for one term anyhow.

Who would select the layman that would be the representative of the craft?

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

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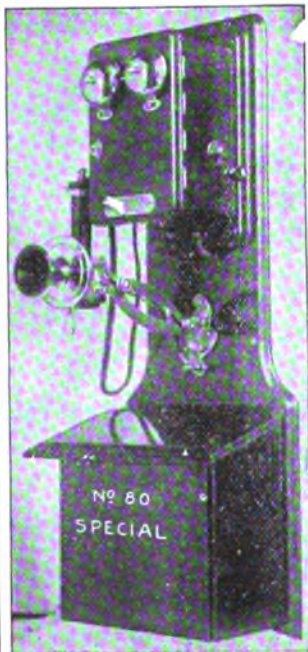
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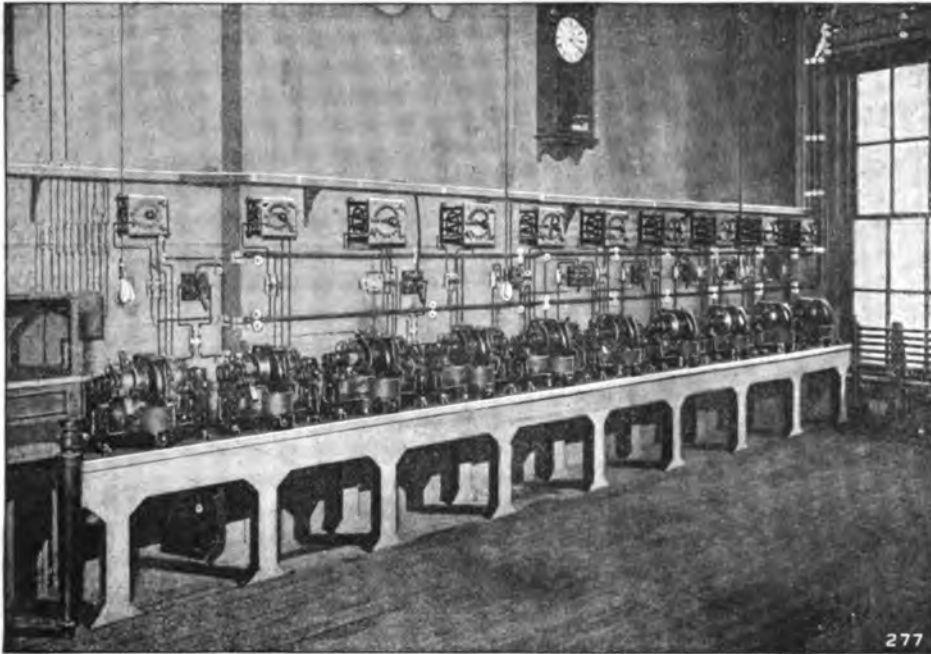
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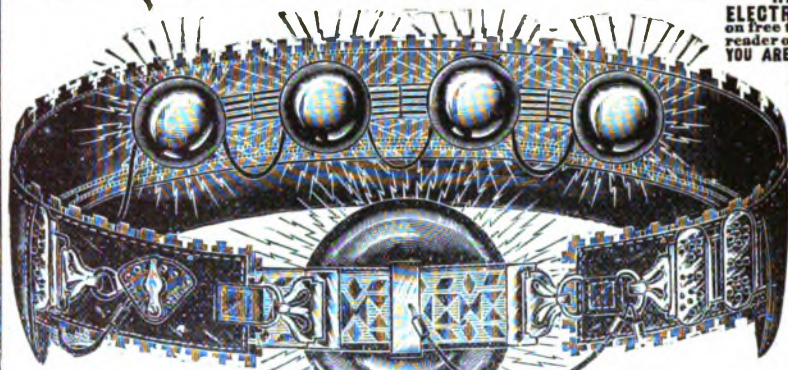
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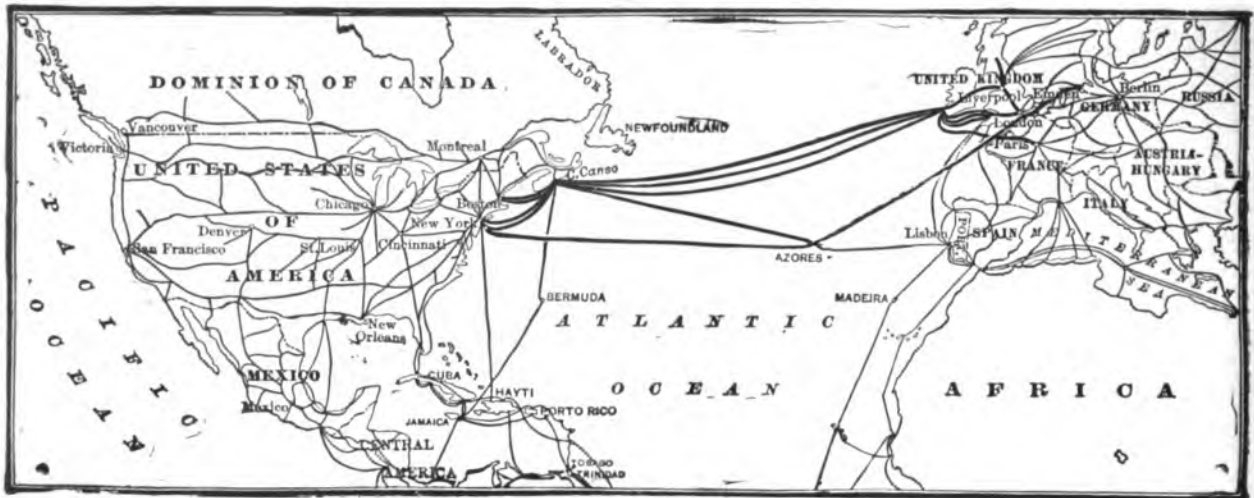


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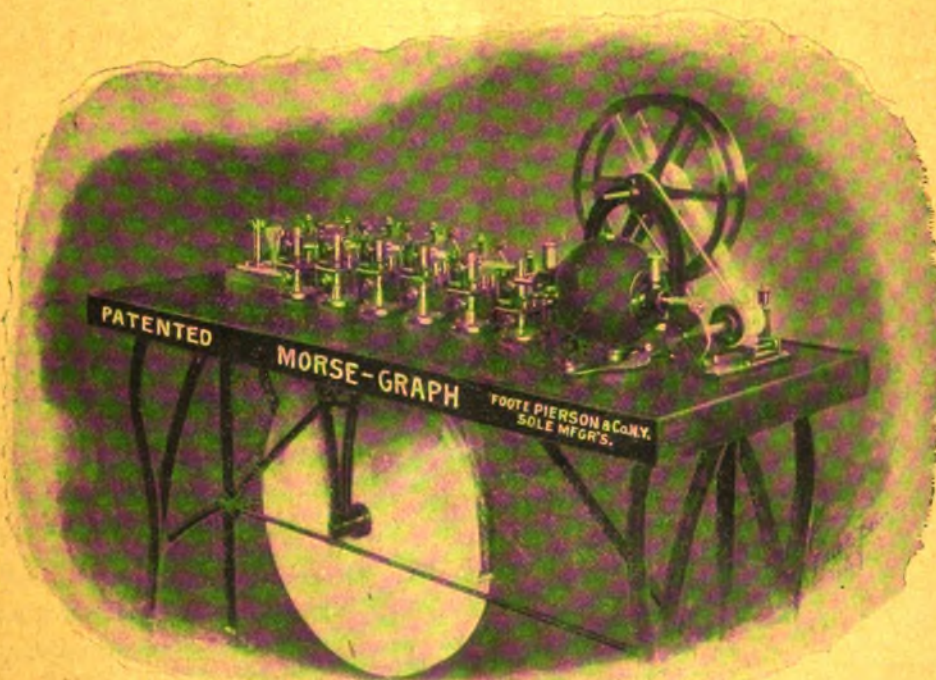
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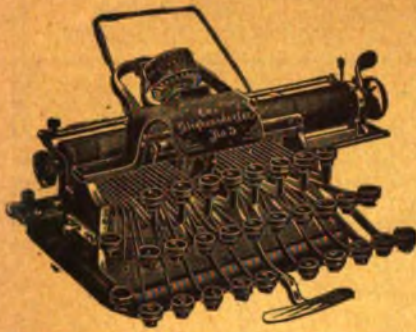


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